

**THE DEVELOPMENT PROCESS OF GOVERNMENT CRISIS MANAGEMENT  
LEADERS FOR NATURAL DISASTERS IN THE CARIBBEAN:**

**A CASE STUDY**

by

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## Abstract

Crisis management is a strain worldwide; however, based on literature reviewed, there is a lack of documentation regarding the development process of government crisis management leaders for natural disasters in the Caribbean. Therefore, the researcher studied how government crisis management leaders for natural disasters in the Caribbean explain their development process. The outcomes added to the body of knowledge and filled the gap in the literature. In addition, the outcomes of the research provided baseline knowledge for future research in crisis management. Scholars and practitioners may also use the outcomes to help answer philosophical questions. The findings indicated that an effective development process leads to successful performance during natural disasters. The outcomes of this explanatory case study revealed that using effective communication, completing ongoing training, educating the public, and having local district disaster committees are key variables for the development process of government crisis management leaders for natural disasters. The recommendations for further research are to study the key variables of the development process for crisis management and for practitioners to explore how to integrate the variables into leadership and management requirements and skills.

## **Dedication**

First, I would like to thank my heavenly Father for making this possible, for I could not have done it without Him. It is only Christ working through me that made this possible.

I dedicate this dissertation to my loving husband, Joseph, and to my children, Tova and Joseph II; to my brothers and sisters, and to my parents, Sylvester Edwards and the late Evelyn Edwards, who raised me in the path that I should go. I can truly say that my upbringing and your support made me who I am today. I also want to thank my special sister-in-law for all of her support and encouragement during this academic journey. I want to thank my elementary school teachers, who motivated me to always press toward the mark and do my best in whatever I do.

Next, I want to thank all my friends, especially Mofolasayo Abolarin; you are a sister and a true friend. I thank you for praying with me and for me, and for your encouragement as we motivated each other along this academic journey. I want to thank other fellow learners whom I met during this journey; we were able to encourage and support each other during challenging times. I am not very good at names, and I do not want to forget anyone, so I thank all of you who contributed to my success. I thank God for all the prayers that went up on my behalf from my sisters on the prayer line; you helped to make each day possible with your reassurance of God's promises.

Finally, I would like to thank all the individuals and the organization that participated in my research and made it a success. Thank you for all of your support and for believing in me to the end. To my dear husband, a special thank you for your

understanding, your kindness, and support, and for being the person you are: a man of good character. I could not have achieved this without all of you; again, thank you all.

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## Table of Contents

Acknowledgments	v
List of Tables	ix
List of Figures	x
CHAPTER 1. INTRODUCTION	1
Introduction to the Problem	1
Background of the Study	3
Statement of the Problem	8
Purpose of the Study	10
Rationale	12
Research Question	12
Significance of the Study	13
Definition of Terms	13
Assumptions and Limitations	14
Theoretical and Conceptual Frameworks	15
Organization of the Remainder of the Study	18
CHAPTER 2. LITERATURE REVIEW	19
Introduction	19
Contingency Theory	20
Evolution of Leadership Development for Disasters	24
History of Crisis Management	27
Definition of <i>Stakeholders</i>	31
Definition of <i>Crisis</i>	34



Natural Disasters in the Caribbean	35
Use of Qualitative Research in Current Literature	40
Chapter Summary	53
CHAPTER 3. METHODOLOGY	55
Research Design	55
Sample	59
Setting	61
Instrumentation	61
Data Collection	63
Data Analysis	64
Validity and Reliability	65
Ethical Considerations	68
Chapter Summary	71
CHAPTER 4. RESULTS	73
Restatement of the Purpose and Research Question	73
Researcher's Background	74
Description of the Sample	74
Methodological Approach	75
Data Analysis	75
Responses to Interview Questions	77
Emergent Themes	98
Chapter Summary	113

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS	114
Introduction and Summary	114
Discussion of the Results	116
Implications of the Study	126
Conclusion	127
Limitations of the Study	128
Recommendations for Further Research	128
REFERENCES	130
APPENDIX. STATEMENT OF ORIGINAL WORK	146

## List of Tables

Table 1. Skills Needed for the Development Process	83
Table 2. Frequency of Themes	99

## List of Figures

Figure 1. Theoretical framework	16
Figure 2. Conceptual framework	18
Figure 3. Procedures: Sample recruitment through data analysis	66
Figure 4. Participants' ratings of the current development process	93
Figure 5. Emergent themes	104
Figure 6. Crisis management model	125

## CHAPTER 1. INTRODUCTION

### Introduction to the Problem

The Caribbean region is known as “the second most prone” (Collymore, 2009, p. 1) to numerous natural disasters such as hurricanes, floods, and so forth. Hurricane Lenny led to the governments of Latin America and the Caribbean uniting and quickly integrating crisis management into the development plan (Collymore, 2009). Because of its geographical location, the Caribbean is prone to natural disasters. According to Julca (2012), most regions are prone to natural disasters, but disasters occur most in developing regions. Charvériat (2000) described the loss as a percentage of gross domestic profit (GDP) for many Caribbean islands and Latin America. When two Caribbean islands were studied that suffered at least seven hurricanes during the 19th century, as an occurrence rate per year, the loss in the Caribbean Islands, as a percentage of GDP, when compared to other islands, was 18.1% (Charvériat, 2000). The other islands with the same number of occurrences or fewer had GDPs of 116.6%, 899%, and 272.3% (Charvériat, 2000). This is a strong indication that some islands were more successful during and after the natural disasters than others, and thus became of interest for the researcher.

The topic of this research is the development process of government crisis management leaders in the Caribbean for natural disasters. Researchers have not documented the development process. As such, the topic is of interest to this researcher,

who sought to understand government crisis management leaders' development process for natural disasters in the Caribbean and whether changes are needed to be effective. Morrison and Oladujoye (2013) purported that crisis management measures, rules, and procedures are essential for any organization and management, especially since natural disasters are more common today.

Morrison and Oladujoye (2013) explained that natural tragedies occur more often today; therefore, before an event, preparations to have measures and practices in place are crucial to any administration. This view supports the fact that crisis management for natural disasters is important to all organizations, and being prepared is just as crucial. Morrison and Oladujoye stated the unpredictability of effects of occurrences calls for operative and cost-effective functioning plans. They further explained there are four continuous stages to natural disaster preparedness: mitigation, readiness, response, and recovery. Of the four, mitigation and readiness are needed in the planning stage.

Mitigation focuses on future planning by implementing a functioning structure to minimize the effects of natural disasters. Readiness targets the pre-event strategies that were intentionally planned to be executed when natural disasters occur (Morrison & Oladujoye, 2013). This is consistent with the importance of having plans, strategies, and techniques in position to lessen the impact when disaster strikes in order to be effective. Kureuther and Useem (2010) justified Morrison and Oladujoye's claims when they indicated that today there is an incessant requirement for administrations to make sure established plans and processes are in place to decrease the results of sudden destructive events. As the literature confirmed, natural disasters are more dominant today, and crisis

management is important to all organizations; therefore, scholar-practitioners would be interested in this topic.

Scholars would be interested in this research because the baseline knowledge gained from this research identified trends, created history, and could answer other philosophical questions by explaining, comparing, and contrasting data. Practitioners would also be interested in this research because the results could help with establishing crisis management strategies for management leadership and implementing effective practices to assist in times of natural disasters. Both scholars and practitioners would benefit from the research because the study added new perspectives to the body of knowledge. Prewitt, Weil, and McClure (2011) posited that crisis management is a struggle for leaders globally. The literature supported the view that the research provided new information for scholars and practitioners to compare and contrast with old information in order to develop strategies or to find answers. This research contributed to ongoing research by providing recommendations for further research in crisis management.

### **Background of the Study**

The key recommendations from the most recent research related to this topic came from (a) Yates and Paquette (2011), who argued that in order to react to catastrophic events, administrations must have the capability through coordination of information and collaboration of actions by many operational divisions and groups with various responsibilities and roles; and (b) Thach (2012), who indicated the need for directors to gain knowledge from actions taken during a crisis and to keep scanning the

external surroundings for potential problems. Thach also indicated that her empirical study be duplicated with a more focused crisis and/or in a different location.

These recommendations reiterated the significance for leaders to learn from disasters and the importance of incorporating crisis leadership skills in the administration plan. Thach (2012) also noted that one of the realistic insinuations is for guidance expansion to contain the necessity to integrate crisis leadership capabilities into common guidance teaching, and that after action reports with significant knowledge should be integrated into more administration and managerial gatherings; in addition, to tallying emergency guidance capabilities to operational administration organizations. This justified having crisis management leaders' capabilities and knowledge integrated into management as part of public administration.

Denhardt (2010) stated,

On one hand, government agencies are urged to attain the greatest possible efficiency in their delivery services; therefore, since public agencies should presumably operate in the public interest, they must be responsive to the needs and desires of those with whom they work. (p. 8)

Löffler and Bovaird (2009) argued that government agencies are bureaucratic, that routine operations cannot deal with unforeseen crises, and that organizations need specific crisis management leaders who are well trained and have management and leadership skills. Brumfield (2012) concurred that most organizations have specific crisis management teams to deal with crises, but they have a long way to go in developing their administration and leadership abilities to react swiftly, conclusively, and effectually in emergency conditions. Based on the literature, these individuals must be proficient to do the job. Brumfield indicated that "some crisis management teams are efficient in



mitigating possible disasters while others fall short” (p. 46). Brumfield noted that some administrators and executives are doing a poor job of handling crisis situations. This research aligned with other existing research on crisis management.

The existing scholarly research of Prewitt et al. (2011) indicated a perspective that is consistent with this research when they noted that the skillfulness required during catastrophes must be constantly sharpened to prepare for, respond to, and learn from crises. Continuous education and training are needed in order to learn, prepare, and react to crises. Prewitt et al. indicated that a crisis is erratic and unforeseen, and that leaders must be able to interpret the signs of an imminent crisis and comprehend how to harness the emergency brought on by the situation. In addition, leaders must be knowledgeable in crisis management to understand the warning signs and to react with the appropriate response strategies.

This researcher utilized the contingency theory. Contingency theory was used by crisis managers to incorporate the community of public relations, communication professionals, and how the administration should relate and react to the public (Coombs, 2012b). Based on Coombs’s (2012b) view, organization leaders use contingency theory to establish the position the organization should take and how to react to crises. The managers utilize the unforeseen event assumption to supply the various variables for the structure that matches the environment, who to involve, and the plan of action (Coombs, 2012b). Coombs indicated that contingency theory helps crisis managers to match the crisis with the best response strategy. Goldfine (2011) justified this view by writing that contingency theory could be used to determine how to adjust or adapt in crisis situations and to create the best response strategy. This view was also supported by Baird,

Furukawa, and Raghu (2012), who added that contingency theory emphasizes that administrators have the skill and/or aptitude to make strategic decisions in order to determine the best match with advancing technology and environmental conditions.

According to the literature, researchers recommended the use of contingency theory as the best match with organizational strategy and the environment. Jianfeng, Solan, and Ghods (2010) justified contingency theory when they claimed the theory supports environmental changes, and that changes in the environment could affect open systems. Lastly, they indicated the administration's survival is dependent on how well it forecasts, reacts, or adjusts to environmental changes. In addition, Jianfeng et al. justified the contingency theory when they claimed the theory supported environmental changes, and changes in the environment could affect open systems, and the administration's survival depended on how well it forecasted, reacted, or adjusted to environmental changes. Administrations must be flexible to develop and adjust to the environment, and to learn and revise the organization's business behavior, when needed, to handle problems, uncertainties, and instability.

The general implications of contingency theory to the existing research are as follows:

1. Contingency theory does not take into consideration how administrators should modify their approaches to various situations as a means of advancing management in organizations (da Cruz, Nunes, & Pinheiro, 2011). The unforeseen event assumption implies that any person could be an administrator as long as the situation is matched with the administrator's

leadership style, but it does not explain why some administrators perform better than others in some situations.

2. Under the contingency theory, a mechanistic structure works best in a stable environment where work is repetitive, with centralized authority, and experienced top management making informed decisions (Joshi, Dencker, Franz, & Martocchio, 2010). Pine (2009) theorized that for crisis management, the application of contingency theory is significantly guided by the circumstance. Pine added that utilizing a mechanistic structure in today's dynamic environment, irrespective of the circumstance, may not offer a suitable foundation for a speedy, absolute judgment, which is needed in times of disaster.

Though disasters occur regularly, few researchers have studied the responses.

Those who did are herein identified as seminal authors for the topic because they laid the foundation for this research and future research. The seminal authors from whom the topic (and theory) originated are Pauchant and Douville (1992), Pearson and Clair (1998), and Elliott and Smith (2006), who agreed that crisis management is a fairly fresh field of investigation and is still in its early years.

Contingency theory originated with Fiedler (1964), who argued there is no one best way to organize or lead an administration, and that leaders are more successful in some situations than others. Goldfine (2011) credited this theory as being the one most useful for matching crisis response strategy with a crisis situation. Hermann (1963) established the foundation for the topic by writing that crises are more common, require

methodical study, and deserve investigation. This idea indicated there is a need to study crisis management leaders because crises are more common today.

In addition to the aforementioned seminal authors, other authors are closely aligned with this research on crisis management regarding failures during natural disasters. For the past five years, the Caribbean and Latin America have experienced severe natural disasters resulting in numerous deaths and significant damages, which have caused the administrators and their international partners to have a renewed interest in how to improve risk management (Charvériat, 2000). Charvériat (2000) further noted that changes in the climate have amplified “natural disaster proneness everywhere” (p. 9). For example, Farazmand (2009) summarized the large failures in governance and communal administration during Hurricane Katrina in the areas of planning, reaction, preparation, crisis management, and recovering from disasters. Auf der Heide (1989) explained that “many disaster reports provided the lessons learned but lack documentation, and many articles made recommendations for disaster planning without providing adequate documentation of their validity or effectiveness” (p. 5).

### **Statement of the Problem**

The research problem is the lack of documentation regarding the development process of government crisis management leaders for natural disasters in the Caribbean. Leaders must know what to do and what not to do during a crisis. Therefore, the researcher sought an in-depth understanding of the fundamentals for an effective development process. Thach (2012) recommended the topic be studied with a more focused crisis and/or in a different location. “The absence of theory development on the

features of natural disasters and the crisis management dimensions of natural disasters was troublesome for both practical and theoretical reasons” (Galaz, Moberg, Olsson, Paglia, & Parker, 2011, p. 361). Galaz et al. (2011) further explained that forces of unforeseen natural disasters require different emergency administration tasks not yet fully expounded upon by the community of researchers. The development process to address some of these tasks is not clearly explained in the literature.

The researcher chose to conduct this study for the following reasons: (a) The research expanded the lack of documentation regarding the development process of government crisis management leaders for natural disasters in the Caribbean, and (b) Julca (2012) wrote that “the influence of climate knows no boundaries, and the occurrence of natural disasters was five times more than over the past 40 years” (p. 509). The danger of disasters is imminent, partially due to the results of climatic changes, and emerging countries bear an unequal share of the adverse results of augmented crisis risk (Julca, 2012).

Not only is there a lack of documentation on the development process of government crisis management leaders for natural disasters in the Caribbean, but Julca indicated that no country is exempt from natural disasters. Therefore, scholars and practitioners would be interested because the baseline knowledge gained from this research could identify trends and has value for the scholarly and practitioner communities where the results may be used to train and educate both communities in crisis management and to understand how crises could affect their communities. The research would benefit scholars by creating an opportunity for other research.

Practitioners would benefit because of the new and relevant information the research provided on crisis management.

### **Purpose of the Study**

The intent of this explanatory case study was to explain the development process of government crisis management leaders for natural disasters in the Caribbean. The researcher's goal was to contribute to scientific knowledge by documenting the development process of government crisis management leaders for natural disasters in the Caribbean. The *development process* is defined as “the capacity and capability for coordinated response efforts across geographical areas and political jurisdictions by multiple government actors” (Gerber & Robinson, 2009, p. 346). Gerber and Robinson (2009) further highlighted the importance “for disaster plans to contain elements of preparedness such as communication plans, clear lines of authority, and dissemination plans” (p. 350), which should “be based on effective implementation, assessing preparedness, and response effectiveness” (p. 348).

The government crisis management leaders' development process was studied to add to the body of literature in the following ways: (a) to provide recommendations and new insights to assist strategic management to formulate crisis response strategies before disaster strikes and to shorten the duration and cost of natural disasters, and (b) to provide relevant information for senior management and leaders of crisis management to engage in building good relationships, communication, and collaboration that are vital during natural disasters to protect lives. According to Wilson (2013), contingency planning is heightened during disasters because of uncertainty. This is consistent with Gerber and Robinson (2009), who stated that proper planning and preparedness are needed before a

disaster happens in order to minimize the severity and cost. Management seems to understand it is important to align crisis response strategy with the situation, and they must know how to react; therefore, this research was undertaken to document the development process.

If the research had not been undertaken, the same developmental needs may have continued to be lacking, such as poor communication, playing the blame game, and a less-than-acceptable response by emergency managers, for example, what occurred in the United States during Hurricane Katrina (Farazmand, 2009). The researcher used these reasons to highlight the importance of contingency planning, having crisis response strategies in place, and a crisis management leader's development process before disasters happen. As Coombs (2012b) indicated, proper communication and collaboration are needed between all stakeholders in order to manage crises, since effective communication during a crisis is the most important part of disaster administration. This research was necessary to help leaders learn from other crisis management leaders who are experienced in natural disasters and to help to increase the limited study of government crisis management leaders for natural disasters in the Caribbean. In addition, Prewitt et al. (2011) concluded the study of crisis management leadership is important today due to the intensity, randomness, duration, and cost of natural disasters.

This research is relevant and timely to provide new information to assist management leaders and strategic managers for crisis preparedness, preventive management, and response strategies needed during natural disasters. This research added to the current literature, which is limited. This topic is of repeated interest in scholarly journals because theorists have not written about the development process of government

crisis management leaders for natural disasters in the Caribbean, and results of the study could be used as a standard by which to compare and contrast future observations. The recommendations of the study provided additional insights and ideas regarding the development process of crisis management leaders. Venkatesh, Brown, and Bala (2013) indicated qualitative investigations could be utilized to provide added understanding or to give good reasons or explanations of findings.

### **Rationale**

The intent for the study was to gain detailed perceptions and understandings in order to fill the gap regarding the development process of government crisis management leaders for natural disasters in the Caribbean. Thach (2012) indicated that what appears lacking is the necessity for directors to gain knowledge from events and constantly examine the environment for upcoming problems. In support of the literature, one may ask, What is understood or what additional insights could be obtained from the development process of government crisis management leaders for natural disasters in the Caribbean to help with future crises? With this in mind, the following research question was developed.

### **Research Question**

The research question for this study is, How do government crisis management leaders for natural disasters in the Caribbean explain their development process?



## Significance of the Study

This research contributed to the existing body of knowledge by adding new relevant information to the limited literature on the development process of government crisis management leaders for natural disasters in the Caribbean. Nash (2013) stated,

We are living in an era where crisis dominates and many organizations will face crises at some point and a better understanding of the experience of crisis could lead to a more responsive and holistic approach to crisis management and organizational resilience. (p. 145)

In addition, the results of this research are significant to strategic managers, senior managers, business leaders, and other stakeholders. This research brought value to the scholars who work in organization and management, business, and leadership, by adding to the body of knowledge in crisis leadership. The research also brought value to the practitioners who work in strategic management and public relations because information and communication are vital to managing disasters.

## Definition of Terms

***Development process.*** Kapucu (2008) explained there must be a coordinated and collaborative work of all stakeholders done through a national outline. Based on this view, the framework would ensure that all agencies responding to natural disasters are trained to know and understand their functions and responsibilities in times of response and recovery efforts of natural disasters. According to the Cabinet Office (2009b), crisis management requires active participation, all stakeholders acting together and coordinating to maintain an amalgamated effort, and responders functioning on precise responsibilities. The Cabinet Office (2009a) referred to this type of management as the

*functioning level*. There is also the *tactical level*, which ensures that activities are synchronized and unified, while the *planned level* establishes the structure and strategies for the *tactical level*, and the police support forms the command incidents points (Cabinet Office, 2009a). Therefore, the development process is needed for all stakeholders to unite and work with each other at the various levels in order to be effective.

Ponis and Koronis (2012) concurred that both planned and not formally planned learning must be proficiently combined, administered, and distributed to the applicable stakeholders (both internal and external). They added that learning is what helps administrations to install the essential disaster prevention and retrieval instruments. Again, this indicates the importance of knowledge and training as part of the development process in order for crisis management leaders to collaborate and coordinate with all stakeholders. Ponis and Koronis explained the unexpectedness of natural disasters leads to the crisis management development process, which is an effort to offer plans and/or procedures for leaders and administrations, a system of methods, expert established tactical administration structures, and equipment and machinery that sustain directors handling crises. As a result, the development process requires knowledge, preparation, and strategies for both leaders and the organizations, along with the skills of crisis management leaders.

## **Assumptions and Limitations**

### **Assumptions**

1. Participants responded to interview questions to the best of their knowledge.
2. Participants gave honest responses.

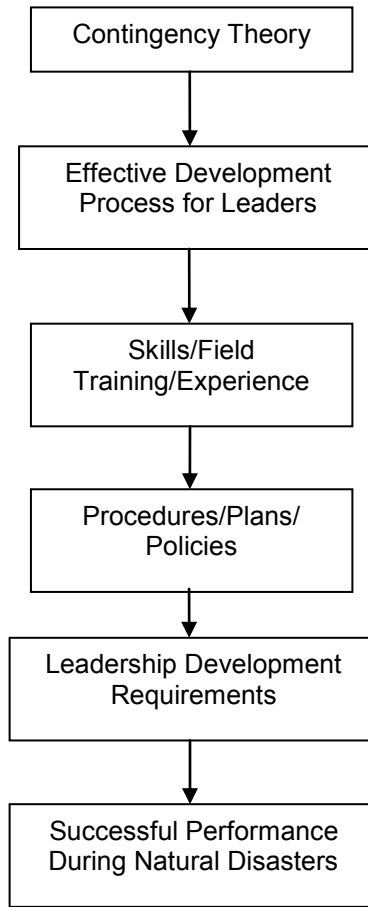
3. Historical records were kept up-to-date and were accurate.
4. Interviews did not exceed an hour.

### **Limitations**

1. There was no direct observation, which, according to Yin (2014), could shield the case's background. In this case, the researcher could put herself at risk by observing crisis management leaders working during natural disasters.
2. Participants recalled experiences based on their memory. According to Yin (2014), there could be errors due to poor recollection.
3. The sample included only crisis management leaders.
4. Interviews were limited as they included only participants' perspectives.

### **Theoretical and Conceptual Frameworks**

The researcher utilized a single explanatory case study approach to gain detailed perceptions and understandings from government crisis management leaders to explain their development process in order to successfully respond to natural disasters in the Caribbean. The main source for data collection was telephone interviews. Secondary data were collected from reports and government correspondence and historical documents. The interviews were digitally recorded and analyzed individually for themes and patterns (Stake, 1995). The data were linked to the researcher's propositions using Yin's (2014) "precision of pattern matching" (p. 147). The theory that served as the basis for the theoretical framework (Figure 1) was Coombs's (2012b) contingency theory.



*Figure 1.* Theoretical framework.

Coombs (2012b) argued that contingency theory is the best match between the environment and unforeseen events. The elements of contingency theory as described by Coombs are effective communication and having crisis response strategies in place. Coombs noted the unanticipated failures that occur during a crisis are ineffective communication, poor decision making during times of uncertainty, and lack of collaboration and coordination among stakeholders. Contingency theory helps with the planning process; it is how crisis managers involve the community, communication

professionals, and how to relate and react with the public (Coombs, 2012b). Baird et al. (2012) added that contingency theory helps with the decision-making process and how to match advancing technology with environmental conditions. Based on Coombs's contingency theory, the following propositions were developed:

- An effective development process leads to positive performance.
- Effective communication among stakeholders and the distribution of relevant information are important.
- Early communication to the public is essential.
- Having trained personnel and trained employees assigned to various tasks during a crisis is essential.
- Having adequate equipment, emergency supplies in place, and emergency transportation are important.
- Designated routing and traffic control are essential.

The conceptual framework outlined the research on the development process of government crisis management leaders for natural disasters in the Caribbean.

Government crisis management leaders require development to successfully respond to natural disasters in the Caribbean. Figure 2 is a conceptual framework of the research.

Data were collected from crisis management leaders “to provide a fresh commentary” (Yin, 2014, p. 111) about the topic. This case study was a single case and was utilized to “determine whether the propositions are correct or whether some alternative set of explanations might be more relevant” (Yin, 2014, p. 51). The findings were used to certify, contest, or enhance the concept (Yin, 2014).

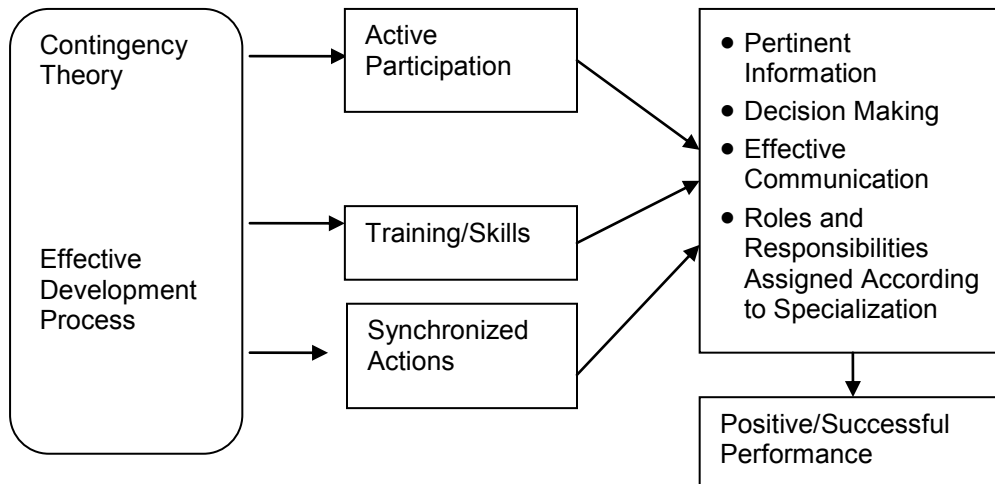


Figure 2. Conceptual framework.

### Organization of the Remainder of the Study

There are four chapters remaining for this study. There is a literature review in chapter 2 regarding the development process of government crisis management leaders. Chapter 3 describes the methodology, the research design used in the study, and the sample of participants chosen for the research. Additionally, chapter 3 describes the setting of the process used to obtain the necessary participants and documents needed to gather data for the research. The instrumentation used was also described, along with the process of data collection and analysis. Lastly, the research's validity, reliability, and ethical considerations were described. The outcomes of this research are offered in Chapter 4. Chapter 5 presents a summation of the outcomes, conclusions, and recommendations for further research.

## CHAPTER 2. LITERATURE REVIEW

### Introduction

Alajloni, Almashaqba, and Al-Qeed (2010) stated traditional philosophers created guidelines for today's use but did not provide answers to the problems faced by organizations in this ever-changing world. Climate change, globalization, and technological advancements have modified organizations, according to Du Plessis, Visagie, and Wijnbeek (2011), for they are multifaceted and operate in ever-changing environment, and both organizations and leaders must be flexible. Many innovative assumptions were created to help organizations and their leaders to deal with today's environment. Bass (1985, 1990); Burns (1978); and Goleman, Boyatzis, and McKee (2004) explained that adjusting to change or being flexible takes certain important capabilities and procedures to be administered successfully. Managing is significant to the role of leadership, and failures in leadership could affect stakeholders and could lead to the end or discontinuation of an organization. Managers must be trained to deal with the internal and external difficulties an organization may face. The intent of this explanatory case study was to explain the development process of government crisis management leaders for natural disasters in the Caribbean. The researcher utilized the contingency theory as the theoretical framework.

Chapter 2 is a literature review of the development process of government crisis management leaders for natural disasters in the Caribbean. The chapter provides a synopsis of the theory that served as the basis for the theoretical framework that guided the study. The chapter includes a discussion of the seminal literature and the evolution of the topic. The chapter also includes a detailed history of crisis management and the definitions of *crisis* and *stakeholders* as they apply to crisis management. Lastly, the chapter provides a discussion of natural disasters in the Caribbean, along with Coombs's (2007) three-phase method to crisis management. The literature review also provides details on the use of qualitative research, followed by an analysis of recent literature.

### **Contingency Theory**

Contingency theory originated with Fiedler (1964), who wrote there is no one best way to organize or lead an administration and that leaders are more successful in some situations than others. Many researchers have analyzed crisis management by utilizing the contingency theory (Dyson & Wilks, 1983; Lerbinger, 1986; Pauchant & Mitroff, 1992; Tomasko, 1990). Coombs (2012b) viewed contingency theory as part of the planning process in crisis situations. The researcher of the present study analyzed how government crisis management leaders for natural disasters in the Caribbean explain their development process, while using the contingency theory as the basis for the theoretical framework.

Coombs (2012b) described contingency theory as the best match between environment and unforeseen events. The theory informs the research as it describes active participation and synchronized actions among stakeholders, which are factors of the



development process. Active participation and synchronized actions are relevant to the theoretical framework where the theory relates to collaboration and coordination among stakeholders during a crisis. Palttala and Vos (2012) added that in crises response, active participation is needed from “a network of organizations which consists of private and public organizations; public authorities include first responder (fire departments, police, hospitals), government bodies, non-governmental, for example, medical, religious, and private organizations, such as infrastructure companies” (p. 42). Prior research is consistent with this point of view, as Palm and Ramsell (2007) posited that active participation and networking among stakeholders are important in crises.

Synchronized actions, according to the Caribbean Regional Sustainable Tourism Development Programme (CRSTDP, 2003–2008), involve “active participation from the network of organizations with information sharing, etc., and collaborative activities to coordinate emergency response plans” (p. 18). The CRSTDP indicated the “disaster planning program involves integrated community disaster planning, which encourages knowledge-sharing and co-working between communities, private, and public organizations” (p. 26).

Contingency theory fosters collaboration and coordination that is required for advancement or improvement; therefore, information is disseminated down the line of the organization. McConnell and Drennan (2006) claimed the reason is that individuals are required to give critical discussions and advance thoughts to the planning of unforeseen events if they desire to overcome and to monitor disaster when it comes. Contingency theory as well as systems theory force organization theorists to examine an organization holistically instead of in parts and as open systems. Traditional philosophers ignored the

exterior environment, but systems theory requires researchers to examine organizations as open systems that interrelate with their environment (Emery, 2010). Von Bertalanffy (1972) is one of the seminal authors who questioned classical theorists' beliefs that systems were closed. Von Bertalanffy argued that systems are open and interact with their environment. This statement concurs with Barnard (1938), who posited that examining organizations as multifaceted, open systems that interrelate with their environment is significant to the process of crisis management.

Contingency theory encourages coordination and collaboration to promote better solutions for new situations, such as continuous environmental changes. Correspondingly, systems theory has been used to encourage coordination and collaboration and indicates an organization's performance is centered on the various parts or divisions and how they correlate to each other (Jianfeng et al., 2010). Systems theory is used to view an organization holistically and to achieve more based on the correlation of all the parts than the organization would be viewed studying parts independently. Both theories support environmental alterations and not closed schemes, for change in one (environment) may possibly have an effect on the other.

The concepts of holism and open systems are appropriate when seeking to understand crisis management. Bowen (1978) and Minuchin (1974) concurred that the divisions or units that make up crisis management have their own functions, boundaries, and subdivisions. Though each division is independent in crisis management, they must correlate, coordinate, and collaborate in the open environment with limited boundaries, policies, and rules. Bechky (as cited in Kahn, Barton, & Fellows, 2013) added that affiliations affect how the tasks get done and how groups synchronize, exchange

knowledge, and achieve the tasks. Similarly, Ki and Brown (2013) explained these correlations will have an effect on how organizations respond to and recover from crises. Crisis managers form part of the open system and do not operate alone. Crisis managers have to ensure that “various units, organizations, and disciplines involved in the front-line crisis responses work together effectively and in a sustainable way, both within and across the public and private/community sectors” (Boin & ‘t Hart, 2010, p. 360).

Bagheri and Mollahoseini (2012) argued the harm caused by crises could be eliminated or reduced via systematized disaster supervision. Contingency theory indicates the administration’s standards and performances depend on the suitability of the situation, or if the theory matches the situation (Coombs, 2012b). Comparatively, Baird et al. (2012) explained that contingency theory requires that managers have the capability to execute strategic decisions that would determine the best fit to the ecological circumstances. When contingency theory is used to suggest a fit or best match between strategic responses and the elements of the environment, it also includes successful performance. Contingency is centered on making a parallel to leadership methods and situations. The success of any theory is based on how well the theory fits the situation. If the environment is stable, a rigid structure works best with repetitive work and centralized authority (Joshi et al., 2010).

However, this structure would not work best for crisis management, for, according to Baird et al. (2012), the environment is constantly changing and requires flexibility to adapt to the many disasters an organization faces. The strategy required is what R. E. Miles and Snow (2003) called *prospector*. Hsi-An and Yun-Hwa (2011) noted this strategy is used when an organization interrelates with an active environment, and

leaders continuously search to generate additional initiatives. In concurrence, Coombs (2012b) indicated that contingency theory provides the various variables to help leaders decide on the structure that matches the environment, who to involve, and the plan of action. The researcher of the present study not only utilized the contingency theory for the theoretical framework but reviewed seminal literature that led to the evolution of leadership development.

### **Evolution of Leadership Development for Disasters**

All organizations will face some type of disaster, whether manmade or natural. Mitroff and Anagnos (2001) indicated that disaster is an essential characteristic of the modern data and technological era. The present research focused on external forces, namely, natural disasters. The Organisation for Economic Co-operation and Development (2003) and Perrow (2007) agreed that disasters happen more often and the impact is now greater. Hermann (1963) laid the foundation for crisis management research. Hermann was the first to identify the three elements of a crisis: There must be an element of surprise, threat, and with little time to respond. Hermann indicated it would not be possible to have a procedure for each unforeseen event because, in the upcoming years, disasters would be almost never-ending. Hermann noted that even in the international arena, there is no planning because leaders are neither aware of nor recognize the likelihood of a disaster happening. Hermann's analysis was the element of surprise could increase the intensity of a crisis if there were no planning, and that threat is common to crises, but having response and recovery strategies in place could minimize the level of

threat to the organization and its stakeholders; therefore, the intimidating character of disasters must be handled or dealt with as soon as possible.

Lentner (1972) critiqued the elements identified by Hermann, for Lentner found that the pressure on time was a component of disaster than having a short response time to make decisions during disaster, and astonishment was not perceived as an essential component of disaster. In disagreement with Hermann's elements, Brady (1974) utilized an identical example to study the judgment procedures during crises and found that danger had major amounts of inconsistencies, while having little response time and astonishment had very little consequence. Though limited studies were conducted, they did not fully support Hermann's three elements of crisis, for only the element of threat was consistently supported by both research. However, Hermann's identification of the three elements of crisis laid the foundation for other research, such as Brecher (1977) and Smart and Vertinsky (1977). More recent literature (Coombs, 2012a) explained that dealing with disasters includes making judgments that are typified by "time pressure" (p. 70), danger, and a modification in circumstances. Lastly, Coombs purported that decision making during times of crisis should include all stakeholders.

Chong and Park (2010) concurred with Hermann's (1963) analysis when they stated that numerous scholars of disaster management, along with experts, are in agreement that the absence of appropriate disaster management planning is the significant cause for ending the life cycle of organizations. Similarly, Chong (2004) wrote that crises will continually threaten the existence of an organization; therefore, leaders must plan for the ever-changing environment and have an approach to improve the disaster preparedness of the organization. Bugge (1993), R. W. Perry and Nigg (1985), and

Quarantelli (1996) agreed, and asserted there is a need for disaster management planning as the existence of organizations will continually be threatened by crises.

Coombs (2012a) wrote that each disaster is different, and since no organization is invulnerable, all organizations must be prepared for disasters. Unfortunately, only a small number of organizations acknowledge the significance of disasters. Instead of preparing and planning for all unexpected occurrences or situations, many depend on the experience of their leaders (Constantinos-Vasilios & Ioannis, 2008). Pearson and Clair (1998) posited that disasters today have a greater impact and that prior investigations on disaster management were lacking the unity of various disciplines that were essential to studying and managing disasters. Similarly, Pauchant, Mitroff, and Ventolo (1992) wrote that in crisis management, organizations should utilize the systems approach and should create dependable contingency assumptions. They indicated that updating contingency assumptions should be based on re-creation of crisis situations and practice exercises, an examination of disaster plans, and lessons learned from past disasters. This justified Barnard's (1938) statement that examining organizations as multifaceted and open systems that interrelate with their environment is significant to the crisis management method.

In addition, Bowonder and Linstone (1987) concluded that disaster management should adopt the open systems approach so that leaders may better understand and gain control of disasters and develop disaster management plans. Pearson and Clair (1998) argued that "crisis management efforts are effective when organizational and external stakeholder losses are minimized, and learning occurs so that lessons are transferred to future incidents" (pp. 60–61). D. Barton, Newell, and Wilson (2002); Herman and Oliver

(2002); and Seeger, Sellnow, and Ulmer (2003) concurred with Pearson and Clair when they claimed disasters create opportunities to obtain fresh knowledge and to create innovative plans; disasters provide opportunities for an organization to grow and develop. Similarly, Veil (2011) explained that crisis should be viewed as a chance to gain knowledge that would benefit an organization. Mitroff and Anagnos (2001) suggested that while all disasters are not unexpected and could be kept from occurring, all disasters could be handled more successfully if managers understood and utilized what is considered best practice.

In addition, Hermann (1963) established a foundation not only for crisis management and leadership development for disasters but also for the topic of this research. Since all organizations will experience crises, before conducting an investigation, it is important to understand the definition of *crisis management* and *crisis*, as Coombs (2012a) wrote, “how a subject is defined indicates how it is approached” (p. 2).

### **History of Crisis Management**

Jaques (2007) wrote that crisis management is a specific method that normally involves “government establishments and territorial authorities and [is] more often related to national or community disasters” (p. 149). On the other hand, Carter (1991) wrote that crisis and its administration is a range of correlated actions, for it is not a sequence of occurrences that begins and ends with each crisis event. Regardless of the difference in definition, it is important for an organization to know how to react to disasters because, according to Pearson and Clair (1998), efficient disaster administration

could signify the disparity between the continuity and demise of an organization. Coombs (2012a) purported that crisis management is constructed to protect or defend against danger or to minimize danger by offering suggestions or proposals for appropriately managing disasters.

Similarly, Jaques (2007) wrote that an essential factor of crisis management is that it is a group or team with various functions working toward a common goal; in this case, government is viewed as a whole and is committed to preparation, which is sometimes instructed by rule or directive, while the emphasis with natural disasters is on minimizing the effect of the crises rather than on minimizing the crises themselves. The outcome of ineffective crisis management is evident in Pearson and Clair's (1998) statement when they posited that establishments must take action to stop or lessen the effects of possible disasters; therefore, organizations must plan to react to crises.

All these definitions are important because, according to Massey and Larsen (2006), organizations must have a practical method for disaster administration by creating disaster administration plans, for the plan determines the disaster administration group and delineates disaster "communication activities" (p. 64). The plan integrates all the approaches identified in the definitions.

Crisis administration literature has been reviewed by many authors. Elliott and Smith (2006) reviewed 25 articles and affirmed that one important factor continues to be immature, that is, learning from disasters—this involves the procedures by which an organization obtains knowledge from disaster proceedings as a way of assisting administration participating in preclusion. In contrast, Lalonde (2007) identified two significant drawbacks: (a) The lack of a disaster administration knowledge prototype



promotes administrative resistance in managing disasters; and (b) many cases were conducted on numerous crises, but none of those cases were synthesized. In addition, Turner (1976) claimed,

A number of studies have set out a variety of developmental models for disasters but because the literature was oriented to the sequence that began with a warning of danger and moves through the onset of danger to the problems of alarm, panic, and rescue, none of the sequence patterns presented were of much help in dealing with organizational events that permit potentially avoidable incidents to occur. (p. 380)

Elliott and Smith (2006) summarized that as more research developed on disasters, their finding of not learning from disasters became more evident, for there were repetitive incidences of the same crisis events. Elliott and Smith analyzed the literature of the seminal authors and placed the research into one of the following categories: (a) There was a main problem with vagueness surrounding the explanation of the word *crisis*, (b) there was an issue with explaining the attributes of *crisis*, or (c) there was an issue with examining the causes of crisis. None of the categories provides a fit to existing literature, but each indicates progress toward a logical classification.

Similarly, Drabek and McEntire (as cited in Moynihan, 2009) and Turner (as cited in Moynihan, 2009) suggested that literature on disaster administration presented inconsistent perceptions on disaster reaction. Pauchant and Douville (1992), Pearson and Clair (1998), and Elliott and Smith (2006) found that disaster administration covers a number of subjects and there has been no synthesis of the various points of view. Pearson and Clair emphasized the literature of disaster administration, though filled with assumptions and recommendations, has undergone limited experiential examination.

Additionally, limited studies have been done that match disaster type with a strategic disaster response (Ki & Brown, 2013). Coombs (2004) developed the attribution theory to find a best fit between disaster type and strategic response, which was later fully developed in his situational crisis communication theory (SCCT). Attribution theory provides the relationship needed to fit crisis response planning with a crisis situation (Coombs, 2004). Coombs further indicated that disasters activate attribution, for disasters are unexpected and unconstructive. This relationship involving attribution and crisis accountability is recognized across an array of crisis types, which include human-error accidents, natural disasters, and organizational misdeeds (Coombs, 2004). The relationship involves three types of crisis grouping: victim, accidental, and intentional (Coombs, 2004). Crisis types grouped under the victim category create low attributions of crisis accountability and temperate reputational threats; natural disasters fall into this category where organizations are seen as the victims.

Coombs's (2004) three groupings are what people use to determine whether the origin of or reason for an incident is the people involved or ecological factors. According to Coombs (2004), natural destructive events are acts of nature that have adverse effects on an organization or climatic occurrences that impact the organization, and past crises are a significant fraction of the interpretation structure of current crises. Attribution theory formed the underlying assumption for the SCCT model, and Coombs (2012a) concluded the selection of the best strategic response is persuaded by the ascription of disaster blame. Moynihan (2009) added that "a coordination and crisis communication model argues that crisis response inevitably depends on collaborative processes to succeed" (p. 897). Xu and Li (2013) argued that the problem with SCCT is that it

determines a circumstance based on ascription, and the underlying principle is that the response strategy should match the disaster condition. Additionally, they purported that practitioners may utilize plans that are in the best interest of the organization, which could affect stakeholders and could lead to a breakdown in the transfer of disaster communication. Additionally, Tomasini and Van Wassenhove (2009) posited that during the various phases of disasters, the teamwork of various stakeholders could assist with minimizing expenses.

### **Definition of Stakeholders**

Freeman (as cited in Haigh & Griffiths, 2009) defined *stakeholders* as any individuals or group that can have an effect on or is influenced by the accomplishment of the organization's goals. In concurrence, Bryson (as cited in Coombs, 2012a) explained that a *stakeholder* is an individual or group that is influenced by or can have an effect on an organization. Holcombe and Anderson (2010) indicated that stakeholder's appointment comprised of persons from the public, organizations providing financial support and the regime. Additionally, Holcombe and Anderson explained the collaboration is especially a "cross-agency" (p. 331) administration group that interacts intimately with other groups as well as individuals to plan and construct suitable alleviation procedures. They noted that execution of this plan has been publicized in the Caribbean to decrease risk while at the same time achieving assistance from all stakeholders with an interest in the organization (Holcombe & Anderson, 2010). This is consistent with Garmhausen (2006), who claimed that organized disaster strategies involve synchronized actions with charitable trust organizations, nongovernmental

organizations, and functioning with private teams to harmonize assistance during disasters. According to Maak and Pless (2006), it is the stakeholders who take the environment into account. Freeman (1984) explained that they [stakeholders] could comprise of workers, partners of business, consumers, regimes, and investors.

Coombs (2012a) posited that for disaster administration, each stakeholder is mutually dependent on the other, and, according to Bryson, Clarkson, and Wood (as cited in Coombs, 2012a), an organization continues to exist or succeed by successfully organizing its stakeholders. Coombs expounded on this view by claiming that all stakeholders are important during crisis management and must be kept notified about the disaster and the plans the organization has to react to the disaster. The collaboration between stakeholders and the organization is crucial during disasters because, according to Coombs, it is the stakeholders who will give an account of the organization's development toward revitalization. Coombs concluded that during a crisis, the transmitting of data to stakeholders as part of communication of the disaster strategy that synchronizes the flow of information in a relevant and timely manner is very essential. Xu and Li (2013) agreed that all interior and exterior stakeholders, or primary and secondary stakeholders, are vital to disaster administration, but there must be equality in the relationships of the stakeholders. In addition, they agreed the conveying of data in disaster administration is crucial, but concluded that Coombs's SCCT was insufficiently put into practice to address the breakdown of the conveying of data during disasters.

Donaldson and Preston (1995) and T. J. Rowley and Moldoveanu (2003) posited that stakeholders are individuals who have a concern in the organization. Clarkson (1995) classified stakeholders as prime or subsidiary, or, as Freeman (1984) claimed, interior

and exterior stakeholders. In addition, Freeman described stakeholders as individuals who could directly affect an organization's operation and accomplishment. Freeman indicated these stakeholders are very important to an organization, and there must be interaction with them if an organization wants to be successful. In addition, Palttala, Boano, Lund, and Vos (2012) purported that government organizations and safety organizations are compelled by rules and regulations to plan for and deal with disasters, but since disasters these days are more complex, they require concurrent participation of numerous organizations.

Similarly, Palttala et al. (2012) explained that the scale and damaging effects of a disaster need additional stakeholders from various communal divisions at the national, provincial, and locality levels. They further claimed that international threats and disasters need intercontinental teamwork by civic and private organizations. Xu and Li (2013) explained that organizations must take into consideration the requirements and concerns of those who are interested in the organization and will in turn assist the organization to obtain its goal. Disaster communication, according to Coombs (2012a), focuses on putting optimistic perspectives in the minds of community members along with all the people who have an interest in the organization. In contrast, Seeger and Griffin-Padgett (2010) explained that during severe disasters, the loss of lives is seen as damaging to stakeholders' confidence, and during such disasters, organizations may experience difficulty determining which strategy to ascribe.

Alpaslan, Green, and Mitroff (2009) and Gilpin and Murphy (2008) asserted that organizations should build confidence and helpful correlations with stakeholders. Pearson and Clair (1998) indicated the organization should guard its stakeholders and provide

them with information for the duration of the disaster. Additionally, Boin (as cited in Piotrowski, 2010) indicated the magnitude of a disaster not only needs a harmonized and enormous reaction at the national or global level but also needs practical and thorough preparation. Lerbinger (2012) concluded that stakeholders must be engaged in the preparation phase of crises.

### **Definition of *Crisis***

Fink (1986) and Perrow (1984) found that organization philosophers agree that disasters vary in size and are unavoidable. As noted earlier in this chapter, Hermann (1963) was the first to discuss the three elements of crisis: surprise, threat, and little time to respond. However, Hermann further posited that by their character, crises are hazardous instances or defining moments in an organization's successive stages; disasters offer the possibility of allowing an organization to be more powerful than it was prior to the disasters. Hermann purported to seek for the chances in a disaster before the catastrophes of those happenings. Similarly, Ulmer, Sellnow, and Seeger (2011) explained that all disasters should not be thought of as very bad experiences and could be unique to an organization. Fink (2000) indicated that *crisis* is typified to some degree by danger and doubt, and is not always awful. In contrast, Rosenblatt and Sheaffer (2002) posited that, generally, *crisis* is defined as a harmful or damaging occurrence.

Mitroff (2001) defined *crisis* as a happening that is likely to have an effect on the entire organization. James, Wooten, and Dushek (2011) defined *crisis* as dangers or troubles to be overcome. The researchers added that a significant first step is to distinguish genuine disasters from company troubles so that leaders can react

consequently to both kinds of circumstances. James et al. surmised that, on the contrary, without being able to distinguish between company troubles and genuine disasters, managers may mistakenly support actions that may give rise to disasters in the organization. Pearson and Clair (1998) highlighted this problem, and noted the need for a general concurrence for the definition and natural history of *crisis* in all fields, for no researcher has recommended a methodical, perception involving all disciplines, and providing instances of achievements and malfunctions.

### **Natural Disasters in the Caribbean**

“Natural disasters are viewed as acts of God that are unwanted, unexpected, unprecedented and almost unmanageable causing widespread unbelief and uncertainty” (Rosenthal, Boin, & Comfort, as cited in Farazmand, 2007, p. 150). Because of its geographical location, the Caribbean is prone to natural disasters (Julca, 2012; UN Development Program, n.d.). Collymore (2008) claimed that more than half of the people in the Caribbean continue living in close proximity to coastal zones. In September 2004, the island of Grenada was ravaged by Hurricane Ivan, which resulted in 28 deaths, and 90% of buildings were destroyed (MunichRe, as cited in Simpson & Gladin, 2008). Additionally, 90% of communications in the Cayman Islands were destroyed, and valued at approximately \$3 million (MunichRe, as cited in Simpson & Gladin, 2008). In 2005, Hurricane Wilma caused damages in Cuba in the amount of \$700 million (Simpson & Gladin, 2008). In 2008, Belize was flooded from Tropical Storm Arthur that caused the loss of five lives (Simpson & Gladin, 2008).

Simpson and Gladin (2008) explained that the consequences of natural disasters could be lessened by disaster administration actions designed to minimize susceptibility to injury, in addition to endorsing preparation and reaction behaviors to save lives.

Simpson and Gladin defined *disaster risk management* as

A process of minimizing and managing the risks inherent in natural hazard events, whilst at the same time decreasing vulnerability to such events. It [disaster risk management] implies a systematic process; to implement policies, strategies, and coping capabilities of the society and community; to lessen the impact of natural hazards and related environmental and technological disasters. (p. 13)

Twiggy (as cited in Simpson & Gladin, 2008) identified four phases in the successive stages of crisis: “[a] prevention/mitigation, [b] preparedness, [c] response, and [d] recovery” (p. 13). Similarly, Coombs (2012a) presented a three-stage method of a united scheme for arranging and making use of the various perceptions purposed by leaders: “precrisis, crisis event and postcrisis” (pp. 18–19), which includes the four phases identified by Twiggy (as cited in Simpson & Gladin, 2008).

**Precrisis phase.** According to Coombs (2012a), the precrisis phase involves three subphases: “detection, prevention, and crisis preparation” (p. 18). Gonzalez-Herrero and Pratt (1995) found that taking action early could help to avoid disasters. In agreement with Coombs’s subphase of “detection” (p. 18), Register and Larkin (2008) as well as Gonzalez-Herrero and Pratt (1995) did not focus only on having systematic contingency plans in crisis management but also on scanning the environment for early warning signs. Champagne (2007) and M. Perry (2007) noted that disaster administration puts considerable importance on preparation and putting a stop to disasters. Register and Larkin (2008) added that no matter how careful or systematic disaster management plans are, they may be of no value if they cannot be conveyed. Coombs (2012a) indicated that



the conveying of data during a disaster is crucial to disaster administration. Regester and Larkin noted that having disaster administration plans in books and not utilizing or conveying them is useless, as was the case in the BP Oil Spill; the organization had a good disaster administration plan on the books for years but never conveyed it until the disaster occurred.

Coombs (2012a) indicated that in the precrisis phase, leaders must discover the causes or signals of caution, gather data correlated to them, and examine the data. Coombs further explained that disaster leaders must create a plan for reacting to the disaster. Similarly, Fink (1986) and Reilly (1993) repeatedly referred to the need for the advance warning signs discovery plan. Regester and Larkin (2008) posited that a logical method begins with recognizing a disaster. Canyon (2012) claimed that recognizing possible disasters in advance is a significant action, and that organizations must have instruments set up that are able to recognize or track repetitive cautions that come in advance of a disaster.

According to Ponis and Koronis (2012), while studies provided evidence of a vast quantity of helpful rules for planning and handling disasters, the function of a well-organized and effective administration to assist with the implementation of these rules is strictly underinvestigated. On the other hand, Andersen (2003) claimed that disaster planning has been the center of many investigations in disaster administration. Additionally, Reilly (1993) noted that disaster planning should be integrated in disaster deterrence and administration. Similarly, Fink (1986) and Shrivastava, Mitroff, Miller, and Miglani (1988) found that dedication to disaster administration by leaders is

compulsory for creating a methodical plan to disaster preparation, which includes strategies and group preparation.

**Crisis event.** Coombs (2007) established that the crisis event phase starts with an activated incident that signifies the start of a disaster and stops when the disaster is deemed to be solved. This phase entails two subphases: “crisis recognition and crisis containment” (Coombs, 2007, p. 19). On the other hand, Kamer (1996) claimed an organization may not be aware it is in a disaster and, according to Coombs (2012a), it is the organization’s stakeholders who declare when a circumstance becomes a disaster. Unfortunately, leadership could refute that such is the case and may decline to take preemptive measures (Pauchant & Mitroff, 1992). Coombs (2007) and Fink (2002) added that consultation and interaction with stakeholders is significant in this phase, and individuals in an organization must recognize a disaster is in existence and must react to the incident as a disaster. Likewise, Regester and Larkin (2008) asserted that comprehending and interacting successfully regarding disaster insights could assist with obtaining the assistance and confidence of all stakeholders.

Coombs (2007) stated that disaster restraint is centered on an organization’s disaster reaction as well as the significance and subject of the first reaction, unforeseen event strategies, and reporting on areas of interest. In addition, Pearson and Clair (1998) found that a disaster administration strategy must be constructed and executed, and that choices made in disasters are typified by “time” (p. 66) restrictions. Likewise, Mitroff (1994) indicated that disaster groups must act to stop disasters from escalating and to restrict the time periods. Alpaslan et al. (2009) indicated that the least setback in listening

to assertions or requests from stakeholders on whom the disaster had an effect is deplorable.

Coombs (2007) indicated the flow of information could pose problems during the reaction stage of a crisis. The internal disaster group must gather data, and the external stakeholders must be kept up-to-date with information about the disaster and actions utilized to deal with the disaster, as well as detailing the steps the organization makes toward recovery. Additionally, Weiner (2006) noted that an organization must account for its actions during a crisis, for liability entails answerability. Similarly, Ray (1999) explained that communication is one of the difficulties of disaster administration, and disaster communication allows an organization to react suitably in an effort to retain the community's trust and lessen harm.

**Postcrisis phase.** Coombs (2007) noted that after a disaster, the lessons learned should assist the organization to better prepare for the next disaster, to ensure that those with an interest in the organization are left with an optimistic feeling about the organization's disaster administration attempts and to make sure that the disaster is really ended. Coombs further indicated that disaster leaders must assess their efforts and the organization must gain knowledge to enhance its disaster administration by means of assessments; these assessments must give guidelines to best practices. Similarly, Sen and Egelhoff (1991) claimed the effects of the disaster must be assessed and an assessment of the devastation must be presented. L. Barton (2001) added that technology has improved the flow of information and has minimized the time disaster management groups have for reacting. On the other hand, Smith and Hayne (1997) indicated the use and speed of technology pose dangers for possible errors. Barton wrote that remarks should be made

on the strong points and weak points of the disaster implementation and proposals for enhancing the disaster administration strategy. Coombs (2012a) added the assessment of information as well as possible updates must be shared with stakeholders, for the conversation between stakeholders and the organization must be sustained for the benefit of all.

### **Use of Qualitative Research in Current Literature**

The use of qualitative inquiry methodology has been more common since the 1990s (Creswell, 2009). Three qualitative studies were analyzed—one is an exploratory study of the subjective experience and utilized the Q methodology, which combines the intensities of both the qualitative and quantitative methodologies. The three studies were completed using various methodologies—an exploratory method, a cross-sectional method, and a case study. Case study is well known across many academic disciplines as it is acceptable in psychology, law, medicine, and political science. The case study method has many types of data collection methods, but interviews have been the primary source of data collection in these studies. Yin (2014) wrote the case study methodology “is relevant the more that one’s questions require an extensive and in-depth description of some social phenomenon” (p. 4).

#### **Study 1**

Wheeler, Weeks, and Montgomery (2013) conducted an exploratory study of the subjective experience, to give an account of the insights and implied concepts of Red Cross employees toward their managers in the framework of disaster emergency response. Their research was consistent with the elements of a qualitative study in which

an exploratory method was used “to discover themes and patterns and to build initial models of how complex systems work” (Bernard & Ryan, 2010, p. 8). The problem that led to their research was that managers were critiqued for their disaster response, and inquiries were made about what successful management looks like in crisis response.

Regrettably, literature in the field of leadership provided limited guidance, and an investigation of current literature revealed the same issue. Likewise, in a recent research conducted by Hannah, Uhl-Bein, Avolio, and Cavarretta (2009), the researchers noted that there is an abundant need for leadership investigation in dangerous or life-threatening situations. Working at the World Trades Center before September 11<sup>th</sup> would not have been considered working in “extreme contexts” (p. 898) but became one after terrorists attacked the twin towers (Hannah et al., 2009). Additionally, Campbell, Hannah, and Matthew (2010) indicated that leadership in dangerous situations is under investigated. Similarly, Wheeler et al., (2013) noted that the problem still exists, and there is a great need for management investigation in such severe settings.

Wheeler et al. (2013) utilized the Q methodology to examine the insights of Red Cross employees, most of whom were volunteers with experience in disaster response and were drafted from chapters in Texas and Oklahoma. Twenty participants were recruited, 11 women and nine men ranging in age from 24 to 72. The research started with a survey, then participants were purposefully selected, which is in agreement with qualitative research. Merriam (2009) wrote that individuals are chosen because they mirror the standard individual or circumstances or example of the occurrence the researcher is studying.

The Q methodology offered the basis for the methodical investigation of bias where participants of the study were given a collection of declarations and were asked to rank them according to a given range (Wheeler et al., 2013). Merriam (2009) and Marshall and Rossman (2011) indicated that subjectiveness is not eliminated from the study but is identified and used to shape the data collection and interpretation. The Q methodology also combined the features of both qualitative and quantitative methodologies. Creswell (2009) indicated that individual quantitative or qualitative methodologies are insufficient to address complex problems in social sciences and health sciences. Hancock and Algozzine (2011) claimed that many researchers are using features of both quantitative and qualitative methodologies for a broader understanding of the topic under study.

According to Wheeler et al. (2013), the declarations that symbolized participants' views were not obtained from direct interviews of the participants but hypothetically from literature. The researchers added that 75 declarations were from Conger and Kanungo's hypothesis of charismatic leadership and Bass's hypothesis of transformational leadership. The declarations were arranged and put into four extensive hypothetical groups, and then superfluous declarations were removed to obtain a "Q-set" (Wheeler et al., 2013, p. 79) of 36 declarations, with nine in each group. Miles and Huberman (1994) purported the reduction of data may consist of the operation of quantifying.

Wheeler et al. (2013) explained that PQ Method software was used to correlate each type with every other type, followed by factor analysis of the relationship matrix. Multiple analyses were done to find the best hypothetical and numerical match; varimax

accounted for 43% of variance, then  $z$  scores were calculated for each declaration using only the types that obviously described the factor (Wheeler et al., 2013). Wheeler et al.'s study revealed that while the research methodology did not allow for a decision concerning the dispersal of the four distinctive viewpoints of management in the populace of Red Cross employees, it specified that all the viewpoints subsist and may symbolize both genuine and perfect viewpoints of management among Red Cross employees. The four viewpoints identified were “show me the way, stand beside me, see me, then tell me, and please understand me” (Wheeler et al., 2013, p. 82). Similarly, Hannah et al., (2009) created a basis to guide further research and for practitioners to investigate the effects of “leadership in extreme contexts” (p. 914).

Wheeler et al.'s (2013) findings revealed four distinctive viewpoints of management among Red Cross employees. The study gave rich descriptions of the Red Cross employees' perspectives, but highlighted the need for additional studies on numerous topics, such as replicating the study with another specimen of Red Cross employees from another region of the nation and conducting a study using another methodology to investigate the dispersal of the viewpoints of management in the community. Wheeler et al. purported that comparable research with dissimilar organizations or in dissimilar nations would be useful in constructing a hypothesis or ideal for management as one kind of “socially-close leadership” (p. 95).

## **Study 2**

Canyon (2012) used a cross-sectional method that utilized the survey technique from a research instrument composed of questions that derived from an accessible disaster administration “audit” (p. 366) and were created to gather information on “crisis

management teams” (CMTs; p. 366). Creswell (2012) indicated the use of an accessible instrument helps to improve the validity of the study. Additionally, Drury, Beaton, Boiney, Duncan, GreenPope, Howland and Klien (2010) explained that relevant to “crisis management teams” cooperation must be facilitated in order to achieve united objectives during disasters (p. 7). Similarly, Kapucu (2006) conducted an investigation to comprehend the issue of fostering collaboration among civic and not for profit entities to attain civic administration’s objectives during disasters. The basis of Kapucu’s (2006) study was based on the works of the “social capital network theory and organizational collaboration” (p. 205).

Likewise, Ganapati (2012) “conducted a case study in Golcuk, Turkey which suffered an earthquake, and provided the research setting in which to study social capital’s consequences for women during recovery because of the severity of the disaster and the civic developments that followed it” (p. 419). According to Ganapati (2012) shared resources assist with providing the crisis administration teams required to foster harmonization and collaboration to deal with communal issues and to foster the interaction needed among stakeholders. Canyon (2012) contacted CEOs and other managerial decision-makers for face-to-face interviews that were conducted via telephone.

Similarly, Ganapati (2012) utilized interviewing as the principal source of data collection. The use of face-to-face interviews concurred with the qualitative practice; as well as, Yin (2014) the methodologist for case study research, who elucidated that interviews are perceptive and provided detailed accounts as well as individual point of views. Canyon (2012) added that participants were chosen from "health establishments,



such as medical clinics, hospitals, pharmacies, and dental clinics and related health establishments, such as, podiatry practices, physio-therapy practices, chiropractic practices and aged-care facilities" (p. 366).

Thirty-four establishments were utilized and participants that were selected/ chosen were compliant with the qualitative process. On the other hand, Ganapati's (2012) study had sixty-nine participants but interviews were conducted until the point of saturation was reached. Glaser and Strauss (1967) posited that the sample size in qualitative research should be decided based on the rule of saturation. In addition, Yin (2014) refers to saturation as "literal replication," and it is reached when the gathering of new information does not impart any additional details to enrich the theory (p. 146). Twenty-seven participants took part in the study; eighteen women who survived the earthquake and nine women who were policy makers.

Earthquake survivors were identified from the newspaper (that was common to Golcuk's residents) and by the snowballing method (a participant that is recruited suggested another individual that may be interested in participating in the study), while policy makers were identified by visiting the disaster recovery offices and also by the snowballing method. Canyon (2012) in his research used an accessible disaster administration audit to gather information from CMTs. Canyon also utilized quantitative forms of data analysis; "the data were analyzed with SPSS for windows, version 18, using the one-way ANOVA for numerical data, followed by Tukey-b post-hoc tests, and chi-square tests for categorical variables" (p. 367). One of the steps identified by Creswell (2009) for data analysis in quantitative research is to make known "the statistics and the statistical computer program for testing the major inferential research questions"

(p. 152). Additionally, Creswell (2009) highlighted that the use of quantitative and qualitative methodologies in research assisted with broadening the understanding. Canyon had a 40% informant rate, which is considered adequate because the issues correlated to the lack of availability and time. In addition, participants feared lawful constraints and the breach of confidentiality.

Yin (2014) explained the importance of protecting the confidentiality and privacy of all informants participating in research. Similarly, Bryman (2008) wrote that participants' privacy and confidentiality be protected, and that it must be stipulated in an informed consent form. Canyon (2012) indicated that the interviews guaranteed anonymity and that those conducting the interviews adhered to protocol standards. The Code of Federal Regulations (45 CFR 46; 2009) indicates the ethical standards for all human participants engaged in research. Additionally, the Academy of Management (2003–2012) added that private data must be treated as such and that secretive data not be made public with subjective identifiers. The hospitals in Canyon's study were distributed evenly in various states in the region of the country, and all other organizations were situated in the western part of Australia.

Canyon (2012) indicated the limitations of his study: (a) no fixed number of disasters was needed before permanent disaster administration teams were formed; (b) proportional business statistics were deficient; and (c) the outcomes of the research confirmed Australia's hospital requirement of further financial, talent, and human capital, which were comparatively poor when compared to U.S. standards. In addition, of the 34 organizations studied, 79% had CMTs, and the organizations provided conflict resolution training to those members. One important note is that only 50% of medical clinics

provided this type of training, while conflict resolution was provided at all hospitals (Canyon, 2012). Rahim (2011) purported that leaders are better able to handle circumstances when there is a thorough understanding of conflict resolution. Further shortcomings of the Australian hospitals were the shortage of staff, entrances to in-patient care were obstructed, and intensive care units and operating theaters were burdened (Canyon, 2012). Canyon recommended that small organizations attempt to include every person in the “preparedness activities” (p. 371), and that all CMTs in large organizations incorporate the leaders of all managerial divisions and “service providers” (p. 371) to minimize the issue of siloing.

Likewise, Kapucu (2006) found that there are questions and difficulties existing with the shared interactions needed by disaster administration teams and other stakeholders working in disasters which have been recognized by many investigators such as Gray (1989) and Linden (2002), and they are of continued interests to the scholarly and practitioner communities. In conclusion, Canyon (2012) found that all hospitals selected for the research in Australia provided conflict resolution training to all crisis management team members compared to only 50% of medical clinics.

### **Study 3**

Olofsson’s (2011) research was focused on developing a hypothetically based replica of organizations’ “disaster preparedness in heterogeneous societies and to empirically investigate the natural element of the replica in Swedish municipalities” (p. 215). The public of European civilization was diverse and an important aspect of disaster preparation was to modify contingency planning and disaster preparations to the public; therefore, through hypothetical and experimental investigations of the replica for

“organizational crisis preparedness in heterogeneous societies” (Olofsson, 2011, p. 215) the OCPH replica was created. In contrast, Lazzaroni and van Bergeijk (2013) argued that there are practical dissimilarities in the use of the word "heterogeneity" (p. 7) in information obtained in studies and especially in fields that are in the infancy stages such as disaster administration. They also added that the outcomes can be conflicting because of the systematic procedure used to achieve results, and that there should be an aim to combine the investigative approach so that the study is less susceptible to investigator's bias. Lazzaroni and van Bergeijk (2013) reviewed twenty studies and concluded that combinations of both quantitative and qualitative approaches are needed to assist with discovering new areas of research. They concluded that any one approach is deficient.

Olofsson (2011) used his prior study of disaster preparation, which was conducted in 160 boroughs to help identify organizations that would be suitable for additional research. This purposeful selection is part of the qualitative methodology; Lewis and Sheppard (2006) indicated that investigators decide what they need to know and then select informants who are experienced and knowledgeable in the field of interest. In an effort to depict the methods required for crisis preparation, while utilizing open-ended interview questions to gather data, Olofsson utilized a qualitative research.

Merriam (2009) purported that qualitative research is done to better understand a phenomenon that theory fails to explain comprehensively or for which there is limited theory to explain the phenomenon. Olofsson (2011) indicated that interviews were done with disaster leaders from six purposefully selected boroughs in Sweden. According to Loh (2012), purposeful sampling is utilized to choose participants with the applicable skills and know-how.

Semistructured interviews were conducted with seven participants from six boroughs, four small to medium-sized boroughs and two city regions in the boroughs of Gothenburg and Stockholm (Olofsson, 2011). Kvale and Brinkmann (2009) noted that an interview is conversational and involves the exchange of viewpoints between individuals. The small sample size supported the stance of a qualitative research where the intent is not to generalize but to understand the outcomes (Swanson & Holton, 2005). This stance also was justified by Molla (2010), who wrote that a small number of participants make the investigator better able to manage the procedure. Similarly, Cooper and Schindler (2011) noted that a small number of participants is one of the important characteristics of qualitative studies.

Bauer and Gaskell (as cited in Olofsson, 2011) suggested that interview questions be open-ended in order to collect data from participants who have invaluable data, experience, and knowledge in the area of study. Olofsson (2011) utilized the interview guide from the OCPH replica. Four interviews were conducted via telephone and three in person. Olofsson noted the reason for not conducting all interviews face-to-face was his lack of finances and the distance to be traveled. Cooper and Schindler (2007) indicated the gathering of data via telephone interviews is more appropriate when informants are not in close proximity to the investigator. The researcher further indicated that each interview lasted for an hour, except for one phone interview that lasted 30 minutes. Olofsson noted that all informants had knowledge of working in disasters.

Additionally, Bauer and Gaskell (as cited in Olofsson, 2011) indicated that data received from interviews be “analyzed and transcribed using the qualitative content analysis approach” (p. 220). Glesne (1999) added that data analysis is the arranging of

information gathered from reading, observing, and hearing in order to learn from the data. Olofsson (2011) had conducted a previous study in which he investigated “formal disaster preparedness of 160 municipalities in Sweden” (p. 219). For his 2011 research, to further develop the OCPH model, the participants were chosen from the municipalities that had been utilized in his prior study. The researcher coded the data using structured coding to reexamine the data collected from interviews and to see how they correlate to each other, to see if the features of the themes varied based on boroughs, and to know what types of disagreements would continue to progress.

Olofsson (2011) noted that an in-depth investigation of interviews with such a small sample is subject to bias and personal interpretations. In order to minimize this risk, data collected from interviews were cited and demonstrated in outcomes (Olofsson, 2011), which is in compliance with qualitative research where bias is not eradicated but is accounted for in data collection and analysis as part of the role of the researcher (Giorgi, 1997; Marshall & Rossman, 2011). Similarly, Creswell (2009) and Glesne (1999) stated the researcher’s bias and values are to be made known and accounted for during the reporting of the data analysis. Bradbury-Jones, Sambrook, and Irvine (2008) claimed that subjectiveness is not unusual in qualitative research.

The outcomes of Olofsson’s (2011) research indicated an organization that has a formal and organized method of disaster preparation does not automatically have casual rehearsals prepared; and although, the experiential study was restricted, the outcomes suggested that the OCPH replica, with its focal point on reasonableness and directness, guaranteed a more functional method of classifying and additional comprehension of directorial crisis preparation (Olofsson, 2011). Zucker (2009) posited that understandings

of what informants think, do, and feel further one's comprehension. Olofsson also added that the OCPH replica could be considered a reasonable tool that is helpful in adjusting disaster preparations to a diverse culture since disasters are "becoming transboundary and transsystem" (p. 224). Prior research of Boin (2009) and Wachtendorf (2009) supported Olofsson's (2011) statement that disasters are "becoming transboundary and transsystem" (p. 224), as Boin examined the tests of transboundary disaster and Wachtendorf examined the social breakdowns of transsystem.

The intent of the experiential examination was to observe if the hypothetical model was experientially appropriate, but Olofsson (2011) found the OCPH model must include all alternatives on conditions of diversity and organization; therefore, the outcomes could be observed as an investigative instrument in the expansion of the model. Olofsson noted that interviewing only disaster leaders was a significant weakness, bearing in mind that leaders' perspectives may be significantly different from other employees'. The researcher recommended an additional study of the OCPH replica should comprise an array of various viewpoints, both internally and externally, of the organization. Trochim (2006) stated that qualitative investigators decide how equivalent their findings are to actuality.

#### **Study 4**

The intent of Blitzstein's (2013) study was to

Describe a unique pension agreement between a major American Labor Union and the six largest American employer[s], involving the merger of four underfunded multiemployer pension plans that restructured the legacy benefits through a financial transaction and redesigned future benefits and funding policy. (p. 12)

The research utilized the case study methodology and was conducted from the view of “a union as a pension stakeholder and reflected the individual’s insider position in developing policies on behalf of the Commercial Workers International Union (UFCW)” (Blitzstein, 2013, p. 13). J. Rowley (2002) posited that case studies are utilized because they give additional perceptions that could not be obtained from other methodologies.

Blitzstein (2013) tried to manage adherent subjectiveness that could be depicted in a case study that is imbalanced. In alignment with qualitative methodology, bias was not eradicated, but was accounted for in the data collection (Merriam, 2009). The problems that led to Blitzstein’s research is that American Debt Benefit Plan has been continuously adversely affected by fiscal disasters such as the bubble bursting in 2000–2002, then the housing and mortgage crisis in 2007–2008. The mortgage crisis remains today and is still a risk to America Debt Benefit Plan. Similarly, Phaup and Kirschner (2010) indicated that fiscal disasters have effects on nationwide rule and civic budgets. Likewise, Constantinescu (2012) posited that current studies have shown that the monetary disasters have significant consequence on cash flows which also affects "pension funds' portfolio" (p. 23). Informants were selected from the UFCW (the main labor union in the United States) and Kroger (the sixth leading employer in the United States). Selecting participants is in concurrence with qualitative methodology. Yin (2009) posited that purposeful sampling identifies participants who will share information that will “yield the best possible data” (p. 91). Participants met and negotiated a new arrangement that maintained united work between the employees of UFCW and Kroger that will expire on January 1, 2022 (Blitzstein, 2013). Blitzstein utilized tactical



conversations via synchronized software that allowed participants to respond immediately to what they heard from the presenters.

Blitzstein (2013) found the range of the UFCW/Kroger retirement fund deal was restricted; “Kroger still reports \$2.3 billion in multiemployer unfunded liabilities and UFCW still has a substantial number of red zone plans with problematic futures” (p. 18). The researcher identified recommendations for further research. The union representative tried courageously to reflect past the existing state of affairs and to suggest a way to sustain the retirement fund; subsequently, “congress, unions, and employers” (Blitzstein, 2013, p. 18) were given five years to reorganize and redesign the rules of giving up work for a more enduring plan “before it is too late” (p. 18). Blitzstein did not expect the detailed understanding obtained from the case study would have provided resolutions for the whole organization and directives on how organizations could create an agreement for “change that allows mature pension plans to survive, evolve, and reinvent a new lifecycle” (p. 13). Hancock and Algozzine (2011) noted that conducting a case study means recognizing a subject matter that can be analyzed in details in its natural setting.

### **Chapter Summary**

In this chapter, a review of the literature and the use of contingency theory and how it was used for the theoretical framework of this study were explained. Seminal literature on crisis management and the evolution of leadership development for disasters were reviewed. The literature revealed the need for methodical studies in crisis management. This was followed by the history of crisis management. The various definitions of *stakeholders* were discussed because of their significant role in crisis

management as revealed by the literature. A review of the literature also revealed the ambiguity in the explanation of crisis among researchers, and how limited studies have been done that matched disaster types with a strategic disaster reaction. Since this research was on natural disasters in the Caribbean, literature was reviewed that discussed some of the devastation suffered by these islands that are prone to natural disasters. In addition, an analysis of current literature was presented that revealed how researchers not only are utilizing the qualitative forms of data analysis but are using both quantitative and qualitative forms of data analysis for a broader understanding of crisis management. Three studies utilized only the qualitative method of data collection, and one utilized the case study methodology, as was used in this research. The literature also revealed that case studies may further one's comprehension of disaster administration.

## CHAPTER 3. METHODOLOGY

The intent of this explanatory case study was to explain the development process of government crisis management leaders for natural disasters in the Caribbean. Marshall and Rossman (2011) wrote that “qualitative methodologists have described three major purposes for research: to explore, explain, or describe a phenomenon” (p. 68). Hence, the following research question was investigated: How do government crisis management leaders for natural disasters in the Caribbean explain their development process?

This study utilized an explanatory case study research approach. Yin (2014) wrote that a “case study is preferred when examining contemporary events, but when the relevant behaviors cannot be manipulated” (p. 12). This researcher sought to obtain a deeper understanding of the development process by conducting in-depth interviews with participants so they could explain their perceptions of the development process.

### Research Design

The case study method was utilized for this research because, according to Yin (2014), case studies are required when the borders between the occurrence that can be observed and the circumstance are not obviously noticeable. An experiment differs in that there is a deliberate separation between the occurrence and the circumstance, while histories are restricted to past occurrences because of the unavailability of applicable

occasions and the lack of participants for interview (Yin, 2014). The case study was most suitable for this research because the study involved the explanation of the development process of government crisis management leaders in the Caribbean who have witnessed many natural disasters (e.g., hurricanes, floods, droughts, etc.). The research question is a how question, and Yin explained “that how questions are more explanatory and likely to lead to the use of a case study, and this is because such questions deal with the operational links needing to be traced over time” (p. 10).

This explanatory case study was a qualitative research where an in-depth understanding and searching for meaning were important. Merriam (2009) posited that qualitative research focuses on seeking meaning and understanding, and added that “qualitative researchers are interested in how people interpret their experiences, how they construct their words, and what meanings they attribute to their experiences” (p. 14). As such, as qualitative investigators search for meaning, this creates the foundation for theoretical assumptions, which distinguishes qualitative studies from other kinds of studies. Creswell (2012) noted it is the theoretical assumptions that help researchers to apply a research technique that articulates their main ideas to generate a study. There are four theoretical assumptions—epistemology, ontology, axiology, and methodology—described as follows.

### **Epistemology**

Epistemology is mainly about knowing and how data are justified (Creswell, 2012). Based on this assumption, a researcher could become an observer-participant to study participants in their own setting. The researcher involved in the case of the present study could not put herself at risk to observe crisis management leaders working in

natural disasters. Stake (1995) added, “When researchers cannot observe for themselves, they ask others who have seen” (p. 44). In addition, the data are obtained from what participants know and experienced; therefore, the knowledge is subjective. The researcher, in an observer-participant capacity, would understand more about participants from gathering firsthand information. Hatch (2006) indicated that epistemology and ontology are correlated because how one knows, or identifies, or becomes aware of reality is based on how one generates or uses knowledge.

### **Ontology**

Hatch (2006) indicated that ontology is concerned with reality that could be biased (i.e., subsists in one’s mind) or objective (i.e., subsists separately). Based on ontology, researchers will know how to generate the knowledge needed to devise the appropriate method to answer the research question and obtain new knowledge. Merriam (2009) stated that qualitative research presumes there are numerous truths; different truths are accepted by qualitative researchers, as well as participants, and those who will read the study. Such was the in the present research, as the researcher used an open-ended interview guide to gather data from government crisis management leaders in interviews that were digitally recorded and transcribed verbatim, thus providing their various perceptions. In this case, the researcher reported numerous truths, for different themes were obtained from the telephone interviews with participants. In qualitative research, the researcher’s role and values must also be made known (Creswell & Plano Clark, 2007).

### **Axiology**

Creswell (2012) indicated that in axiology in qualitative research, the researcher’s principles must be made known in the research. Therefore, the researcher used journaling

to monitor and record her bias throughout the study. Merriam (2009) added, “The researcher is the primary instrument for data collection and analysis” (p. 15), which could introduce bias. The researcher had no prior experience in crisis management, only knowledge that was gained from reviewing literature about the topic. The researcher constructed the data collection method before the study, and the data analysis followed a logical path to observe data and create a detailed understanding of the subject being investigated.

### **Methodology**

Creswell (2012) described methodology as autonomous; conclusions are made according to the researcher’s interpretation of the data collected. Merriam (2009) posited that qualitative research is done to better understand a phenomenon that a theory fails to explain comprehensively or for which there is limited theory to explain the phenomenon. In qualitative research, the phenomenon must be bounded to “qualify as a case” (Merriam, 2009, p. 41). Hence, the boundary of the case for this study was the development process for the Caribbean.

Additionally, research methods are associated with underlying traditions. According to Racher and Robinson (2003), there are four research traditions—positivist, postpositivist, interpretivist, and constructivist—and each qualitative study may be guided by either of these traditions. A single case study was utilized for the present research so that the researcher could gain detailed perceptions and understandings from the data collected from government crisis management leaders explaining their development process to successfully respond to natural disasters in the Caribbean. Yin

(2014) asserted a “case study is preferred when examining contemporary events, but when the relevant behaviors cannot be manipulated” (p. 12).

The case study research method is associated with the underlying tradition of constructivism where, according to Merriam (2009) and Stake (1995), the qualitative investigation presumes that truth is socially created, meaning there are numerous truths, or established meanings, of a particular happening. This researcher constructed knowledge from the data collected from historical documents, telephone interviews, and observation in the form of nonverbal communication such as pauses, tones, or inflection during the interviews. Doing so helped the researcher to gain insights from participants’ perspectives as they explained the development process of government crisis management leaders for natural disasters in the Caribbean. Numerous truths or established meanings were revealed as participants shared their experiences, from which themes and patterns developed (Swanson & Holton, 2005), thus providing a thorough understanding, as these themes and patterns were analyzed with those from the theoretical and conceptual frameworks.

### **Sample**

Leaders who are knowledgeable in the field of disaster management were purposefully chosen to take part in this research. As Loh (2012) explained, purposeful sampling is utilized to choose participants with applicable skills, training, and know-how. With this in mind, participants were selected from a government national disaster organization in the Caribbean. The target population was male and female government crisis management leaders for natural disasters in the Caribbean with at least 5 years of

work experience that included working in natural disasters. The purposeful sampling is consistent with the case study design; as Yin (2009) asserted, the selection procedure identifies participants who will share information that “yield the best data” (p. 91) to answer the research question. The sampling procedure was structured to obtain precise and rich information from those crisis management leaders who were most experienced in the government national disaster organization and met the inclusion criteria.

The inclusion criteria for the research included a sample size of 20 government crisis management leaders for natural disasters (or the number of participants needed to reach saturation) in the Caribbean with more than 5 years of work experience that included working in natural disasters. Cooper and Schindler (2011) posited that a small number of participants is one of the important characteristics of qualitative studies. Glaser and Strauss (1967) suggested the sample size in qualitative research should be decided based on the rule of saturation. Yin (2014) referred to *saturation* as “literal replication” (p. 146), which is reached when the gathering of new information does not impart any additional details to enrich the theory. This researcher also targeted historical documents as secondary sources.

Yin (2014) noted that historical “documents can provide other specific details to corroborate information from other sources” (p. 107). The historical documents viewed for this study were accessed from public websites (Caribbean Disaster Emergency Management Agency [CDEMA] and United States Agency for International Development [USAID]), while others were made available by the organization. The researcher was granted permission by the organization to have access to the information. The identity of the organization selected for this research will remain anonymous.



Information received from the organization was reviewed to ensure the organization's anonymity. Information was gathered from primary and secondary sources. Principal information was collected via telephone interviews.

### **Setting**

Interviews were conducted over the telephone with each participant using 10 open-ended questions from an interview guide. Before the interviews were conducted, a site permission letter was sent to the government organization in the Caribbean requesting its participation in the research and allowing the researcher access to historical documents that are not publicly available. After the necessary approvals were obtained by the researcher and forwarded to the director, the researcher was sent e-mail addresses and telephone numbers of those participants willing to take part in the research. The researcher contacted each participant via e-mail or telephone to set the time and date of the interview. The researcher was also granted access to historical documents within the organization, which were e-mailed to the researcher. Contents from publicly available documents used in the research were saved in a password-protected word document file with only the researcher having the password. All data extracted from the published documents and those sent from the organization were imported into a Word document without any personal identifiers in order to protect the organization's identity.

### **Instrumentation**

This research involved the use of principal data in the form of interviews and subordinate data in the form of historical documents. The interviews were semistructured.

Bernard and Ryan (2010) stated the foundation of semistructured interviews is an interview guide, and because the questions asked of participants are the same, it is possible to compare interviews. This research utilized semistructured, “shorter case study interviews” (Yin, 2014, p. 111) via telephone with participants. Interviews were conducted using 10 open-ended questions. These questions were asked of each participant in the same order to seek participants’ perspectives on the development process of government crisis management leaders for natural disasters in the Caribbean.

Capella University requested that all new instruments be field tested. Therefore, the researcher field tested the interview guide. For the field test, the researcher sought the support of two experts in the field from the Caribbean and three terminally degreed persons (PhDs) who were not among the participants selected for this research. This ensured internal validity or credibility because the researcher requested that the instrument be reviewed and “solicited feedback” (Merriam, 2009, p. 217) from the experts to ensure the instrument could be used to collect the data the researcher sought. Merriam (2009) added that “peer examination is a strategy that can be used to ensure for consistency and dependability” (p. 222). The field test experts suggested no changes to the instrument, for Institutional Review Board (IRB) review.

The instrument was used to interview the participants via telephone based on their agendas and accessibility. Apart from recording the responses, themes were identified and coded. The analysis was completed using Yin’s (2014) “precision of pattern matching” (p. 147), which “involves no precise comparisons whether you are predicting a pattern of non-equivalent dependent variables or a pattern based on rival independent variables, the basic comparison between the predicted and the actual pattern may involve

no quantitative or statistical criteria” (p. 147). The researcher also noted participants’ change in tone or any inflection, as a form of observation. These nonverbal communications were also included in the transcripts. The researcher ensured that all data collected were kept in a password-protected electronic database.

Secondary data were collected from historical documents in the form of written reports, policies, plans, newspapers, evaluations, and assessments. Stake (1995) indicated that documents serve as alternatives for archives of actions the researcher could not witness firsthand and can be important sources for the case. The information from historical documents also was analyzed and coded using the “precision of pattern matching” (Yin, 2014, p. 147).

### **Data Collection**

Interviews were the principal form of data collection. Yin (2014) wrote, “Interviews are insightful and provide explanations as personal views (e.g., perceptions, attitudes, and meanings)” (p. 106). The researcher utilized interviews of at least 20 crisis management leaders (as required by Capella University) or until the point of saturation occurred. Telephone interviews were conducted because observing participants at work during natural disasters would have put the researcher at risk.

Stake (1995) wrote the interview is the chief path to numerous truths. Prior to conducting the interviews, a recruitment letter was sent to the director of the organization. An informed consent form, which described the nature of the study and indicated that each interview would take no more than an hour, was sent to each participant to be reviewed and signed. The researcher conducted telephone interviews

using 10 open-ended questions based on “participants’ schedules and availability” (Yin, 2014, p. 88). The researcher noted their answers and indicated change in tone or any inflection as a form of observation. Information also was gathered from documents such as reports and government correspondence.

Participants were given coded names (P1, P2, etc.) in order to protect their privacy. The researcher followed all ethical guidelines to ensure privacy, anonymity, and confidentiality of all participants. Yin (2014) stated, “Protect the confidentiality and privacy of persons who contribute, so that, as a result of their contribution, individuals will not be unintentionally put in any unwanted situation” (p. 78).

Each interview was digitally recorded and transcribed verbatim. The researcher analyzed and coded all data individually for patterns and themes using Yin’s (2014) “precision of pattern matching” (p. 147). Historical documents also were analyzed and coded for content using “precision of pattern matching” (Yin, 2014, p. 147) to ensure they “corroborate and augment the data” (p. 107) received from participants and are directly linked to the propositions.

### **Data Analysis**

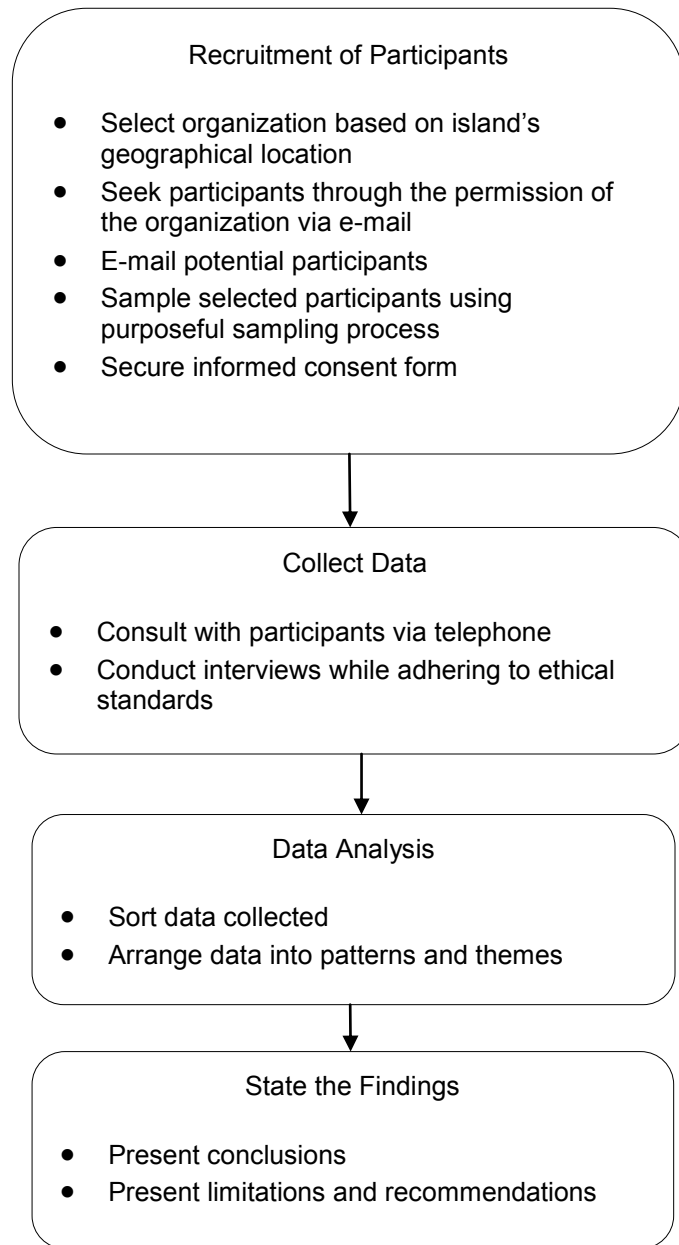
All data were analyzed and transcribed using Yin’s (2014) “precision pattern matching” (p. 147). The data were amalgamated as a direct representation of the researcher’s propositions. The researcher conducted interviews with each participant. All interviews were digitally recorded; themes were identified and coded using this technique. Yin (2014) stated that “audio tape provides a more correct recording of any interview” (p. 110). In addition, notes were taken of nonverbal communication, such as

pauses, tones, or inflection. The raw data from the digital recording for each interview were transcribed verbatim and reviewed line by line. Important contents were taken from documents. The content was analyzed to corroborate participants' responses. All transcripts were placed in categories based on patterns and themes and were matched to the propositions presented in the study.

Themes were identified and counted for frequency to identify patterns and show how they formed the theoretical framework. M. B. Miles and Huberman's (1994) six-step process was used to analyze the raw data: The researcher (a) gathered the data, (b) coded the data, (c) individually reviewed the responses of each informant, (d) categorized the data for themes and numerically recorded repetitions, (e) classified themes, and (f) explained and presented each theme in the findings. The findings were used to certify, contest, or enhance the concept (Yin, 2014). The researcher used word processing software to present the findings. The step-by-step procedures the investigator utilized, from recruitment to data analysis, are illustrated in Figure 3.

### **Validity and Reliability**

Merriam (2009) posited that "credibility, transferability, dependability and confirmability substitutes for internal validity, external validity, and reliability and are widely adopted in qualitative research" (p. 211). The criterion for judging the credibility of this research was the researcher's use of multiple sources of data collection.



*Figure 3.* Procedures: Sample recruitment through data analysis.

### **Credibility**

The investigator conducted telephone interviews with each participant using an interview guide. The investigator asked open-ended questions to seek participants'

perspectives on the development process of government crisis management leaders for natural disasters in the Caribbean. The researcher also noted nonverbal communication as a form of observation. Data from historical documents also were collected. This ensured internal validity or credibility through data triangulation, and according to Yin (2014), “encourages the collection of information from multiple sources, but aimed at corroborating the same finding” (pp. 120–121).

The data from historical documents were coded using “precision of pattern matching” (Yin, 2014, p. 147) to ensure they “corroborate and augment the data” (p. 107) received from participants and are directly linked to the propositions. If the pattern matches, internal validity is enhanced. In addition, the research provided thick descriptions and detailed explanations so that readers could assess the conclusions given in the research and could apply or transfer them to other situations.

### **Transferability**

The research provided detailed explanations of the findings from notes, documents, and direct quotes from the participants’ responses to interview questions. Lincoln and Guba (as cited in Merriam, 2009) posited, “The best way to ensure the possibility of transferability is to create a thick description” (p. 227). Stake (1995) indicated, “Thick descriptions, experiential understanding, [and] multiple realities” (p. 43) are likely in qualitative case studies. Therefore, this research provided adequate explanations that readers could apply to other situations. A thick description, according to Lincoln and Guba (1985), is a technique or method used to attain external validity.

## **Dependability**

Field testing was completed in this research to ensure “internal validity or credibility” (Merriam, 2009, p. 217) as well as reliability (Merriam, 2009). Two experts from the Caribbean and three PhDs who are knowledgeable in the field of disaster management and are not participants selected for this research were asked to review the instrument for clarity, readability, and deliverability, as requested by Capella University. The instrument was peer reviewed, per Merriam (2009), which enhances the dependability and credibility of the instrument. The experts reviewed the instrument and recommended no changes.

## **Confirmability**

Lincoln and Guba (1985) defined *confirmability* as the extent to which the data collected validate the research findings. The researcher utilized documents and interviews as methods of data collection. Open-ended questions were asked of all participants via telephone. Yin (2014) stated, “Each answer represents the researcher’s attempt to compile evidence related to the particular findings” (p. 126). In addition, the researcher used contents from historical documents to ensure they “corroborate and augment the data” (Yin, 2014, p. 107) received from participants and are directly linked to the propositions.

## **Ethical Considerations**

Merriam (2009) claimed that “ensuring validity and reliability in qualitative research involves conducting the investigation in an ethical manner” (p. 209). The Code of Federal Regulations (45 CFR 46; 2009) specifies the ethical guidelines for research



dealing with human participants. The researcher adhered to all guidelines that applied to this study. The researcher also completed the CITI training program and optional modules for researchers who are working with human participants and received the *Human Research Curriculum Completion Report*. The research was administered under the IRB requirements: informed consent, confidentiality, privacy, bias, security, benefits, and risk (Bryman, 2008), and the moral standards of the key *Belmont Report* principles.

All participants were treated with respect, and the researcher was trustworthy and truthful about what the study was intended to do. The researcher used information that is publicly available and information she was given permission to use from the organization. The researcher analyzed documents fairly based on the results of the information.

### **Informed Consent Form**

The informed consent form outlined the nature of the research and was provided to all participants for their review and signature before they participated in the study. This ensured they understood the intent of the study. In compliance with the interview protocol, a verbal acknowledgment was also digitally recorded before each telephone interview began. This paperwork was kept secure by the researcher as part of the research process.

### **Confidentiality**

The researcher ensured that during and after the research all participants remained anonymous. Anonymity also was stipulated in the informed consent form so that participants could verify that they could withdraw at any time. The researcher adhered to

these guidelines by giving each participant a code number, and all personal identifiers were removed from all data collected.

### **Privacy**

Detailed information was provided by the researcher to ensure that all participants' private information was kept private. The informed consent provided detailed information on how participants' information would be kept private. All information collected during the recruitment process and all methods of data collection and analysis used to gather information were kept private to maintain privacy of participants.

### **Bias**

The researcher did not try to influence the research in any way or to share her knowledge, ideas, or experiences that can be regarded as researcher's subjectiveness. The researcher tried to minimize subjectiveness by using journaling to monitor her bias in which she recorded her thoughts, feelings, ideas, questions, and so forth, throughout the research.

### **Benefits**

All participants were given an equal opportunity to contribute to the research based on their perceptions. The data added to the lack of documentation regarding the development process of government crisis management leaders for natural disasters in the Caribbean. The findings from the research may benefit practitioners in crisis management, public administration, and strategic management.

## **Security**

All data were kept secure, and all paperwork was locked in a private safe accessible only to the researcher. All computerized data were password-protected and kept on the researcher's home computer. All data will be kept for the required 7 years and destroyed thereafter. All hard copies will be microshredded to ensure security and the disk smashed.

## **Risk**

The researcher adhered to all safety precautions to ensure that participants were exposed to minimal risk. The use of a digital recorder and the reason for its use was made known to all participants via the site permission letter, informed consent, and interview protocol. The length of each interview was no more than an hour in order to protect participants from unnecessary duress. In addition, the researcher adhered to all ethical considerations for human participants administered in the key *Belmont Report* principles (justice, benevolence, and respect for persons) and 45 CFR 46. Initial contact via e-mail and telephone is common in daily living and did not cause participants more than minimal risk. All names of participants as well as the organization were given codes to ensure privacy, confidentiality, and anonymity. All participants in this research did so voluntarily; no one was coerced or promised any incentives to participate. No third party was involved in the data collection process.

## **Chapter Summary**

This chapter provided a detailed description of the research design used to determine how government crisis management leaders for natural disasters explain their

development process. The sample, setting, and instrumentation also were discussed and explained. The various methods of data collection were discussed, along with justifications for their use in the study. Data analysis was discussed, as was a step-by-step procedure of how the raw data were analyzed in the study. This was followed by a description of the validity and reliability of the research. The chapter ended with the ethical considerations for the study, which was conducted utilizing the IRB requirements and the key *Belmont Report* principles.

## CHAPTER 4. RESULTS

### **Restatement of the Purpose and Research Question**

The purpose of this explanatory case study was to explain the development process of government crisis management leaders for natural disasters in the Caribbean. The researcher's goal was to contribute to scientific knowledge by documenting the development process of government crisis management leaders for natural disasters in the Caribbean. The researcher interviewed participants, and the data obtained from their responses were used to answer the research question, How do government crisis management leaders for natural disasters in the Caribbean explain their development process?

Chapter 4 provides an analysis of participant responses based on the emerging themes and patterns that were matched to the propositions, and how they were used for the theoretical and conceptual frameworks. An analysis of the data collected from historical documents also is presented, indicating whether they “corroborate or augment the data” (Yin, 2014, p. 107) collected from participants' responses, and are directly linked to the propositions.

## **Researcher's Background**

The researcher has a professional background in strategic planning and is computer literate. The researcher was assigned a mentor from Capella who is an expert in the field. The researcher conducted a field test, which helped with reviewing the interview guide, and completed coursework in qualitative methodologies. The researcher has some experience conducting interviews in a professional capacity, thus qualifying her to conduct interviews, which was the main data collection method used in this research. The researcher conducted telephone interviews with each participant using the 10 open-ended questions in the interview guide. This allowed the researcher to collect the data needed from each participant to answer the research question.

## **Description of the Sample**

Crisis management leaders from a government national disaster organization in the Caribbean were the participants for the study. Participants were chosen because they met the inclusion criteria. Most participants had 10+ years' working experience as crisis management leaders, and all had at least 5 years' working experience that includes working in natural disasters. Fifteen participants—eight women (53%) and seven men (47%)—were interviewed because saturation was reached at this point. The point of saturation was reached after conducting 12 interviews, but 15 participants were interviewed to ensure the data collected had an adequate foundation (Creswell, 2009). Interviews were conducted to help the researcher gain detailed perceptions and understandings from the data collected from government crisis management leaders as they explained the development process used to successfully respond to natural disasters

in the Caribbean. Yin (2014) wrote that “a single case can represent a significant contribution to knowledge” (p. 51).

### **Methodological Approach**

The researcher received an e-mail list of 27 possible participants. The researcher was able to complete all telephone interviews within one month. The researcher conducted interviews until the point of saturation was reached; therefore, a total of 15 interviews were conducted. Signed informed consent forms were e-mailed to the researcher from the director of the organization who granted site permission. The researcher also digitally recorded participants’ oral consent before each interview began. Upon receipt of oral consent, each participant was assigned a code number (P1–P15) sequentially as the interviews were conducted. The duration of each telephone interview was 30 minutes and each was transcribed verbatim. Contents from documents kept within the organization as government correspondence also were e-mailed to the researcher. The researcher ensured that no information received contained any personal identifiers that could be linked to the organization or its participants.

### **Data Analysis**

All data were transcribed and analyzed using Yin’s (2014) “precision of pattern matching” (p. 147). Important contents taken from documents were analyzed to corroborate participants’ responses. M. B. Miles and Huberman’s (1994) six-step process was used to analyze the raw data.

**Step 1: Gather data.** The researcher gathered the data and transcribed each recording word-for-word, paying special attention to important statements or phrases. Nonverbal communication such as pauses, change in tone, and inflection were noted in the transcripts. Data collected from documents were transcribed carefully to ensure there were no personal identifiers.

**Step 2: Code data.** The researcher coded the data by highlighting important statements in order to develop meanings. The theoretical framework provided the units of analysis by which the data collected were viewed and coded.

**Step 3: Individually review the responses of each informant.** Each participant's responses were read and reread, looking for similarities and/or differences and emerging themes.

**Step 4: Categorize data for themes and numerically record repetitions.** The researcher identified themes from the data and numerically noted repetitions. These were counted for frequency to identify patterns.

**Step 5: Classify themes.** The frequency of the themes gave the pattern as to which happened most and least. The researcher used the frequency to determine the categories.

**Step 6: Explain and present each theme in the findings.** Yin's (2014) "precision of pattern matching" (p. 147) was used to link the findings to the propositions of the study. The results of the study also were positioned in the theory to help bring about an understanding of the data from a theoretical standpoint. The researcher used the findings to indicate whether they confirmed, challenged, or extended the theory (Yin, 2014).



## Responses to Interview Questions

Based on documentation from the national disaster organization, the development process of crisis management leaders for natural disasters in the Caribbean includes the following:

### PRE-DISASTER

1. The carrying out of preparedness and mitigation activities;
2. Implementation of public education and awareness programs on all aspects of comprehensive disaster management;
3. The development of multi-year work programs with specific outputs and outcomes;
4. Detailing of all emergency plans, shelter management systems, and the identifying of personnel for these tasks;
5. An examination of the relevant laws which could be activated in an emergency in order to ensure public safety;
6. The development of a district organization (including special training) to ensure local emergency action and capable of functioning for 48 hours without external support;
7. The maintaining of the National Emergency Operation Centre equipping it with modern ITC [Information Technology Center] systems to allow for maximum benefit and acceptable capacity;
8. The establishment of the following Committees:
  - a. Evaluation–Information
  - b. Health–Welfare
  - c. Transport
  - d. Communications (to disseminate warnings and Public Safety Information before, during and after the impact of a disaster or emergency to reduce its effects and assist in recovery).
  - e. Works
  - f. Supplies Management
  - g. Selection and training of volunteer personnel for field operations including shelter management (to devise and implement training and simulation drills on emergency response procedures for communities, schools, government agencies, and private sector.

Emergency Operation, Security and Search and Rescue (to execute coordinated Search and Rescue Operations as needed in any disaster situation) are the direct responsibility of the National Emergency Operation Centre.

### DURING

Coordination and Public Information

## POST DISASTER

The following tasks will be managed by the appropriate response groups:

1. Damage and Needs Assessment
2. Public information
3. Debris clearance
4. Restoration of Utility Services
5. Emergency communications
6. Emergency Transport
7. Emergency Shelter
8. Public Health and Medical
9. Coordination of external international offers of assistance
10. Supplies distribution

Functions of crisis management leaders with their local district committees/groups:

Pre-Disaster:

1. Liaise with Group Leaders
2. Nomination of working committee chairman
3. Development of operational plans
4. Develop an information and education program
5. Develop training programs:
  - a. securing the emergency equipment;
  - b. conducting simulation exercises;
  - c. maintain coordination of services at national and district level;

During Disaster:

1. Evacuation operations
2. Rescue of persons from endangered areas

Post-Disaster:

1. Mobilization of Services
2. Damage Assessment
3. Implement the operational plan for the following: shelters, welfare, rescue of trapped persons, transport, First-Aid, road clearance, building repairs, communication system, and operators. (*National Emergency Management Plan, 2011*)

Following Yin's (2014) precision of pattern matching, the researcher compared and contrasted participants' responses to the interview questions with the data received from documents, to know if the data received from documents corroborated participants' responses.

## Interview Question 1

“Describe the development process that you have used to become a crisis management leader for natural disasters.”

In response to Question 1, no individual participant explained the development process in its entirety when compared to the information received from documents. Most participants stated they were trained and/or educated by attending workshops, seminars, meetings, or taking courses with the national disaster organization. These trainings included disaster management and shelter management, as indicated by P3, who stated, “I am the coordinator of the district disaster committee. After being elected, we go through a number of trainings, including disaster management and shelter management. It’s a lot of training.” Another participant stated the trainings received from the Caribbean Red Cross included cardiopulmonary resuscitation (CPR) and first aid, while another added that training was received in triaging, and that they had simulation trainings.

P4 stated,

I was a part the Caribbean Red Cross, and there is where I gained my experience. I attended workshops, CPR, first aid, and simulation trainings, and I volunteered a lot in the communities during hurricanes, and this is how I got to this position.

P10 stated he developed his local district committee, which includes a welfare person, a security person, a first-aid person, and a person in charge of assessment and communication. P10 added, “I am also trained to use a ham radio that I used during disasters to communicate with the leaders of the committees in my area.”

Many participants stated they were trained; P11 stated, “Several courses were taken with the organization and the Red Cross Authority.” However, P11 never explained what those courses were or what they included. P12 “attended several workshops on

leadership, disaster management, and risk management.” P7 stated, “The development process that we used was a series of training that took place at the organization, such as shelter management, and this takes place over a period of time.”

Participants expounded on how they developed their crisis management groups and the local trainings they provided for their groups, but commented very little on their own development process. In addition, one participant stated he has a mitigation plan that was used as a guideline during times of disasters. P6 stated, “We also learn as we go, because it is the practical experience that gets you there. Books are good, but experience is better, because if you are thrown into a situation, you will not know how to manage it.” P5 stated, “I did training seminars with the organization, and we have community groups, and we had our own local trainings too.” P1 developed community groups that were trained by the director of the national organization, they attended workshops, and then they would go from village to village to educate those in the zone. P2, P13, and P14 did not answer the question at all; their responses described how they became crisis management leaders.

When compared to the information received from the documents, many participants did not expound on the development process detailing how they were trained to coordinate activities, to carry out search and rescue, to maintain supplies, the relevant policies and laws that could be activated during times of disasters, and equipping information technology centers with modern systems. The relevant explanation for the lack of information regarding search and rescue could be the fact that there is a National Emergency Operation Centre that is responsible for search and rescue in the Caribbean. Of the 15 participants, 12 (80%) gave information about the development process, while

three (20%) did not answer the question. However, the answers received from the 12 participants were used to describe the development process, for each participant added some information. The information gathered included the mitigation plan; public awareness; assigning individuals within the local crisis groups to various tasks; developing district committees and providing local trainings; and having crisis managers trained in communication, disaster, leadership, shelter, and risk management.

Eighty percent of the participants recalled some elements of the development process, which is considered a good match based on the information collected from documents. This could be attributed to the fact that, as indicated by some participants, the training is repetitive, the same each year, so the leaders do not attend all of the trainings every year. Many participants had more than 10 years in crisis management training, so they indicated they were well trained for hurricanes—the most frequently occurring disaster in the Caribbean.

### **Interview Question 2**

“What skills are required for crisis management leaders for natural disasters?”

According to information received from the national disaster organization in a document entitled *Emergency Operation/Search and Rescue*, there is a disaster administration group—including leaders from police, fire, public health, military, coast guard, and airport personnel—that is trained in search and rescue skills. Crisis management leaders have groups that include members assigned to various roles and responsibilities. In addition, crisis management leaders are trained to have leadership skills such as interpersonal skills; monitoring to manage operational plans; and management skills to organize, coordinate, assess, and forecast (*National Emergency*

*Management Plan*, 2011). According to the *National Emergency Management Plan* (2011), the leaders also are trained to communicate with external stakeholders by utilizing technology, radio, and the media.

Local trainings also are provided by the Red Cross Authority to train leaders in first aid, CPR, and triaging as part of emergency care and treatment skills (*National Emergency Management Plan*, 2011). The meteorological services provide updated information on disasters and keep the public aware via media. The organization also has direct communication out of the weather station in Miami and can track the expected disaster as well. Any major decisions will be made by the organization, while minor in-field decisions are made by the crisis management leaders. In addition, *Emergency Telecommunications* (n.d.) noted that instruction is provided for “radio operators and technicians in emergency techniques.” From the documents provided, the following skills (Table 1) were identified, corroborated by participants, as part of the development process.

Twelve participants (80%) identified skills that are needed for the development process, while three participants did not identify any skills. P3 made an important point, although no particular skills were identified:

Every bit of skill is very important to someone involved in disaster management because the more one knows, the better one can operate. Disaster management is a very wide scale and deals with a lot of issues. Any skills one has is important, whether academics or professional skills. The more information, and the more skills one has, the better, especially in disaster management. It is not one specific skill, but one should have a number of skills, especially knowing about disaster management, in order to handle crises.

Table 1. *Skills Needed for the Development Process*

Skills required for crisis management leaders for natural disasters	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15
Management skills		X					X							X	
Communication skills	X					X									
Leadership skills		X			X		X			X		X	X	X	
Search and rescue skills															
Emergency care and treatment skills								X			X				
Decision-making skills															

In contrast, P4 and P9 indicated that no particular skills were required. Based on the information provided, 80% of participants identified skills that were part of the development process, and that were corroborated by data collected from documents. This is considered a good match; however, documents identified an additional skill that is part of the development process: decision making. In this case, crisis management leaders are trained to make minor in-field decisions, but major decisions must be communicated to the director of the national disaster organization to seek a decision. This decision-making skill was not identified by any of the participants perhaps because they are allowed to make only minor in-field decisions.

### Interview Question 3

“Are there differences in crisis management development for leaders to be effective during hurricanes versus floods? If so, what are the differences in the development?”

Documents received provided a flood mitigation plan. The pamphlet on floods contained information on what to do before a flood, how to protect life and property, and what to do after a flood. The documents also provided tips for water-damaged items and a list of flood-prone areas on the islands.

Before a flood:

- Develop your emergency/evacuation plan
- Secure and waterproof important documents (e.g., title deeds, passports, bank papers, financial records, and photos).
- If living in a flood prone area evacuate early.
- When evacuating turn off utilities, especially electricity.
- All furniture and electrical appliances should be raised off the floor.
- Roll up and store rugs and carpets.

Protect life and property:

- Keep drains and waterways clear.
- Building close to waterways and in flood prone areas is risky.
- Do not attempt to cross waterways on foot where the water is above your knees

After a flood:

- Take pictures of damage for insurance claim purposes
- Avoid handling electrical equipment in wet areas
- Ensure that drinking water is not contaminated. Boil or use unscented Clorox
- Do not use fresh food that has come into contact with flood waters. (*Floods*, n.d.).

The organization also provided a hurricane mitigation plan regarding what to do before, during, and after a hurricane.



Before a hurricane:

- Develop your emergency evacuation plan
- Develop your emergency communication plan
- Have disaster supplies readily available

During a hurricane:

- Monitor hurricane warnings and keep the public updated
- Keep stock and check of emergency supplies
- Secure and waterproof important documents
- Secure buildings
- Listen radio for recent updates and instructions
- Re-examine evacuation plan

After hurricane:

- Stay informed and let the public know when it is safe to return home
- Avoid flooded roads with unknown water depth
- Utilize telephone only for emergencies
- Report loose or dangling utility lines and report as soon as possible
- Take pictures of damage for insurance claim purposes
- Assist those who have injuries or are trapped and give first-aid where necessary. (*Hurricane*, n.d.)

In addition, correspondence received titled *Emergency Operation/Search and Rescue* (n.d.) indicated that the group of experts should have individuals who are trained to carry out search and rescue and to evacuate individuals using a boat. The document added that hurricanes, as well as weak storms and depressions, could create flooding, and all emergency groups and leaders should collaboratively participate during disasters. Based on the documents received, crisis management leaders receive the same trainings, except for those leaders of crisis management teams assigned to specialized roles and responsibilities.

In response to Question 3, nine participants (60%) stated the crisis management development for leaders is the same and that to be effective during hurricanes and floods, they were trained in all areas. Their statements corroborated information in the documents. Additionally, the mitigation plans received are different, but as the

correspondence from the national disaster organization indicated, the trainings are the same. P2 stated,

I haven't done much on floods, but I believe there may be some differences, for water may require a little different activity, such as what happened in a particular community where the flooding required boats. You are required to have skills to be able to use those, whereas [with] wind impact, you are on the ground and have to protect yourself from flying debris, so I believe it is a little different.

P1 stated, "We have never had any flooding in our area, but other communities have where I was called to be of assistance and to get roads cleared. This means that some of my skills were still applicable during flooding." However, P4 stated, "There is no difference because what we do here is that we train everyone in every area; we have training across the board, so in an event we know who to call." Many participants used the words "same skills applied" and indicated the trainings received from the CDEMA and USAID and the government organization were applicable to all situations, whether a hurricane or flood. P13 stated, "The training is equally centered on disaster management, and whatever the disaster is, you are being equipped to manage the disaster." P5 and P11 stated there were differences in damages, but P11 stated, "We are trained in all areas and to coordinate our groups to work in whatever disasters."

On the other hand, P7, P9, P10, and P14 did not answer the question which could be due to lack of understanding the question or because they are in areas that have not experienced floods. They explained that water could cause much more damage than hurricanes. Since some of the participants did not answer the question, the data could not be analyzed to determine what was supported by the information found in documents. For those who answered the question, the information received from documents corroborated a 60% match, which is considered fair.

#### Interview Question 4

“What procedures, plans, and policies do you have in place, and how do they help you to successfully respond to natural disasters?”

The following information was received from the organization regarding its policies, plans, and procedures.

**Policies.** The government of both islands has a policy that includes preparing for, responding to, recovering from, and mitigating against disasters, by working with its partners, which include public and private sectors, civilians, and key agencies. The mission is to save lives and protect property on both Caribbean islands, while protecting the environment.

The islands have a national disaster preparedness and response advisory committee. The general function of the committee is to advise and assist the chairman in the planning and implementation of all measures considered necessary or desirable to reduce the effects of disaster and to plan for administration of the Emergency Powers Act. The committee shall be empowered to appoint as a member of the committee for such periods as the committee may deem fit, representation of other public or private sector agencies.

The national disaster committee shall make recommendations in the event of imminent threat or a disaster occurring for the declaration of a state of emergency (as provided by the disaster legislation of 2002 which would involve the necessary response activities from appropriate ministries and agencies of Government. The National Disaster Committee or its executive shall make request for the release and direct allocation of Emergency Contingency Funds including request for foreign disaster assistance in the event that local resources are insufficient to meet national response and/or recovery needs.

Plans and Procedures:

The overall objective of the national disaster plan is to detail arrangements to cope with the effects of natural and/or man-made disasters occurring in the two Caribbean islands.

Duties and Responsibilities:

The National Disaster Committee under the overall direction of the Minister responsible for Disaster Management and Cabinet shall be tasked with the responsibilities:

1. To advise on appropriate action to reduce the effects of disasters on the islands;

2. To review and direct the functions of the Management Sub-Committees and the National Organization;
3. To develop policies for the proper management of a national disaster under the direction of the Cabinet as provided for in the Emergency Powers Act;
4. To monitor the activities of the National Emergency Organization;
5. Annual review and evaluation of national and sectoral plans;
6. To ensure the coordinator between national and district organization;
7. To secure Government's policy on shelter and develop the administrative procedures for effective management and control;
8. To arrange for relief aircraft, ships as well as customs and visas clearances for overseas emergency personnel and supplies;
9. To develop programs for Public Information and press briefing;
10. To prepare Emergency Regulations covering the declaration of a state of emergency, requisition of vehicles, stores, buildings and other emergency supplies;
11. To develop alert systems—warnings, dissemination of information, responsibility for and control of broadcasting;
12. To prepare evacuation plans, shelter and refuge areas including identification of executing agencies;
13. Training of all categories of emergency personnel within the organization and support agencies;
14. To prepare inventory of resources country wide;
15. To develop a transport inventory of heavy equipment as well as administrative arrangements to include requisition and compensation for use in an emergency;
16. To review past disaster assessments, and damage reports;
17. To develop health care and environmental control program;
18. To develop a prioritized list of needs from overseas donors to meet shortage in relief supplies;
19. To develop and implement Mutual Aid Agreements through the appropriate Government Agencies;
20. To develop and implement a process to facilitate the activation of the regional response mechanism;
21. To supervise the restoration and rehabilitation phases.  
(*National Emergency Management Plan, 2011*)

P3, P11, and P13 stated the organization has a plan that they put together and use as a guideline, but as crisis management leaders, they have their own plans in place to get things done. P2 stated, "The organization has a plan that we try to follow and keep within

those guidelines.” Many participants stated that as they receive a warning, they notify their groups, inform the public, and prepare shelters just in case they need to perform an early evacuation. P1 stated, “If there is a warning out that a natural disaster is approaching the island, as with any crisis, we will get together with our groups to review our plan.” P14 stated he is equipped with a ham radio that he uses to obtain information from the organization and to keep his committee and the public informed. P3 stated, “We have a management plan we put together, and we have the different people in place, along with different crisis management leaders.”

In addition, P4 stated, “We have a district council, and we get directions from the organization, and from there we get things down with our committee.” P5 stated they work with their committee, assess what is going on, then report to their committee and the organization. P8 stated, “They must be on alert at all times, not only during hurricane season, for they must be vigilant in case there is a manmade disaster.” P6 stated they have to protect the citizens, so she has people in various roles to deal with the shelters, evacuation, monitor the shelters, and provide security. P7 stated they have a warning system, and as long as a warning is issued, the groups prepare and are put on standby to respond if necessary. P9 stated a plan “is in place for the shelters,” while P10 expounded “on the dos and don’ts of the shelters.” P13 stated,

Well, most of the various procedures and plans are organized by the government national organization. In terms of our community, there are certain guidelines for us to follow, whether it is shelter management or other activities. We have to be equipped to manage the shelter and to respond during a disaster. We take the feedback after the disaster to the organization so that they can assess and evaluate how we dealt with the disaster, and to see what is necessary from this time forward as it pertains to disasters.

Crisis management leaders have ham radios and CB radios so they can communicate with the organization during the hurricane season. When they are notified of a warning by the organization, crisis management leaders inform their groups/committees, and they begin notifying the community and others by getting the word out early. Those trained in shelter management will help to prepare the shelters—the churches and schools on the islands. When a warning is issued, crisis management leaders meet with their groups and each person is reminded of his or her roles and responsibilities and how to communicate with people and each other. The organization has plans, such as the management plan, that crisis management leaders try to follow to stay within the guidelines. They have persons assigned to various roles—such as those for evacuations, road clearings, monitoring the shelters, security at the shelters, construction, assessment—and people on standby if anything should happen, including nurses, army personnel, and police. The organization has vehicles available to each constituency as a means of getting around and carrying out their various roles and responsibilities. These crisis management leaders are placed on alert at all times and must be vigilant.

The information received from documents corroborated the responses from participants because all of the participants provided some elements of the policies, plans, and procedures. Many stated they have groups that were created with individuals from private and public communities, and they work together to implement the organization's plans. Each response (100%) was supported by the information provided in the documents, which is considered excellent.

## Interview Question 5

“During a natural disaster, did you have leadership requirements that were not included in your development process? What were the requirements?”

Based on information received from the presentation entitled *Basic Disaster Management Training for Leaders* (n.d.),

The government cannot handle natural disasters alone, and needed the cooperation and unity of other agencies in order to prepare for and respond to crises.” “Leaders for crisis management are trained and educated to be able to delegate and disseminate responsibilities, for their objective is to promote coordinated actions. In addition, leaders are required to have a good command of the English language, and must be able to communicate effectively, to take conclusive actions, and to keep the public informed. There must be synchronized actions between the organization and those keeping the public informed. Leadership skills are needed at all stages of a disaster. The Director and CDEMA (regional) function as managerial leaders and provide the general strategies and make major decisions for those working in disasters. Each disaster is considered different and requires strategies based on the capital obtainable during that time.

Crisis management leaders must be able to coordinate activities with their local district groups and committees, and to make minor in field decisions. They must be able to implement the strategies and to organize their groups based on the trainings, education, and simulation courses taken. Additionally, crisis management leaders are expected to build unofficial correlations with those external to their networks. Therefore, crisis management leaders must have people oriented skills (soft skills) to work along with those of the media, volunteers, other ministries and agencies of the government, charities, private, and nonprofit organizations. Crisis management leaders foster distributive guidance. For mitigation to be successful, it must be widely known, and that is why all stakeholders are trained and educated, as well as, the general public. There is public awareness to let the public know the needs and benefits of the mitigation programs and programs of training and education to ensure that mitigation programs are supported and will be properly implemented.

Based on this information, various leadership skills are required, such as implementation, organization, dissemination of roles and responsibilities, fostering of coordinated activities, effective communication, people skills, relationship building, decision making, and distributive guidance.

Most participants responded to Question 5 in the negative. P5 stated, “Leadership seminars are required as part of the development process.” P8 stated, “All leadership skills are needed,” and therefore, responded by stating, “We need all the leadership skills and knowledge, and during a disaster they are just been revised.” All 10 participants (66.67%) who responded in the negative believed the organization provided leadership seminars that were needed as part of the development process. One participant was unsure, but indicated the courses provided by the organization on a regular basis have helped them with being prepared and in understanding their duties. In contrast, four participants (26.67%) responded in the affirmative and did not identify any leadership requirements. They explained they were born natural leaders. P7 stated, “It is the leadership instincts that helped with building a relationship with a football team who are always there, ready, and willing to assist.” P14 stated, “I am a natural leader with a broad spectrum of social skills. It is my natural ability that caused me to respond to situations right away.”

Based on the information provided from documents, only 10 participants gave responses that corroborated the leadership requirements presented in the documents. This is a 66.67% match, which is considered fair. One participant was very unsure and spoke of the training received to help with preparing and understanding the duties. Four participants explained it was their natural abilities that helped them to successfully respond to natural disasters, but they did not cite any particular leadership requirements that were not included as part of the development process.



### Interview Question 6

“How would you rate the current development process on a scale of 1 to 10, with 1 as the best?”

Based on participants’ responses, Figure 4 was plotted.

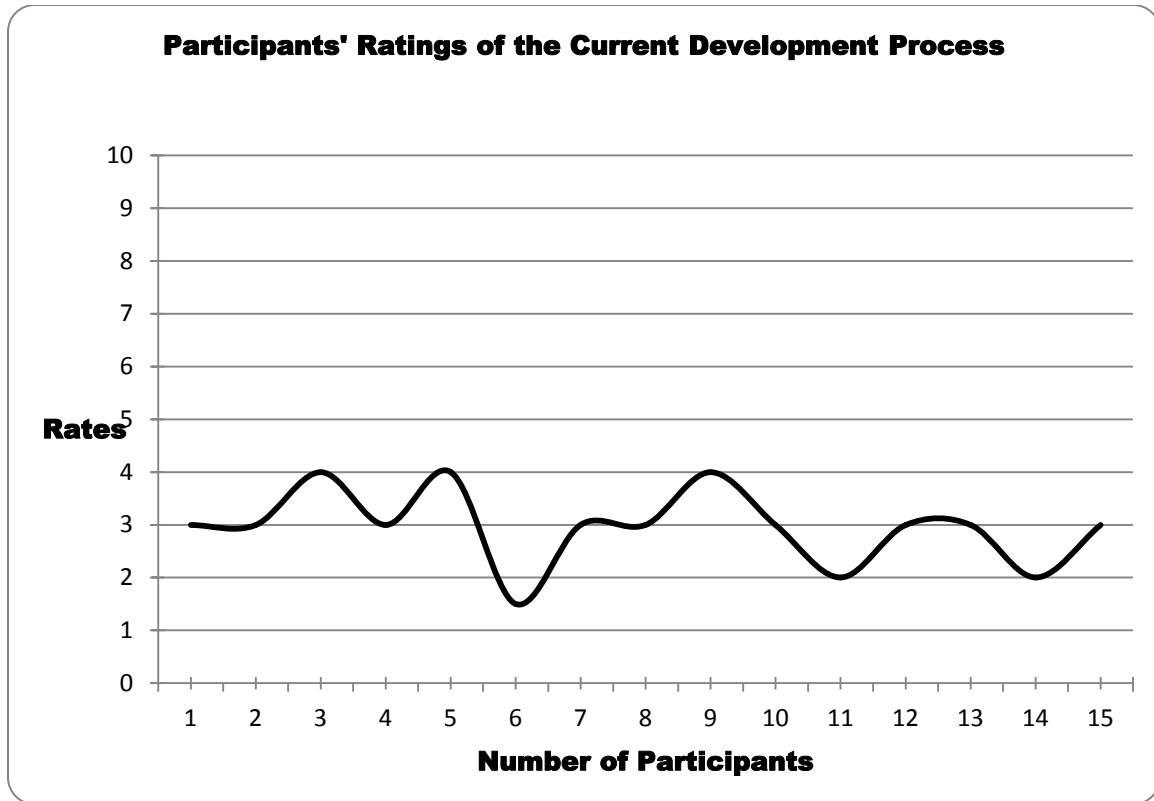


Figure 4. Participants’ ratings of the current development process.

The researcher had to reverse the results because most participants assumed 10 was the best. Based on their first response, the researcher had to choose the corresponding number with one as the best, because participants were calling numbers that did not correspond with the first response given, when assuming 10 was the best,

after the researcher repeated the question. This was true of three participants. Nine participants rated the current development process as 3, three participants as 4, one participant as 1.5, and two participants as 2. Then these results were added to find the average:  $27 + 12 + 1.5 + 4 = 44.50 \div 15 = 2.97$ . This meant that the current rate of the development process was approximately 82%, which is considered good.

Some participants gave a rationale for their responses. P1 stated, "I am going to give us a 3 because we are more developed and more active, more than some of the other Caribbean islands." P6 stated, "I would say we are at 1.5; I said that because we would be a 1 if we had more funding." Similarly, P11 stated,

Presently, I would rate our development process as a 2. I still believe that there is room for improvement, and one of the reasons I said this is that many of the homes built on this island meets specific building requirements and allows us to withstand certain categories of hurricane.

P7 stated, "I would probably give it a 3 because there are certain things that still needs to be done, such as more public awareness." P10 also rated the development process a 3, but he had a different reason for his response: "Quite a few countries in the Caribbean do not have the setup we have. Disaster is taken care of by the government national organization, and we have crisis management leaders in every district that is responsible to the organization." In contrasts, P14 stated, "I would grade the development process for natural disasters as a 2, for there is room for improvement, even though we have come a long way."

No documentation was provided on the current rating of the development process, but based on participants' responses, the current development process would be considered good. The participants had various reasons for their responses. Some rated the

development process based on how their respective community was affected, while others looked at it from how prepared they are for the disasters the islands suffer most. P12 stated, “I would say 3, for we have a good program in risk management and overall disaster. We are rooted, but I still think we have some local work to do.”

### **Interview Question 7**

“What could be added to improve the development process for crisis management leaders for natural disasters?”

Many participants stated new simulations could be included so they could be trained in other disasters, or to have someone from the United States come in to train them in areas such as typhoons, a phenomenon they have neither experienced nor been trained to respond to. Some spoke of having more public awareness and letting the public know what the leaders do and what they are about, in order to make their job easier. Others indicated not much is needed in crisis management, but at the operational level, more district offices are needed, and they need to be fully equipped, not partially equipped as at present. For others, monetary assistance is the greatest need, to provide more equipment and transportation so they can work more efficiently. Others indicated the communication level is good but could be better if they had more radio systems, while P7 stated, “I would say more training because training is very important. I would say more public awareness would go a long way.” Likewise, P13 stated,

I would say constant training, constant education, keep educating the leaders. When I say “constant” is because we have not had any big disaster like other countries, apart from hurricanes, and so we become complacent and sometimes we do not attend the trainings as we should, or we ignore the trainings.

P13's response indicated the organization provides trainings, but many do not attend, which could have an effect on their development process and performance in terms of knowing what is to be done during a crisis.

P10's response was very different from the other participants':

People who have been in this [crisis management] for a number of years should be recognized. There is a national award in the country every Independence Day, and people should be recognized for serving in disasters. If not at this particular award [ceremony], have a ceremony at least once or twice per year and honor the people who have been doing this to show some sort of appreciation. This would help to motivate people, for if people are happy with what they do, they will do their best work.

With this response, one could conclude that adding these elements and some degree of motivation, whether as suggested by P10, would help to improve the development process, for part of the process is to develop groups who will work voluntarily during natural disasters. A nonmonetary incentive could help to motivate others to volunteer, a need indicated by some of the participants.

### **Interview Guide Question 8**

“What might be changed to improve the development process for crisis management leaders for natural disasters?”

Some participants responded that people's mannerisms and concepts need to change for things to fall into place. Others indicated that some leaders are too politically minded and it affects their performance. Many added the development process is fine, but the administrative side of government is the problem. P6 stated,

We do get training, we do get exposure, and like I said, you have to have a love of community. We have had so many changes over the years; as far as the organization goes, we are fine. Our problem comes from the administrative side of government; that is where our problem is. They do not take what we do seriously. We need to have some environmental knowledge, and now that climate

change has come into it, we have to do courses for those too, and to be part of the organization, we have to be trained. When I say “government,” I don’t think they understand how important a role the organization plays in these things. They think the organization is just another office, so this is where the change is needed.

P14 stated, “One of the things I would like to see happen, though, that would make us even more effective is government involvement in providing materials and infrastructure.”

The main problem that emerged according to participants’ responses to Question 9 is the need for government to take disaster response seriously and to be involved in providing materials and infrastructure in order to make the leaders more effective, as indicated by P14. P11 cited another government issue:

One of the things that could change would have to be the DCA [Development Control Authority]. They should help to improve the development of the island; they need to coordinate with the disaster officers and let them know when someone is going to build a house, because sometimes homes are built too close to borderlines, and so on. Based on that, if the DCA would have meetings with the disaster coordinators before they approved these buildings or structures, this could help improve disaster [response] on the island.

According to participants’ responses, most of the issues affecting the development process are government administrative issues. Participants are comfortable with the trainings and education received from the organization, and many stated this education is adequate. P15 stated, “No changes; we have a good program in place.” P6 agreed.

### **Interview Question 9**

“Are there elements of the development process that could be eliminated because they add no value?”

Many participants responded in the negative, while one said yes, two expressed why they cannot state that the elements added no value, and two cited elements that had

nothing to do with the development process. P12 stated, “It would be very dangerous to eliminate any form of elements because we don’t know what types of disasters may occur, be it manmade or natural disasters that could happen.” P13 stated,

I would not say that we could eliminate anything, because some of the training that we have or have gotten was given on a board base, or we provided board base training on natural disasters. But because of the fact that we are prone to hurricanes, you may want to eliminate something pertaining to flood or earthquake, and it would not be appropriate or proper to do so. We have to keep what we have until whenever we are faced with such disasters.

Participants are very aware that eliminating elements from the development process may be inappropriate and could be dangerous as no one knows what types of disasters they may face. P6 stated, “Everything has value when you are dealing with disaster. Everything has value. It may not seem so in one particular situation, but it may come in another.”

### **Interview Question 10**

“Have you anything else that you would like to share regarding the development process?”

Some participants took the easy way out and did not add anything, whereas others welcomed the opportunity to give additional detailed information. The general conclusion was that more persons need to volunteer and to get onboard, including politicians, because it builds a better community.

### **Emergent Themes**

In an effort to answer the research question—How do government crisis management leaders for natural disasters in the Caribbean explain their development

process?—the researcher identified six themes that emerged from the data analysis of participants’ responses to the interview questions. Data obtained from the organization and from public websites were categorized and placed in the six themes. The themes were (a) “We educate and we train”; (b) “We are in charge of our communities”; (c) “We form groups, teams, committees, and/or subcommittees to work with us”; (d) “We have to have a number of skills”; (e) “We need more volunteers, it is voluntary service”; and (f) “We must be able to communicate.” The researcher assessed each participant’s responses and data from historical documents, and ranked them according to frequency (see Table 2).

Table 2. *Frequency of Themes*

Theme	<i>f</i>
“We educate and we train.”	78
“We are in charge of our communities.”	69
“We form groups, teams, committees, and/or subcommittees to work with us.”	25
“We have to have a number of skills.”	23
“We need more volunteers, it is voluntary service.”	19
“We must be able to communicate.”	16

In addition, the researcher used Yin’s (2014) “precision of pattern matching” (p. 147) to indicate whether the data received from documents “corroborate or augment [the] data” (p. 107) received from participants and whether they are directly linked to the propositions of the study. Yin explained,

This pattern matching procedure involves no precise comparisons. Whether you are predicting a pattern of non-equivalent dependent variables or a pattern based on rival independent variables, the basic comparison between the predicted and the actual pattern may involve no quantitative or statistical criteria. (p. 147)

The following propositions were developed based on Coombs's (2012b) contingency theory:

- An effective development process leads to positive performance.
- Effective communication among stakeholders and the distribution of relevant information is important.
- Early communication to the public is essential.
- Having trained personnel and trained employees assigned to various tasks during a crisis is essential.
- Having adequate equipment, emergency supplies, and emergency transportation is important.
- Designated routing and traffic control is essential.

The researcher also situated the results in the theory to facilitate an understanding of the data within the theoretical perspective, for the theoretical framework provided the lens through which the data were viewed.

**“We educate and we train.”** This was the first theme that emerged from the data, with a focus on participants' explanation of the development process. Ten questions were asked, and seven participants used these words to explain their development process in all 10 responses. These words were used 78 times. In addition, a document received from the organization stated, “One of the organization's responsibilities is to train volunteer personnel for field operation” (District Emergency Organization, n.d.). Another



documented indicated the organization “devises and implements training and simulation drills on emergency procedures for communities, schools, government agencies, and private sectors” (*The Public Information, Education and Mobilization*, n.d.). P3 stated,

It’s a process where I have gone through a number of training. It’s all about training. I am the coordinator of the district disaster committee. After being elected, we go through a number of training, including disaster management and shelter management. It’s a lot of training.

One of the essentials during a crisis, as noted in the propositions, is assigning trained personnel and trained employees to various tasks. The data collected were linked to this proposition because not only are the crisis management coordinators trained but also their groups and/or committees that were formed in the communities. The islands

Continue to build their complement of trained personnel in search and rescue; 32 individuals were engaged in a 1-week training course in November. Participants included were police, those from the fire departments, and military. The course covered topics such as, building damage assessment, search strategies, pre-hospital care, rescue techniques, tools and equipment and accessories. (CDEMA, 2013, para. 1)

Another group was trained the following week. In addition,

29 individuals from various emergency response agencies completed a 1-week training on Mass Casualty Management (MCM) at the national disaster organization. This session was supported by the Pan American Health Organization (PAHO) as part of its technical cooperation to the Ministry of Health. (CDEMA, 2013, para. 1)

In attendance were emergency medical service, members of the hospital, community health clinics, police, fire, and military, and the topics covered were mass casualty, triaging of victims, emergency response, hospital reception, planning for disasters and stress management or psychological first aid as it is now called. (CDEMA, 2013, para. 3)

The Office of U.S. Foreign Disaster Assistance (OFDA) helped the islands with “establishing early warning networks, training school children, and teaching local emergency personnel how to conduct search and rescue” (USAID/OFDA, n.d., para. 1).

Many participants spoke about the trainings they received in shelter management, to prepare them for disasters. P10 listed some of the individuals and the roles they are responsible for during a crisis:

I had a meeting and formed subcommittees to look after the area if there is a disaster. I oversee it all because I am the crisis management leader for the area, and there are six or seven churches [used as shelters] with a committee leader to liaison with me. A part of the committee is called welfare. I have a welfare person, a security person, a first aid person, and a person in charge of assessment and communication for the various subcommittees.

P7 stated, “Well, the development process that we used was a series of training that took place at the organization, such as shelter management, and this takes place over a period of time.”

Contingency theory, which informed the research, was used to describe active participation and synchronized actions among stakeholders during a crisis. Based on the data collected, there is a strong indication of working with those in the communities, forming various groups, committees, and/or subcommittees with members assigned to various roles and responsibilities as they work together during a crisis. The theory also indicated that individuals must have knowledge, field training, and/or experience in order to have the coordination and collaboration needed among stakeholders during times of disaster.

P13 stated, “The organization provides certain trainings and fundamentals to help you along the way in becoming a more effective person in the field of crisis management.” This statement indicated that these trainings have helped the leaders to be more successful in their performance during disasters. Other participants spoke about being knowledgeable about one’s environment; P15 referred to this as local knowledge:

“Well, mostly I would say local knowledge, knowing who is who in my community—nurse, doctors, police—whom I could call on during disasters.” This fit with the theory whereby knowledge and field training and/or experience are important, because participants noted that trainings and education are not enough during a crisis; practical experience is necessary. In addition, field training and experience are just as important. P6 stated,

We also learn as we go along, because it is the practical experience that gets you there. Books are good, but experience is better, because if you are thrown into a situation, you will not know how to manage it.

To educate and train was the most frequent theme cited by participants, for it was used 78 times during the interview process. Figure 5 illustrates how the emerging themes relate to an effective development process, thus helping crisis management leaders to reach their goal of successful performance during natural disasters.

**“We are in charge of our communities”; “We form groups, teams, committees, and/or subcommittees to work with us”; and “We need more people to volunteer/voluntary service.”** The next three themes that emerged are discussed together because of their correlation or overlap. Many participants spoke about the groups, teams, committees, and/or subcommittees they formed in their community and/or communities. The islands have zones that are made of up of districts, and these districts are made up of communities. The crisis management leaders are placed in charge of these districts that are made up of two, three, four, or five communities.

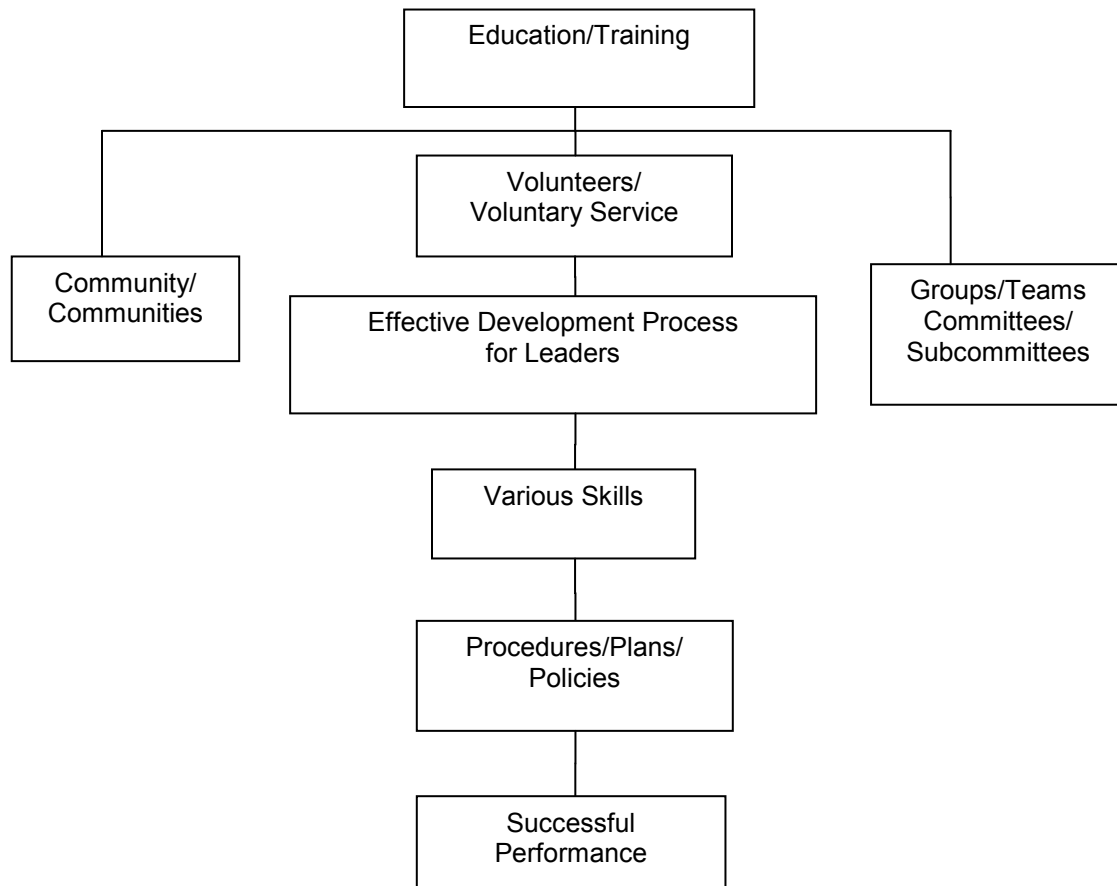


Figure 5. Emergent themes.

Some participants cited the difficulties they experienced in getting people to volunteer, as it is a voluntary service. Others stated they have a good program with groups the leaders could call on at any time. Some added it would be nice to have more volunteers because it would make the job quicker and easier. One participant spoke about motivating volunteers so that others will be encouraged to do so. These volunteer groups are made up of various individuals, such as nurses, police, fire, army, and members of the community, as indicated by the participants.

**P8.** I think more people should be involved, more people in the community in general. And instead of asking people, more people should volunteer, more or less.

**P11.** Although it is a voluntary service, more people should get more involved, and this would help with vulnerability, and those who may not understand certain things. Basically, if more people get onboard, it can be a plus for the disaster authorities on the island.

**P10.** I organized the area; this is a difficult task because nobody likes to do anything for free. I encouraged and tried to motivate others, I had meetings and formed subcommittees to look after the area, if there is a disaster. I oversee it all because I am the crisis management leader for the area.

Based on the analysis of correspondence, getting the public involved guarantees collaboration that extends over a great distance on the islands. The themes emerged from participants' responses, and overlapping was indicated in the documents, which was the reason for not explaining them as separate factors. The district organization's main objective is to "prepare the community for any disaster and to coordinate activities of the community and their resources for assistance prior to, during, and after a disaster" (*District Emergency Organization*, n.d.). There is a coordination of responsibilities within these groups that, according to the data, includes medical officers, nurses, police, volunteer agencies, community organizations, and private sectors based in the area. A review of the islands' disaster legislation from 2009 indicated the islands have "roles and functions that are clearly defined and assigned" (CDEMA, 2013, para. 3). Those in specialized roles are full-time workers, except for the volunteers. According to participants' responses, volunteers are trained to carry out certain tasks under the supervision of the crisis management leaders. As one participant stated, "Disaster is everybody's business." P8, who has a nursing background, stated, "In my case, with a

nursing background, we do triaging. You have to do triaging and report any important emergencies as soon as possible.”

Based on the theoretical framework, crisis management leaders’ development process includes active participation and synchronized actions. Stakeholders must be able to work together, knowing who is responsible for what roles. When asked about the development process, participants stated various persons are involved in certain roles. These include full-time workers who have specialized roles as well as volunteers who are trained to carry out certain tasks. This aligns with contingency theory because the theory helps crisis management with the planning process; it is how crisis managers involve the community, the communication professionals, and how to relate and react to the public (Coombs, 2012b).

**“We have to have a number of skills” and “We must be able to communicate.”** When participants were asked what skills were required for crisis management leaders, many explained that a number of skills were required. Many participants shared the view that no one specific skill is needed in disaster management; rather, a number of skills are necessary in order to handle a crisis. P3 stated,

Any skill one has is important, whether academics or professional skills, and the more information and the more skills one has, the better, especially in disaster management. It is not one specific skill, but one should have a number of skills, especially knowing about disaster management, in order to handle crises.

Many believed that communication and a good command of the English language, along with various other skills, are important:

**P1.** Well, first of all, to be a crisis management leader, one must be able to communicate with the people.

**P6.** One must have the ability to communicate with your fellow men.

**P10.** You must know the people in your area and do not talk above or talk below them, or talk down to them; you must talk across to them. Communication is essential in disaster.

**P12.** We must have leadership skills because we play a leading role; some communication skills, especially oral communication; and some command of the English language, to deal with the public and to provide services.

Participants also described ways of getting information out to the public, including giving handouts/pamphlets because people do not attend meetings at the halls. Crisis management leaders are even negotiating with people to attend meetings, and informing them how to care for their environment before a disaster. P10 stated, “We keep them informed of the dangers of disaster.” Another participant stated, “The more information one has, the better he could operate.”

When asked to rate the development process, many gave reasons for their responses. A few participants spoke about being equipped with a ham radio or CB radio that is linked to the organization. This is how they receive a warning if any disaster that is threatening the island. One participant stated her way of getting the word out early to the public is by driving out with the police, going from community to community to inform the people, just in case they are not listening to the media. Many participants also shared their displeasure with the lack of funding and the need for more equipment and transportation, as well as help from the government administration and more public awareness. P7 stated, “I would probably give it a 3 because there are certain things that still need to be done, such as more public awareness.”

Two of the propositions for the study stated that effective communication among stakeholders and the distribution of relevant information is important, and early communication to the public is essential. As one participant stated, communication is

essential in disaster. Another participant stated the organization is supportive and has a good program, while another participant stated other islands do not have a good program. Participants' responses were linked with data from the documents in that participants are getting pertinent information, such as disaster warnings, out to the public. For example, P1 stated,

I have these groups of persons working with me. If there is a warning out and a disaster approaching the island, we will get together. We let everyone know what the island is expecting, and those who need to go to a shelter are helped to get there. Those who can stay with other family members are encouraged to do so. We get the word out early. We meet and we educate each other, reminding each person what their roles are and how to communicate with the people and each other. We ensure family members are safe as well as those in our community.

Frandsen and Johansen (2011) wrote that ineffective communication during a disaster creates more crises.

Other participants indicated the program they have is a good one. Based on data analyzed from documents, "All local district disaster committees organized throughout the country have trained personnel in Initial Damage Assessment—IDA, Damage Assessment and Needs Analysis—DANA, Shelter and Shelter Management—SSM, Communication, Emergency Care & Treatment—ECAT, and Mass Casualty Management—MCM" (*Basic Disaster Management Roles and Functions of the Organization*, n.d.). In addition, there are those who have specialized roles, such as the army, who provides additional communication officers and search and rescue; police assigned to traffic control; and Red Cross and medical personnel. Emergency supplies are located at some district offices, others are put in place by the Red Cross; and medical personnel and emergency transportation, such as the Red Cross, ambulance services, fire, and police, are put on alert during a disaster.



Disaster supplies are distributed by the organization based on feedback received from crisis management leaders about their districts. The organization also has direct communication with the media and local and international weather stations to track disasters approaching the islands. Major decisions are made by the organization, while minor in-field decisions are made by the crisis management leaders. In addition, correspondence noted that instruction is provided for “radio operators and technicians in emergency techniques” (*Emergency Telecommunications*, n.d.).

Data analyzed from a handout by the organization stated, “The office coordinates disaster management activities on a national scale which includes preparing for, responding to, recovering from, and mitigating against disasters, by working with its partners” (National Disaster Organization, n.d.). These partners include public and private sectors, civilians, and key agencies. The organization has an emergency plan with detailed evacuation routes, emergency routes, and first-aid stations. The organization is also responsible for assisting with disaster management in four other Caribbean islands.

The data collected from participant responses and documents aligned with the propositions of the study and the overall consensus that having an effective development leads to successful performance. However, some crisis management leaders are asking for more public awareness and for funding and support from the government to get more equipment and transportation. Some participants do not have a district office, and those who do stated they were only partially equipped. Many handouts and pamphlets are available, such as one on the organization and what the organization does and information on emergency shelters, floods, and earthquakes, to name a few. The pamphlets on emergency shelters list the dos and don'ts of the shelters:

### Rules of the Shelters

1. Cooperate with the Shelter Management team and help out when required.
3. The use of indecent or obscene language is prohibited.
4. No drinking of alcoholic beverages or smoking of illicit drugs.
5. No inappropriate behavior will be tolerated.
6. No defacing or vandalism of shelters.
7. Board your pet with your veterinarian or kennel. (*Emergency Shelters*, n.d.)

The pamphlet also lists the reasons for staying at a shelter, planning a safe route to the public shelter, and what to take to a shelter. There is also a book on tsunami warnings that was created especially for young children, to educate them about tsunamis, the dangers they present, and what should be done to save lives and property.

The pamphlet on earthquakes provides information as what to do before an earthquake; during an earthquake if indoors, if outdoors; after an earthquake; home inspection; and earthquake history. Data analyzed from a handout on the organization stated, “There is an ongoing public awareness program” (National Disaster Organization, n.d.).

### **Answer to the Research Question**

Interview questions were created to answer the research question, How do government crisis management leaders for natural disasters in the Caribbean explain their development process? Fifteen crisis management leaders described the development process they used to become crisis management leaders for natural disasters in the Caribbean. There was an 80% match of participants’ responses to documents received that explained the development process for leaders. For Question 2, there was an 80% match of participants’ responses to the documents received that indicated the skills needed as part of the development process. Question 3 had a 60% match to the

documents received that indicated there are no differences in leadership development in order to be effective during hurricanes versus floods. Question 4 had a 100% match to documents that explained the policies, plans, and procedures needed in natural disasters and a 67% match to documents used to identify the leadership requirements that are included in the development process.

Participants rated the current development process as good, with only one participant giving the development process a 5 on a scale of 1 to 10, with 1 as the best. The organization has a current development process of approximately 82%, which is considered good for the Caribbean islands where resources tend to be an issue and considering changes in government. This confirmed Coombs's (2012b) contingency theory and added to the lack of documentation on the development process for government crisis management leaders for natural disasters in the Caribbean. The organization has a focused approach or contingency plan to prepare for crises, where it trains and educates on the national and community levels. Many participants shared this view, for the theme "We educate and we train" was used 78 times in participants' responses.

The organization has a national emergency management plan that was revised on September 11, 2011. This plan includes

Policies, guidelines, standard operational procedures, emergency support functions, hazards, sectors, and subregional focal points. Based on this plan, any major situation that may threaten the two Caribbean islands will receive support and coordination by the Caribbean Disaster Emergency Management Agency. However, this decision must be made by the Prime Minister, the Cabinet Secretary, and the Director of the Disaster Organization. CDEMA will coordinate the regional plan. (*National Emergency Management Plan, 2011*)

This confirmed Coombs's (2012b) contingency theory, for it is this theory that helped the organization with the position the organization should take and how to react to crises.

Coombs wrote that "contingency theory is used when threats are an important aspect of crises" (p. 24). The vision of the organization, as indicated in the government correspondence, is to reduce vulnerability to natural and manmade disasters in these two Caribbean islands, through multisector and integrated disaster risk reduction and management. This information is also available to the public in the form of pamphlets from crisis management leaders and from the organization itself.

Responses from the 15 government crisis management leaders indicated that an effective development process contributes to successful performance, where overall performance was judged on contingency planning, and fit with Coombs's (2012b) contingency theory, which helped with the planning process. The data analyzed were viewed through the lens of the theoretical framework that provided the underlying theory for the research. This conclusion was also based on how well the data from documents corroborated participants' responses and were linked to the propositions posed in this research. Participants identified the importance of training, experience, effective communication, and working in groups, which is consistent with Coombs's suggestions of having effective communication, collaboration, and coordination among stakeholders, as well as field training, knowledge, and experience. As Coombs stated, it is importance for organizations to have a focused approach, which includes knowing who to involve and having a plan of action. Most of the data from the documents corroborated participants' responses, except for one issue: There is documentation indicating the organization has "an ongoing public awareness program" (*National Disaster*

*Organization*, n.d.), while many participants indicated that more public awareness is needed.

### **Chapter Summary**

The outcomes of this explanatory case study were presented in this chapter. The investigation's focus was to explain the development process of government crisis management leaders in the Caribbean. The researcher analyzed the data from 15 participants in an attempt to answer the research question, How do government crisis management leaders for natural disasters in the Caribbean explain their development process? The problem the research addressed was the lack of documentation regarding the development process of government crisis management leaders for natural disasters in the Caribbean.

The chapter started with a restatement of the purpose of the research and the research question. The researcher's background, experience, and training were provided, as well as a description of the sample and methodological approach. A detailed description of the data analysis and the process used to analyze the data collected from participants and documents were presented. A detailed analysis of participants' responses to interview guide questions was provided, along with the emergent themes. The chapter concluded with an answer to the research question based on the data collected.

## CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

### Introduction and Summary

The intent of this explanatory case study was to explain the development process of government crisis management leaders for natural disasters in the Caribbean. The researcher's goal was to contribute to scientific knowledge by documenting the development process of government crisis management leaders for natural disasters in the Caribbean. The research problem was the lack of documentation regarding the development process of government crisis management leaders for natural disasters in the Caribbean. The researcher utilized conversational interviews to gain detailed perceptions and an in-depth understanding of the fundamentals for an effective development process. Thach (2012) indicated that her empirical study be duplicated with a more focused crisis and/or in a different location. In addition, "the absence of theory development on the features of natural disasters and the crisis management dimensions of natural disasters is troublesome for both practical and theoretical reasons" (Galaz et al., 2011, p. 361). Based on the problem statement, the following research question was developed: How do government crisis management leaders for natural disasters in the Caribbean explain their development process?

A case study was the methodological model for this research. The utilization of single-case study made it possible for the researcher to gain detailed perceptions and

understandings from the data collected from government crisis management leaders explaining their development process in order to successfully respond to natural disasters in the Caribbean. Yin (2014) purported “that a single case can represent a significant contribution to knowledge and theory building by confirming, challenging, or extending the theory” (p. 51). The researcher selected participants from the national disaster organization in the Caribbean and conducted interviews with 15 participants, at which point saturation was reached. The researcher received an e-mail list of 27 individuals who were willing to take part in the research. The researcher was able to complete all telephone interviews within one month.

Participants shared in-depth perceptions based on their experiences working in natural disasters in the Caribbean. All participants signed an informed consent form and gave consent for their interviews to be digitally recorded and their responses published. Data from government documents were received from the organization and public websites were utilized as part of the data collection and analysis processes. As Benbasat, Goldstein, and Mead (1987) explained,

Case study research is particularly appropriate for certain types of problems: those in which research and theory are at their early formative stages and sticky practice based on problems where the experiences of the actors are important and the context of action is critical. (p. 369)

The participants had at least 10 years’ experience working in crisis management, including natural disasters, while the inclusion criterion was 5 years of work experience. The participants were willing to share their knowledge and experiences.

The researcher obtained verbal consent from participants, which were recorded before the interviews began, and all participants signed an informed consent form.

Participants were assigned a code based on the order in which the interviews were conducted. These codes were utilized to refer to each participant throughout the study, for no personal identifiers were utilized. In addition, documents received from the organization were modified and did not contain any personal identifiers or the organization's identity. Each telephone interview was conducted by the researcher and lasted no more than 30 minutes. Participant interviews were transcribed verbatim. The investigator analyzed all transcribed data using M. B. Miles and Huberman's (1994) six-step process, followed by Yin's (2012) "precision of pattern matching" (p. 147), which was used to link outcomes to the propositions. Microsoft Word was used to highlight keywords, count for frequency, code, and categorize the data. The researcher was able to discovering the emerging themes by analyzing the data.

### **Discussion of the Results**

The investigator utilized participants' perceptions of their experiences working in natural disasters to identify six emerging themes. The six themes identified to answer the research question were (a) "We educate and we train"; (b) "We are in charge of our communities"; (c) "We form groups, teams, committees, and/or subcommittees to work with us"; (d) "We have to have a number of skills"; (e) "We need more volunteers, it is voluntary service"; and (f) "We must be able to communicate." The data also were viewed through the theoretical framework to find if they confirmed, challenged, or extended the theory (Yin, 2014).

**"We educate and we train."** This theme was used by seven participants in all 10 responses and was repeated in some cases. These words were used 78 times by



participants as they explained their development process. Many participants explained the various trainings they received in crisis management both at the regional and local levels. Farazmand (2009) indicated the need for disaster organizers and administrators to be trained in crisis management because such training is lacking. For example, during Hurricane Katrina, the crisis management teams and the stakeholders involved were unable to work successfully together as there was a breakdown in communication, the flow of information, and other coordinated activities needed during disasters. It is important to help build those relationships through simulated field trainings. Some participants stated the need still exists for more training and for the training to be specific and ongoing, not just during disaster seasons. Other participants stated they were trained adequately for hurricanes, which occur most often in their region, but would like to receive international training in typhoons and tornadoes.

The theme of educating and training is consistent with Coombs (2012a), who posited that preparing and planning for disasters should address certain areas of interest: (a) diagnosing susceptibilities, (b) evaluating types of disaster, (c) choosing and educating a disaster group, (d) choosing and educating a spokesman, (e) creating a disaster administration plan, and (f) reassessing the message plan. Goldstein (as cited in Coombs, 2012a) suggested a successful disaster administration group be created through cautious choosing and educating, and that people be chosen who are most suitable for the duties whereas educating assists individuals with improving their abilities and becoming more capable at executing their missions.

In addition, the results also indicated that training developed the crisis managers' skills and helped them to become more effective. Information obtained from CDEMA

stated that “training is provided to the crisis management teams in many areas and that the OFDA assists with creating early warning signal network, training school children in these countries, and teaching local emergency personnel how to conduct search and rescue” (USAID/OFDA, n.d., para. 1). The results are consistent with Canyon’s (2012) study of 34 organizations, which revealed that all hospitals provided trainings in conflict resolution for all crisis management team members, as opposed to only 50% of medical clinics. Canyon recommended that the various managers in the various divisions be trained as well, in an effort to prevent siloing. Similarly, this confirmed Coombs’s (2012b) contingency theory where ineffective communication and poor decision making were identified as some of the failures experienced during times of disasters. Coombs (2012a) added that ineffective communication could pose problems during the reaction stage of a crisis.

**“We are in charge of our communities”; “We form groups, teams, committees, and/or subcommittees to work with us”; and “We need more volunteers, it is voluntary service.”** The results revealed that participants are in charge of their own communities and were selected by members of their respective communities because of their relationships and involvement in the communities. The study indicated that crisis management leaders had teams, groups, committees, and/or subcommittees with whom they work. P15 stated, “Our community is closely knitted together, and they can respond to any situation; we can call on them at any time.” Coombs (2012a) stated the group must be able to perform collaboratively during a crisis. Coombs further indicated that selecting a group is not easy, as individuals must be eligible to function on a disaster administration committee and must be able to fill specific functional roles.

Additionally, Coombs (2012a) claimed that the framework of the disaster administration group should show the nature of the disaster. This agreed with CRSTDP (2003–2008) documentation that indicated that crisis response strategy includes a unified public crisis preparation that fosters the sharing of knowledge and responsibilities among the community and private and public organizations. Moynihan (2009) noted that during disasters, the lack of harmonization is generally the problem; therefore, having role-specific systems is exceptional. Balamir 's (2002) research supported the idea of having designated roles and responsibilities among stakeholders during disasters. The researcher posited that, if at each event, new groups were to assume responsibilities, it would reduce what could be learned as best practice from the process, and the duties that overlap among multiple stakeholders could lead to chaos. In addition, Boin and McConnell (2007) indicated that planning for natural disasters should be achieved in a comprehensive conversation with all stakeholders involved in order to create a unified community to react to disaster. For example, Brattberg (2012) and Farazmand (2009) elucidated about the poor preparation that was evident amid the federal, state, and local authorities in the United States during Hurricane Katrina. Additionally, they noted the lack of capability of the federal government to harmonize its efforts with those of the state and local executives during that time, as lessons to be learned.

**“We have to have a number of skills” and “We must be able to communicate.”** The results showed that various skills are required during disasters, such as leadership and management skills, people skills, and communication skills. Eighty percent of crisis management leaders indicated they should have various skills. P10 stated communication is essential in disasters and that disaster is everybody’s business. Coombs

(2012a) stated, “Communication is an essential part of the crisis prevention process, and it helps to locate warning signs and relay that knowledge to the relevant units” (p. 50). Milašinović, Kešetović, and Nadić (2010) recognized serious interaction issues with organizations, mass media, and other stakeholders as one of the features of today’s disaster. They further explained that disaster leaders today are positioned in a very difficult era and requires the use of several specialized skills and methods. This is consistent with the findings of the present research in that 80% of crisis management leaders posited they must have various skills. P8 stated, “We need all the leadership skills and knowledge, and during a disaster they are just been revised.” P1 stated, “Well, first of all, to be a crisis management leader, one must be able to communicate with the people.”

The results of the study also supported the propositions of this study but identified an additional perspective. The themes identified were concurrent to the propositions developed based on Coombs’s (2012b) contingency theory:

- An effective development process leads to positive performance.
- Effective communication among stakeholders and the distribution of relevant information is important.
- Early communication to the public is essential.
- Having trained personnel and trained employees assigned to various tasks during a crisis is essential.
- Having adequate equipment, emergency supplies, and emergency transportation is important.
- Designated routing and traffic control is essential.

The results indicated that the development process is good, with an overall rating of approximately 82%. P15 stated no changes were needed to the development process because they have a good program in place. The data collected from documents also indicated “the organization coordinates disaster management on a national scale while working with its partners” (*National Disaster Organization*, n.d.). Barton (as cited in Goldberg & Harzog, 1996) argued that having a disaster administration plan in writing is critical for persisting through a disaster, but it must be used by the organization in order to gain the advantages of being prepared. Other propositions are effective communication with stakeholders, providing relevant information, and early communication with the public. Based on the themes identified, education and training were provided and relationships were developed with crisis management groups wherein they could be called on at any time.

Choudhary (2012) stated that the leaders of disaster administration are in agreement that during a disaster, the organization needs to convey information and communicate the truth to its stakeholders and the public, or else they will lose confidence in the organization. Similarly, Boin and ‘t Hart (2010) explained the importance of conveying information that is relevant and in a timely manner within the disaster reaction structure as well as to applicable communities and the public, to enable these stakeholders to make updated judgments while synchronizing and cooperating. As the results indicated, education and training were provided as part of the development process. Boin and ‘t Hart stated that in addition to having good preparation, there must be ongoing education and training, assessing, and acquiring of knowledge through practice in the field.

Another proposition is having emergency equipment, supplies, and transportation in place. As participants revealed, there is a need for more transportation from the government and more fully equipped district offices. At this point, those crisis management leaders with district offices in the community indicated the offices are partially equipped, but the organization and other medical personnel help to fill the void by supplying emergency supplies.

The last proposition called for designated routing and traffic control. The disaster management plan has designated routing, but not all areas on the islands have alternate routes, and police are assigned to control traffic during a disaster. The organization has a national emergency management plan, which, according to Boin and 't Hart (2010), must have ongoing monitoring and be restructured and modified as needed. According to documents, the *National Emergency Management Plan* (2011), includes “policies and procedures, and indicated that any major situation that may threaten the two Caribbean islands would receive support and coordination by the Caribbean Disaster Emergency Management Agency.”

The researcher identified a perspective that was not identified by Coombs’s (2012b) contingency theory or the propositions for this study. Two participants suggested recognizing volunteers who have served for a number of years. This finding could enhance Coombs’s contingency theory where not only crisis management workers are considered but also recognition is given to incentivize or motivate volunteers in crisis management. Govekar and Govekar (as cited in Wheeler et al., 2013) conducted a study that considered unpaid worker inspiration and concluded that unpaid worker recognition was correlated to their purpose for offering. Robbins and Judge (2011) indicated that

individuals are inspired by cash, but being happy or fulfilled by their job supersedes cash. Hackman and Oldham (1980) and Herzberg (1968) concluded that intrinsic reward is what inspires individuals. Similarly, Viorel, Aurel, Virgil, and Stefania (2009) claimed that inspiring individuals is one of the important characteristics that define how employees would perform. Additionally, Adair (2009) noted that the inspiration of a person is the reason why he or she will behave in a certain way. Adair stated that an efficient manager will inspire, enhance, and motivate. Likewise, Herzberg (as cited in Viorel et al., 2009) found that inspiration is used to decide how satisfied or dissatisfied individuals are with their tasks, and the concern is not whether the inspiration is intrinsic or extrinsic. The participants in Herzberg's study indicated they were fulfilled when they obtained recognition, accomplishment, and advancement. Herzberg found that inspiration could increase an individual's performance on the job, but only if the inspirational aspects were related to the person's wants. Volunteers should be given recognition; perhaps this will motivate others to volunteer and could improve the services provided, as indicated by Herzberg.

The outcomes of this study align with Coombs's (2012b) contingency theory in stating there is no one best or perfect disaster administration method that could be used to fit all disaster situations. As Coombs stated, all disasters are different. In addition, Chang, Hong, and Cameron (2012) concluded that unforeseen event assumptions recognized definite changes (possible threat and earnestness of the condition) that are possible during disaster conditions, but other changes such as the organization structure and dimensions must also be taken into consideration. They expounded that unforeseen event assumptions may be used for methodical comprehension and preparation of disaster

message plans. However, Boin and 't Hart (2010) explained that “worst case scenarios must be considered, for if contingency plans rest on unrealistic, overoptimistic assumptions, it could shatter key presumptions of existing plans” (p. 360).

Lastly, the results of this study concurred with some of Boin and 't Hart's (2010) suitable preparations that were based on the understanding that each catastrophe is unique. They provided seven ways for recognizing suitable preparations:

[a] Disaster program must be aligned with activities, [b] there must be ongoing risk monitoring, [c] there must be continuous education and training of personnel, [d] testing and learning through field exercise, [e] building relationship and trust with stakeholders, [f] effective crisis management manages the public expectations, and [g] crisis planning efforts need to be continuously monitored, updated, and adjusted. (Boin & 't Hart, 2010, pp. 360–361)

In addition, the data obtained from documents corroborated participants' responses, except for the fact that many participants cited the need for more public awareness, despite information in a handout on the organization that stated, “There is an ongoing public awareness program” (*National Disaster Organization*, n.d.). Based on the outcomes of this research, the researcher developed a model on government crisis management leaders' perspectives for an effective development process, which includes Coombs's (2012b) contingency theory and the propositions of the research (see Figure 6).



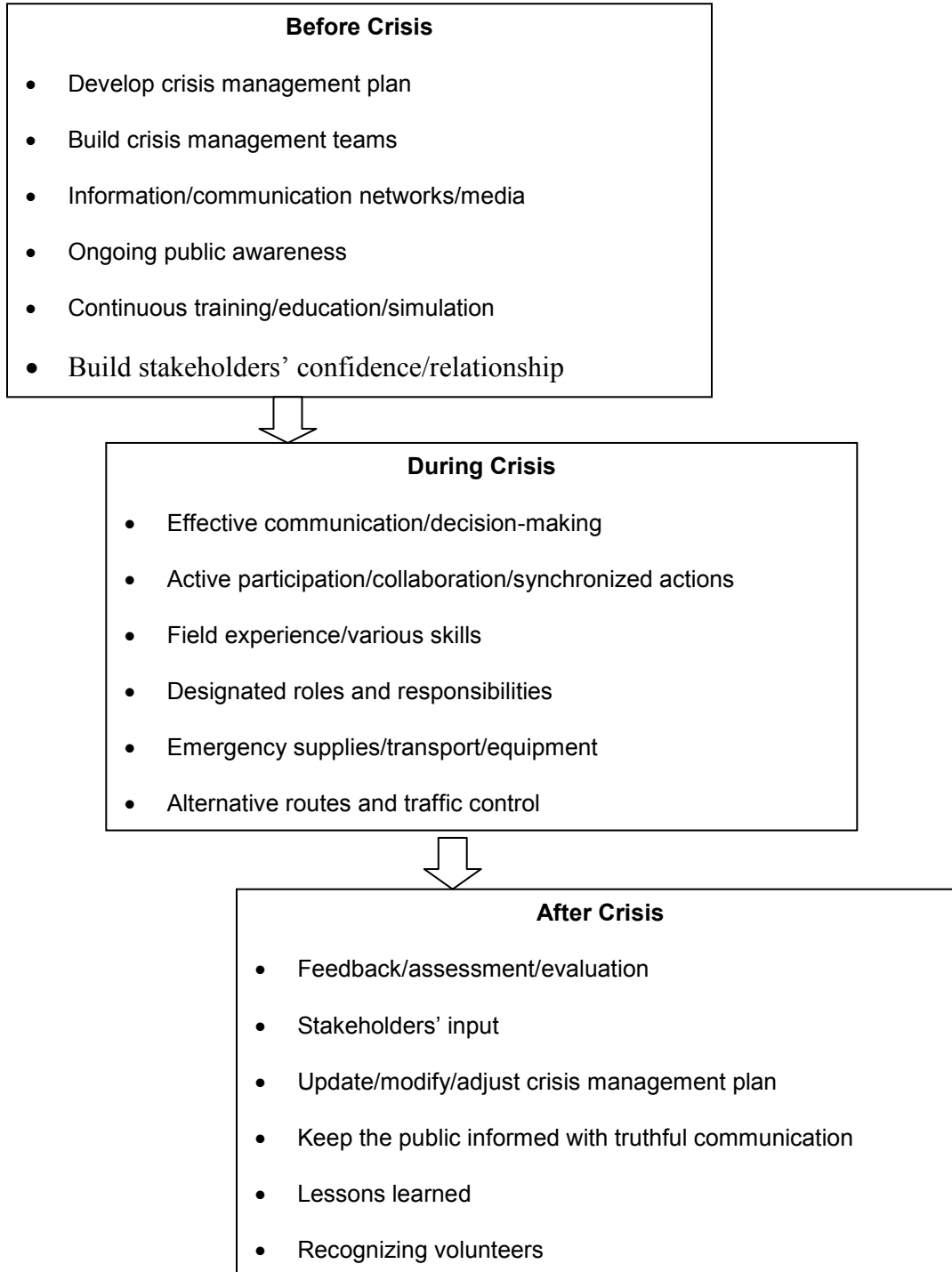


Figure 6. Crisis management model.

## Implications of the Study

Crisis management is a fairly new field of investigation (Elliott & Smith, 2006; Pauchant & Douville, 1992; Pearson & Clair, 1998). Most research conducted on crisis management focused on the behaviors or actions of important stakeholders and the effect of crisis communication in the process of crisis management (Rosenthal, Charles, & 't Hart, 1989), but none studied the development process of government crisis management leaders for natural disasters in the Caribbean.

The present study enhanced the scholar-practitioner community by adding to the limited body of literature on the topic. In addition, the researcher developed a theoretical framework that allowed the researcher to determine whether the findings confirmed, challenged, or extended the theory (Yin, 2014). The research includes findings that may enhance Coombs's (2012b) contingency theory by adding to crisis management research based on government crisis management leaders' perspectives.

The research also added to the limited studies on crisis management by investigating government crisis management leaders for natural disasters in the Caribbean. This research aligned with Thach's (2012) recommendation that her empirical study be duplicated with a more focused crisis and in a different location. This research focused on crisis management leaders in the Caribbean, a region that is prone to natural disasters, especially hurricanes, and added to scholarly research on crisis leadership development in organizations. As Thach indicated, civic managers are more interested in capital, financial planning, and social assistance.

Additionally, this research could be used as the basis for scholars and practitioners to answer philosophical questions on crisis management plans and to

conduct further research in this field. According to Coombs (2012a), organizations that are not engaged in disaster administration “have more to lose today than they had before” (p. 7). Coombs (2012a) added that “the possibility of disasters has intensified and the need for disaster administration is increasing, not decreasing” (p. 11). Finally, this research could add value to scholars working in organization management and leadership, by adding to the body of literature in leadership administration and management.

### **Conclusion**

The purpose of this study was to understand the development process of government crisis management leaders as they explained their perspectives for natural disasters in the Caribbean. Most studies of crisis management have focused on the behaviors or actions of the main stakeholders; however, there was a lack of documentation regarding the development process for government crisis management leaders for natural disasters in the Caribbean. Galaz et al. (2011) purported that natural disasters require different emergency administration tasks not yet addressed entirely by the community of researchers.

This research was an explanatory case study. Participants were 15 government crisis management leaders for natural disasters in the Caribbean. These participants were asked 10 open-ended questions so that they could explain their development process for natural disasters based on their experiences. The outcomes revealed a perspective that was not identified in the conceptual framework; and based on the outcomes, the researcher developed a model on crisis management leaders’ perspectives, Coombs’s (2012b) contingency theory, and the propositions of the research (see Figure 5).

The research question for this study was, How do government crisis management leaders for natural disasters in the Caribbean explain their development process? The outcomes of the research indicated that education and training are important, as are having crisis management teams, various skills, and effective communication. As Coombs (2012a) hypothesized, ineffective communication is one of the unanticipated failures that occur during a crisis; additionally, it is “communication that is an essential part of crisis prevention process and it helps to locate warning signs and relay knowledge to the relevant units” (p. 50).

### **Limitations of the Study**

The key limitation is the fact that the sample included only government crisis management leaders. The research may have yielded different outcomes had it included first responders such as police, fire, and medical personnel who receive different trainings and education and may have different perspectives.

### **Recommendations for Further Research**

This study on the development process of government crisis management leaders may be used for in-depth insights and understandings of leaders’ perspectives. This research could be completed with a different sample of crisis management workers, such as first responders from another location. In addition, with the use of a different methodology, the study could be conducted with crisis management leaders in different countries. Another study could be conducted to determine if the development process is different for other government crisis workers. Finally, a study could be conducted of the

development process for leaders in nongovernment organizations that respond to natural disasters.

The outcomes and conclusions of this explanatory case study provided the basis for future research regarding the development process for leaders who respond to natural disasters. This research provides a foundation for additional research, to extend the body of literature for crisis management leaders who address natural disasters.

Based on the review of literature, a gap was identified that this investigator tried to fill by conducting this research. Thach's (2012) exploratory study of

132 private and 131 public leaders from the metropolitan area of California where crisis were higher than other parts of the United States was conducted to describe the challenge and opportunities leaders saw during crisis, as well as their viewpoints on leadership. (p. 716)

The recommendation was that the study be duplicated with a more focused crisis and in a different location.

## REFERENCES

- Academy of Management. (2003–2012). *Code of ethics*. Retrieved from [http://www.aomonline.org/aom.asp?ID=&page\\_ID=240](http://www.aomonline.org/aom.asp?ID=&page_ID=240)
- Adair, J. (2009). *Effective leadership: How to be a successful leader* (New revised ed.). London, England: Pan Macmillan.
- Alajlani, M. M., Almashaqba, Z. M. S., & Al-Qeed, M. A. N. (2010). The classical theory of organization and its relevance. *International Research Journal of Finance and Economics*, 41, 60–67.
- Alpaslan, C. M., Green, S. E., & Mitroff, I. I. (2009). Corporate governance in the context of crises: Towards a stakeholder theory of crisis management. *Journal of Contingencies and Crisis Management*, 17(1), 38–49. doi:10.1111/j.1468-5973.2009.00555. x
- Andersen, E. (2003). Be prepared for the unforeseen. *Journal of Contingencies and Crisis Management*, 11(3), 129–134.
- Auf der Heide, E. (1989). *Disaster response: Principles of preparation and coordination*. St. Louis, MO: Mosby.
- Bagheri, S., & Mollahoseini, A. (2012). Review strategies for promoting effectiveness crisis management in National Iranian Copper Industries Company's (NICICO) organizational units. *International Business & Management*, 5(2), 43–51. doi:10.3968/j.ibm.1923842820120502.1005
- Baird, A., Furukawa, M. F., & Raghu, T. S. (2012). Understanding contingencies associated with the early adoption of customer-facing web portals. *Journal of Management Information Systems*, 29(2), 293–324.
- Balamir, M. (2002). Painful steps of progress from crisis planning to contingency planning: Changes for disaster preparedness in Turkey. *Journal of Contingencies and Crisis Management*, 10(1), 39.
- Barnard, C. I. (1938). *The functions of the executive*. Cambridge, MA: Harvard University Press.

- Barton, D., Newell, R., & Wilson, G. (2002). Preparing for a financial crisis. *McKinsey Quarterly*, (2), 79–87.
- Barton, L. (2001). *Crisis in organizations II: Managing communications in the heat of chaos*. Cincinnati, OH: South-Western.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.
- Bass, B. M. (1990). *Bass and Stogdill's handbook of leadership*. New York, NY: Free Press.
- Benbasat, I., Goldstein, D. K., & Mead, M. (1987). The case research strategy in studies of information systems. *MIS Quarterly*, 11(3), 369–386.
- Bernard, H. R., & Ryan, G. W. (2010). *Analyzing qualitative data: Systematic approaches*. Thousand Oaks, CA: Sage.
- Blitzstein, D. S. (2013). Restructuring occupational pension plans in crisis: A US labor-management case study. *Rotman International Journal of Pension Management*, 6(1), 12–19. doi:10.3138/ripjm.6.1.12
- Boin, A. (2009). Meeting the challenges of transboundary crisis: Building blocks for institutional design. *Journal of Contingencies and Crisis Management*, 17 (4), 367–377.
- Boin, A., & McConnell, A. (2007). Preparing for critical infrastructure breakdowns: The limits of crisis management and the need for resilience. *Journal of Contingencies and Crisis Management*, 15(1), 50–59. doi:10.1111/j.1468-5973.2007.00504.x
- Boin, A., & 't Hart, P. (2010). Organising for effective emergency management: Lessons from research. *Australian Journal of Public Administration*, 69(4), 357–371. doi: 10.1111/j.1467-8500.2010.00694.x
- Bowen, M. (1978). *Family therapy in clinical practice*. New York, NY: Aronson.
- Bowonder, B., & Linstone, H. A. (1987). Notes on the Bhopal accident: Risk analysis and multiple perspectives. *Technological Forecasting and Social Change*, 32, 183–202.
- Bradbury-Jones, C., Sambrook, S., & Irvine, F. (2008). Research methodology. The phenomenological focus group: An oxymoron? *Journal of Advanced Nursing*, 65(3), 663–671.

- Brady, L. P. (1974). *Threat, decision time and awareness: The impact of situational variables on foreign policy behavior* (Unpublished doctoral dissertation). Ohio State University, Columbus.
- Brattberg, E. (2012). Coordinating for contingencies: Taking stock of post-9/11 homeland security reforms. *Journal of Contingencies and Crisis Management*, 20(2), 77–89. doi:10.1111/j.1468-5973.2012.00662.x
- Brecher, M. (1977). Toward a theory of international crisis. *International Studies Quarterly*, 21, 39–74.
- Brumfield, K. (2012, October). Succeeding in crisis leadership. *Financial Executive*, 45–47.
- Bryman, A. (2008). *Social research methods* (3rd ed.). New York, NY: Oxford University Press.
- Bugge, R. G. (1993). Temporary organization for crisis intervention. When a disaster—a hotel fire—strikes a community. In J. P. Wilson & B. Raphael (Eds.), *International handbook of traumatic stress syndromes* (pp. 965–974). New York, NY: Plenum Press.
- Burns, J. M. (1978). *Leadership*. New York, NY: Harper & Row.
- Cabinet Office. (2009a). *Management and co-ordination of local operations*. Retrieved from <http://www.cabinetoffice.gov.uk/ukresilience/response/localoperations.aspx>
- Cabinet Office. (2009b). *Management and co-ordination of local operations*. Retrieved from [http://www.cabinetoffice.gov.uk/media/132053/err\\_chap\\_03.pdf](http://www.cabinetoffice.gov.uk/media/132053/err_chap_03.pdf)
- Campbell, D., Hannah, S., & Matthews, M. (2010). Leadership in military and other dangerous contexts: Introduction to the special topic issue. *Military Psychology*, 22(Suppl. 1), S1- S14.
- Canyon, D. V. (2012). The state of systemic threat surveillance in some Australian health organizations. *Journal of Business Continuity & Emergency Planning*, 6(2), 102–110.
- Caribbean Disaster Emergency Management Agency. (2013). [Home page.] Retrieved from <http://www.cdema.org>
- Caribbean Regional Sustainable Tourism Development Programme. (2003–2008). *Good practices: Natural hazard risk management in the Caribbean tourism sector*. Retrieved from <http://www.onecaribbean.org/content/files/NaturalhazardRiskManagementFinaltext.pdf>



- Carter, W. N. (1991). *Disaster management: A disaster manager's handbook*. Manila, Philippines: Asian Development Bank.
- Champagne, D. E. (2007). Elements of a comprehensive safety plan. In J. F. L. Jackson & M. C. Terrell (Eds.), *Creating and maintaining safe college campuses: A sourcebook for evaluating and enhancing safety programs*. Sterling: Stylus.
- Chang, D. H., Hong, H., & Cameron, G. T. (2012). *Same crisis, different responses: Case studies of how multiple competing corporations responded to the same explosion-related crises* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 1220692923)
- Charvériat, C. (2000). *Natural disasters in Latin America and the Caribbean: An overview of risk*. Washington, DC: Inter-American Development Bank, Research Department.
- Chong, J. K. S. (2004). Six steps to better crisis management. *Journal of Business Strategy*, 25(2), 43–46.
- Chong, J. K. S., & Park, J. (2010). A conceptual framework and research propositions for integrating TQM into crisis planning. *Review of Business Research*, 10(2), 69–74.
- Choudhary, A. (2012). Mission “trust.” *Academy of Strategic Management Journal*, 11(1), 101–113.
- Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, 20, 92–117.
- Code of Federal Regulations. (2009). *Title 45, public welfare, Department of Health and Human Services, Part 46: Protection of human subjects*. Retrieved from <http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html>
- Collymore, J. (2008). *Disaster risk management: Coastal communities and tourism development*. Retrieved from <http://www.onecaribbean.org/content/files/CDERACoastalCommun.pdf>
- Collymore, J. (2009). *Climate change and disaster risk management: A Caribbean perspective*. Retrieved from <http://www.caribank.org/uploads/2009/07/J-CollymoreCCDisasterManPaper.pdf>
- Constantinescu, D. (2012). The lessons of the crisis on pension funds' portfolio management. *Theoretical & Applied Economics*, 19(12), 23–36.
- Constantinos-Vasilios, P., & Ioannis, P. (2008). Services managers' awareness of crisis management: Attitudes and preparation. *Innovative Marketing*, 4(3), 37–45.

- Coombs, W. T. (2004). A theoretical frame for post-crisis communication: Situational crisis communication theory. In M. Martinko (Ed.), *Attribution theory in the organizational sciences: Theoretical and empirical contributions* (pp. 275–296). Greenwich, CT: Information Age.
- Coombs, W. T. (2007). *Ongoing crisis communication: Planning, managing and responding* (2nd ed.). Thousand Oaks, CA: Sage.
- Coombs, W. T. (2012a). *Ongoing crisis communication: Planning, managing, and responding* (3rd ed.). Thousand Oaks, CA: Sage.
- Coombs, W. T. (2012b). Parameters for crisis communication. In W. T. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 17–53). West Sussex, England: Blackwell.
- Cooper, D. R., & Schindler, P. S. (2007). *Business research methods* (10th ed.). Boston, MA: McGraw Hill Irwin.
- Cooper, D. R., & Schindler, P. S. (2011). *Business research methods* (11th ed.). Boston, MA: McGraw Hill Irwin.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among the five approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- da Cruz, M., Nunes, A., & Pinheiro, P. (2011). Fiedler's contingency theory: Practical application of the Least Preferred Coworker (LPC) scale. *IUP Journal of Organizational Behavior*, 10(4), 7–26.
- Denhardt, R. B. (2010). *Theories of public administration*. Boston, MA: Cengage.
- Donaldson, T., & Preston, L. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, 20, 65–91.
- Drury, J. L., Beaton, E., Boiney, L., Duncan, M. O., GreenPope, R. Howland, M.D., & Klein, G.L. (2010). *Collaboration research for crisis management teams*. Now Publishers Inc, Hanover, MA, U.S.A.

- Du Plessis, A. J., Visagie, J. C., & Wijnbeek, D. D. (2011). Max Weber's theory revisited: Modern organization culture stimulating productivity. *Interdisciplinary Journal of Contemporary Research in Business*, 2(12), 15–30.
- Dyson, K., & Wilks, S. (1983). *Industrial crisis*. New York, NY: St. Martin's Press.
- Elliott, D., & Smith, D. (2006). Cultural readjustment after crisis: Regulation and learning from crisis with the U.K. soccer industry. *Journal of Management Studies*, 43(2), 289–317.
- Emery, M. (2010). Refutation of Kira & van Eijnatten's critique of the Emery's open systems theory. *Systems Research & Behavioral Science*, 27(6), 697–712. doi:10.1002/sres.1010
- Farazmand, A. (2007). Learning from the Katrina crisis: A global and international perspective with implications for future crisis management. *Public Administration Review*, 67(1), 149–159. doi:10.1111/j. 1540-6210.2007.00824.x
- Farazmand, A. (2009). Hurricane Katrina, the crisis of leadership, and chaos management: Time for trying the “surprise management theory in action.” *Public Organization Review*, 9(4), 399–412. doi:10.1007/s11115-009-0099-2
- Fiedler, F. E. (1964). A theory of leadership effectiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 1, pp. 149–190). New York, NY: Academic Press.
- Fink, S. (1986). *Crisis management: Planning for the inevitable* (Illustrated ed.). New York, NY: American Management Association.
- Fink, S. (2000). *Crisis management: Planning for the inevitable* (Revised, with a new foreword). New York, NY: American Management Association.
- Fink, S. (2002). *Crisis management: Planning for the inevitable*. Lincoln: iUniverse.
- Frandsen, F., & Johansen, W. (2011). The study of internal crisis communication: Towards an integrative framework. *Corporate Communications*, 16(4), 347–361.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston, MA: Pitman.
- Galaz, V., Moberg, F., Olsson, E.-K., Paglia, E., & Parker, C. (2011). The institutional dimensions of cascading ecological crises. *Public Administration*, 89(2), 361–380.

- Ganapati, N. (2012). In good company: Why social capital matters for women during disaster recovery. *Public Administration Review*, 72(3), 419-427.  
doi:10.1111/j.1540-6210.2011.02526.x
- Garmhausen, S. (2006). Firms fail to learn from past disasters. *Crain's New York Business*, 22, 18-24.
- Gerber, B. J., & Robinson, S. E. (2009). Local government performance and the challenges of regional preparedness for disasters. *Public Performance & Management Review*, 32(3), 345-371.
- Gilpin, D. R., & Murphy, P. (2008). *Crisis management in a complex world*. New York, NY: Oxford University Press.
- Giorgi, A. (1997). The theory, practice, and evolution of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology*, 28(2), 235.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory. Strategies for qualitative research*. Chicago, IL: Aldine.
- Glesne, C. (1999). *Becoming qualitative researchers: An introduction* (2nd ed.). Don Mills, Ontario, Canada: Longman.
- Goldberg, S. D., & Harzog, B. B. (1996). Oil spill: Management crisis or crisis management? *Journal of Contingencies and Crisis Management*, 4(1), 1.
- Goldfine, E. (2011). Best practices: The use of social media throughout emergency & disaster relief. *School of Communication*, 39, 1-38.
- Goleman, D., Boyatzis, R., & McKee, A. (2004). *Primal leadership: Learning to lead with emotional intelligence*. Boston, MA: Harvard Business School Press.
- Gonzalez-Herrero, A., & Pratt, C. B. (1995). How to manage a crisis before or whenever it hits. *Public Relations Quarterly*, 40, 25-30.
- Gray, B. (1989). *Collaborating*. San Francisco, CA: Jossey-Bass.
- Hackman, J. R., & Oldham, G. R. (1980). *Work redesign* Reading, MA: Addison-Wesley.
- Haigh, N., & Griffiths, A. (2009). The natural environment as a primary stakeholder: The case of climate change. *Business Strategy & the Environment*, 18(6), 347-359.  
doi:10.1002/bse.602

- Hancock, D. R., & Algozzine, B. (2011). *Doing case study research: A practical guide for beginning researchers* (2nd ed.). New York, NY: Teachers College Press.
- Hannah, S. T., Uhl-Bien, M., Avolio, B. J., & Cavarretta, F. (2009). A framework for examining leadership in extreme contexts. *Leadership Quarterly*, 20, 897–919.
- Hatch, M. J. (with Cunliffe, A. L.). (2006). *Organization theory: Modern, symbolic, and postmodern perspectives* (2nd ed.). England: Oxford University Press.
- Herman, M. L., & Oliver, B. B. (2002). A primer for crisis management. *Risk Management*, 49(1), 48.
- Hermann, C. F. (1963). Some consequences of crisis which limit the viability of organizations. *Administrative Science Quarterly*, 8(1), 61–82.
- Herzberg, F. (1968). *Work and the nature of man*. London, England: Crosby.
- Holcombe, E. A., & Anderson, M. G. (2010). Implementation of community-based landslide hazard mitigation measures: The role of stakeholder engagement in “sustainable” project scale-up. *Sustainable Development*, 18(6), 331–349. doi:10.1002/sd.409
- Hsi-An, S., & Yun-Hwa, C. (2011). Exploring the effectiveness of outsourcing recruiting and training activities, and the prospector strategy’s moderating effect. *International Journal of Human Resource Management*, 22(1), 163–180. doi:10.1080/09585192.2011.538980
- James, E., Wooten, L. P., & Dushek, K. (2011). Crisis management: Informing a new leadership research agenda. *Academy of Management Annals*, 5(1), 455–493. doi:10.1080/19416520.2011.589594
- Jaques, T. (2007). Issue management and crisis management: An integrated, non-linear, relational construct. *Public Relations Review*, 33(2), 147–157.
- Jianfeng, W., Solan, D., & Ghods, A. (2010). Distance learning success: A perspective from socio-technical systems theory. *Behavior & Information Technology*, 29(3), 321–329. doi:10.1080/01449290903544645
- Joshi, A., Dencker, J. C., Franz, G., & Martocchio, J. J. (2010). Unpacking generational identities in organizations. *Academy of Management Review*, 35, 392–414.
- Julca, A. (2012). Natural disasters with un-natural effects: Why? *Journal of Economic Issues*, 46(2), 499–510.

- Kahn, W. A., Barton, M. A., & Fellows, S. (2013). Organizational crises and the disturbance of relational systems. *Academy of Management Review*, 38(3), 377–396. doi:10.5465/amr.2011.0363
- Kamer, L. (1996). When the crisis is orchestrated: Corporate campaigns and their origins. In L. Barton (Ed.), *New avenue in risk and crisis management* (Vol. 5, pp. 64–72). NV: University of Nevada Las Vegas Small Business Development Center.
- Kapucu, N. (2006). Public–nonprofit partnerships for collective action in dynamic contexts of emergencies. *Public Administration*, 84(1): 205–20.
- Kapucu, N. (2008). Collaborative emergency management: Better community organizing, better public preparedness and response. *Disasters*, 32, 239–262. doi:10.1111/j.1467-7717.2008.01037.x
- Ki, E., & Brown, K. A. (2013). The effects of crisis response strategies on relationship quality outcomes. *Journal of Business Communication*, 50(4), 403–420. doi:10.1177/0021943613497056
- Kureuther, H., & Useem, M. (2010). Principles and challenges for reducing risks from disasters. In H. Kureuther & M. Useem (Eds.), *Learning from catastrophes: Strategies of reaction and response* (pp. 1–13). Upper Saddle River, NJ: University of Pennsylvania, Wharton School.
- Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Los Angeles, CA: Sage.
- Lalonde, C. (2007). The potential contribution of the field of organizational development to crisis management. *Journal of Contingencies and Crisis Management*, 15(2), 93–104.
- Lazzaroni, S., & van Bergeijk, P.A.G. (2013). *Natural disasters impact, factors of resilience and development: A meta-analysis of the macroeconomic literature*. ISS Working Papers- General Series 554, Institute of Social Sciences of Erasmus University Rotterdam (ISS), The Hague.
- Lentner, H. H. (1972). The concept of crisis as viewed by the United States Department of State. In C. F. Hermann (Ed.), *International crises: Insights from behavioral research* (pp. 112–135). New York, NY: Free Press.
- Lerbinger, O. (1986). *Managing corporate crises: Strategies for executives*. Boston, MA: Barrington Press.
- Lerbinger, O. (2012). *The crisis manager: Facing disasters, conflicts and failures* (2nd ed.). New York, NY: Routledge.

- Lewis, J. L., & Sheppard, S. R. J. (2006). Culture and communication: Can landscape visualization improve forest management consultation with indigenous communities? *Landscape and Urban Planning*, 77, 291–313.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Thousand Oaks, CA: Sage.
- Löffler, E., & Bovaird, T. (Eds.). (2009). *Public management and governance*. London, England: Taylor & Francis.
- Loh, E. (2012). How and why doctors transition from clinical practice to senior hospital management: A case research study from Victoria, Australia. *International Journal of Clinical Leadership*, 17(4), 235–244.
- Maak, T., & Pless, N. M. (2006). Responsible leadership in a stakeholder society—A relational perspective. *Journal of Business Ethics*, 66, 99–115. doi:10.1007/s10551-006-9047-0
- Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.). Thousand Oaks, CA: Sage.
- Massey, J. E., & Larsen, J. P. (2006). Crisis management in real time: How to successfully plan for and respond to a crisis. *Journal of Promotion Management*, 12(3/4), 63–86.
- McConnell, A., & Drennan, L. (2006). Mission impossible? Planning and preparing for crisis. *Journal of Contingencies and Crisis Management*, 14(2), 59–70.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Milašinović, S., Kešetović, Ž., & Nadić, D. (2010). The power and impotence of crisis management in facing modern crises. *Megatrend Review*, 7(2), 273–289.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Miles, R. E., & Snow, C. C. (2003). *Organizational strategy, structure and process* (Reprint ed.). CA: Stanford University Press.
- Minuchin, S. (1974). *Families & family therapy*, Cambridge, MA: Harvard University Press.
- Mitroff, I. I. (1994). Crisis management and environmentalism: A natural fit. *California Management Review*, 36(2), 101–113.

- Mitroff, I. I. (2001). *Managing crises before they happen*. New York, NY: American Management Association.
- Mitroff, I. I., & Anagnos, G. (2001). *Managing crises before they happen: What every executive and manager needs to know about crisis management*. New York, NY: AMACOM.
- Molla, T. (2010). Towards understanding epistemological assumptions of history teacher educators: My experience with phenomenological enquiry. *Educational Research Journal*, 25(1), 27–45.
- Morrison, J. L., & Oladujoye, G. (2013). CEO effectiveness for leading pre-event natural disaster preparedness planning to meet the needs of employees and their families. *Journal of Business & Economics Research*, 11(5), 203–212.
- Moynihan, D. P. (2009). The network governance of crisis response: Case studies of incident command systems. *Journal of Public Administration Research & Theory*, 19(4), 895–915. doi:10.1093/jopart/mun033
- Nash, L. (2013). The subterranean fires: Eruptions, interruptions and disruptions in organizational life and their strategic significance. *Annual International Conference on Enterprise Marketing & Globalization*, 141–146. doi:10.5176/2251-70\_BizStrategy13.20
- Olofsson, A. (2011). Organizational crisis preparedness in heterogeneous societies: The OCPH model. *Journal of Contingencies and Crisis Management*, 19(4), 215–226. doi:10.1111/j.1468-5973.2011.00652.x
- Organisation for Economic Co-operation and Development. (2003). *Emerging risks in the 21st century: An agenda for action*. Retrieved from <http://www.oecd.org/futures/globalprospects/37944611.pdf>
- Palm, J., & Ramsell, E. (2007). Developing local emergency management by co-ordination between municipalities in policy networks: Experiences from Sweden. *Journal of Contingencies and Crisis Management*, 15, 173–182. doi:10.1111/j.1468-5973.2007.00525.x
- Palttala, P., Boano, C., Lund, R., & Vos, M. (2012). Communication gaps in disaster management: Perceptions by experts from governmental and non-governmental organizations. *Journal of Contingencies and Crisis Management*, 20(1), 2–12. doi:10.1111/j.1468-5973.2011.00656.x



- Palttala, P., & Vos, M. (2012). Quality indicators for crisis communication to support emergency management by public authorities. *Journal of Contingencies and Crisis Management*, 20(1), 39–51. doi:10.1111/j.1468-5973.2011.00654.x
- Pauchant, T. C., & Douville, R. (1992). Recent research in crisis management: A study of 24 authors' publications from 1986 to 1991. *Industrial & Environmental Crisis Quarterly*, 7, 43–66.
- Pauchant, T. C., & Mitroff, I. (1992). *Transforming the crisis-prone organization: Preventing individual, organizational, and environmental tragedies*. San Francisco, CA: Jossey-Bass.
- Pauchant, T. C., Mitroff, I. I., & Ventolo, G. F. (1992). The dial tone does not come from God! How a crisis can challenge dangerous strategic assumptions made about high technologies: The case of Hinsdale telecommunication outrage. *Executive*, 6(3), 66–79. doi:10.5465/AME.1992.4274193
- Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. *Academy of Management Review*, 23(1), 59–76.
- Perrow, C. (1984). *Normal accidents: Living with high-risks technologies*. New York, NY: Basic Books.
- Perrow, C. (2007). *The next catastrophe: Reducing our vulnerabilities to natural, industrial, and terrorist disasters*. NJ: Princeton University Press.
- Perry, M. (2007). Natural disaster management planning: A study of logistics managers responding to the tsunami. *International Journal of Physical Distribution & Logistics Management*, 37(5), 409–433.
- Perry, R. W., & Nigg, J. M. (1985). Emergency management strategies for communicating hazard information. *Public Administration Review* [Special Issue], 72–77.
- Phaup, M., & Kirschner, C. (2010). Budgeting for disasters: Focusing on the good times. *OECD Journal On Budgeting*, 1, 21-41.
- Pine, J. C. (2009). *Natural hazards analysis: Reducing the impact of disasters*. Boca Raton, FL: Taylor Francis.
- Piotrowski, C. (2010). Earthquake in Haiti: The failure of crisis management. *Organization Development Journal*, 28(1), 107–112.

- Ponis, S. T., & Koronis, E. (2012). A knowledge management process-based approach to support corporate crisis management. *Knowledge & Process Management*, 19(3), 148–159. doi:10.1002/kpm.1390
- Prewitt, J. E., Weil, R., & McClure, A. Q. (2011). Crisis leadership: An organizational opportunity. *Australian Journal of Business & Management Research*, 1(6), 60–74.
- Quarantelli, E. (1996). The future is not the past repeated: Projecting disasters in the 21st century from current trends. *Journal of Contingencies and Crisis Management*, 4(4), 228–240.
- Racher, F. E., & Robinson, S. (2003). Are phenomenology and postpositivism strange bedfellows? *Western Journal of Nursing Research*, 25(5), 464–481.
- Rahim, M. A. (2011). *Managing conflict in organizations* (4th ed.). New Brunswick, NJ: Transaction.
- Ray, S. J. (1999). *Strategic communication in crisis management: Lessons from airline industry*. Westport, CT: Quorum Books.
- Reger, M., & Larkin, L. (2008). *Risk issues and crisis management: A case of best practice* (4th ed.). London, England: Kogan Page.
- Reilly, A. H. (1993). Preparing for the worst: The process of effective crisis management. *Industrial and Environmental Crisis Quarterly*, 7(2), 115–143.
- Robbins, S. P., & Judge, T. A. (2011). *Organizational behavior* (14th ed.). Upper Saddle River, NJ: Pearson.
- Rosenblatt, Z., & Sheaffer, Z. (2002). Effects of crises-triggered demographic depletion of organizational change: The case of Israeli Kibbutzin. *Journal of Contingencies and Crisis Management*, 10, 26–38.
- Rosenthal, U., Charles, M. T., & 't Hart, P. (Eds.). (1989). *Coping with crises: The management of disasters, riots and terrorism*. Springfield, IL: Thomas.
- Rowley, J. (2002). Using case studies in research. *Management Review News*, 25(1), 16–27.
- Rowley, T. J., & Moldoveanu, M. (2003). When will stakeholder groups act? An interest- and identity-based model of stakeholder group mobilization. *Academy of Management Review*, 28(2), 204–219.

- Seeger, M. W., & Griffin-Padgett, D. R. (2010). From image restoration to renewal: Approaches to understanding postcrisis communication. *Review of Communication, 10*, 127–141. doi:10.1080/15358590903545263
- Seeger, M. W., Sellnow, T. L., & Ulmer, R. R. (2003). *Communication and organization crisis*. Westport, CT: Praeger.
- Sen, F., & Egelhoff, W. G. (1991). Six years and counting: Learning from crisis management at Bhopal. *Public Relations Review, 17*(1), 69–83.
- Shrivastava, P., Mitroff, I., Miller, D., & Miglani, A. (1988). Understanding industrial crises. *Journal of Management Studies, 25*, 285–303.
- Simpson, M. C., & Gladin, E. (2008). *Good practices: Natural hazard risk management in the Caribbean tourism sector*. Barbados: Caribbean Regional Sustainable Tourism Development Programme.
- Smart, C., & Vertinsky, L. (1977). Designs for crisis decision units. *Administrative Science Quarterly, 22*(4), 640–657.
- Smith, C. A. P., & Hayne, S. C. (1997). Decision making under time pressure: An investigation of decision speed and decision quality of computer-supported groups. *Management Communication Quarterly, 11*(1), 97–126.
- Stake, R. E. (1995). *The art of case study research*. London, England: Sage.
- Swanson, R. A., & Holton, E. F., III. (Eds.). (2005). *Research in organizations: Foundations and methods of inquiry*. San Francisco, CA: Berrett-Koehler.
- Thach, L. (2012). Managerial perceptions of crisis leadership in public and private organizations: An interview study in the United States. *International Journal of Management, 712–725*.
- Tomasini, R. M., & Van Wassenhove, L. N. (2009). From preparedness to partnerships: Case study research on humanitarian logistics. *International Transactions in Operational Research, 16*(5), 549–559. doi:10.1111/j.1475-3995.2009.00697.x
- Tomasko, R. M. (1990). *Downsizing: Reshaping the corporation for the future*. New York, NY: AMACOM.
- Trochim, W. M. K. (2006). *The research methods knowledge base* (2nd ed.). Retrieved from <http://www.socialresearchmethods.net/kb/>
- Turner, B. (1976). The organizational and inter-organizational development of disasters. *Administrative Science Quarterly, 2*, 378–397.

- Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2011). *Effective crisis communication: Moving from crisis to opportunity* (2nd ed.). Thousand Oaks, CA: Sage.
- UN Development Program. (n.d.). *The Caribbean: Comprehensive approaches to disaster management*. Retrieved from <http://www.undp.org/cpr/disred/documents/publications/corporatereport/latinamerica/caribbean1.pdf>
- United States Agency for International Development/Office of U.S. Foreign Disaster Assistance. (n.d.). [Home page.] Retrieved from <http://www.usaid.gov>
- Veil, S. R. (2011). Mindful learning in crisis management. *Journal of Business Communication, 48*(2), 1–32.
- Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative–quantitative divide: Guidelines for conducting mixed methods research information systems. *MIS Quarterly, 37*(1), 21–54.
- Viorel, L., Aurel, M., Virgil, M., & Stefania, P. (2009). Employees motivation theories developed at an international level. *Annals of the University of Oradea, Economic Science Series, 18*(4), 324–328.
- Von Bertalanffy, L. (1972). The history and status of general systems theory. *Academy of Management Journal, 15*, 411.
- Wachtendorf, T. (2009). Trans-system social ruptures: Exploring issues of vulnerability and resiliency. *Review of Policy Research, 26*(4), pp. 379–393.
- Weiner, D. (2006). Crisis communications: Managing corporate reputation in the court of public opinion. *Ivey Business Journal, 70*(4), 1–6.
- Wheeler, C., Weeks, P., & Montgomery, D. (2013). Disaster response leadership: Perceptions of American Red Cross workers. *International Journal of Leadership Studies, 8*(1), 76–97.
- Wilson, T. C. (2013). Risk management lessons learned from the financial crisis: One CRO's view. *Journal of Risk Management in Financial Institutions, 6*(2), 167–177.
- Xu, K., & Li, W. (2013). An ethical stakeholder approach to crisis communication: A case study of Foxconn's 2010 employee suicide crisis. *Journal of Business Ethics, 117*(2), 371–386. doi:10.1007/s10551-012-1522-0
- Yates, D., & Paquette, S. (2011). Emergency knowledge management and social media technologies: A case study of the 2010 Haitian earthquake. *International Journal of Information Management, 31*(1), 6–13.

- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). London, England: Sage.
- Yin, R. K. (2012). *Applications of case study research* (3rd ed.). Thousand Oaks, CA: Sage.
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.
- Zucker, D. M. (2009). How to do case study research. *School of Nursing Faculty Publication Series*, Paper 2. Retrieved from [http://scholarworks.umass.edu/nursing\\_faculty\\_pubs/2](http://scholarworks.umass.edu/nursing_faculty_pubs/2)

## APPENDIX. STATEMENT OF ORIGINAL WORK

### Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

### Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the *APA Publication Manual*.

Learner name  
and date Sylvia Ephraim 2/10/2014

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Mentor name  
and school Dr. Rubye Braye, School of Business and Technology, 2/11/2014

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