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The Impact of Principal Knowledge, Attitudinal Favorability and Organizational Structure on Emergency Preparedness in New Jersey's Public Schools

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THE IMPACT OF PRINCIPAL KNOWLEDGE, ATTITUDINAL FAVORABILITY AND ORGANIZATIONAL STRUCTURE ON EMERGENCY PREPAREDNESS IN NEW JERSEY’S PUBLIC SCHOOLS

BY

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Submitted in Partial Fulfillment of the Requirements for the Degree Doctor of Education
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ABSTRACT

THE IMPACT OF PRINCIPAL KNOWLEDGE, ATTITUDINAL FAVORABILITY AND ORGANIZATIONAL STRUCTURE ON EMERGENCY PREPAREDNESS IN NEW JERSEY’S PUBLIC SCHOOLS

SCOTT R. ROCCO

School violence, an issue documented across the United States, has put a focus on school emergency preparedness for school principals. Therefore, the purpose of this study was to understand the school principal’s level of emergency preparedness in New Jersey public schools and how the confidence and behavior of principals affect emergency preparedness.

This study had three research questions that centered on the principal’s behavior and confidence. The population for this survey was New Jersey public school principals ranging from kindergarten to 12th grade schools, vocational, technical or institute schools, public schools for the handicapped, and magnet schools. Each selected principal received a survey instrument with seven sections related to school emergency preparedness.

The procedures for data analysis included the development of indices for data reduction of the three independent variables, chi square analysis to address the first three research questions, and two multiple linear
regression of the three independent variable and each dependent variables for the fourth research question.
ACKNOWLEDGEMENTS

One of my personal and professional goals has always been to earn a doctorate. The thought of achieving this goal seemed far from attainable years ago and even as I moved through the classes and into working directly on the dissertation, the light at the end of the tunnel always seemed so far away. However, with the assistance of my dissertation committee, cohort members, and family, the light became brighter and the goal possible.

To my dissertation committee:

I thank Dr. Edward Forsthoffer, III who for some years now continually encouraged me to apply to Seton Hall University and work toward my goal. You have been a consistent and positive force in this process, a colleague and friend. Thank you for all of your support, encouragement and assistance.

Dr. Joseph Stetar, I enjoyed your classes in the Executive Doctoral Program as they provided insight into education in areas around the world that I could never imagine getting firsthand knowledge. In addition, your effort during the dissertation process, was appreciated.
To my advisor who provided guidance, support and encouragement, Dr. Martin Finkelstein, I say thank you. In a single word, “onward”, you sent a consistent message that enabled me to move from one point to the next in the dissertation process, bring calm to chaos, and satisfaction to frustration. When I felt as if I hit a wall you kept me centered and assured progress was made. Your time, encouragement, suggestions, and patience are greatly appreciated. As I move forward in my career, I will always keep in my mind that simple, yet powerful word. ONWARD!

To my cohort members:

The Executive Doctoral Program is designed to rely on the strengths of the group. I could not have asked for a more dedicated and supportive group of individuals who all came together for one common goal. Even as classes ended and members of Cohort XIII defended their dissertations, the group continued to encourage its members to carry on and complete the task at hand. The most significant aspect of this program will always be the professional and personal friendships made during my time at Seton Hall University with my cohort members. Thank you one and all for your assistance and camaraderie.
To my family:

For as far back as I can remember my parents taught me the value of education and reinforced it throughout my life. It’s that focus that led me to continue my education and led to my ultimate goal of earning a doctorate.

However the opportunity and ability to achieve this goal is not accomplished individually. The only way I completed this journey was with the support of my family. At every turn they encouraged, motivated, and pushed me to go further in the process. As a result, they had to forgo my presence at events, activities and nights at home with the family. It was a sacrifice for all in my family. For your sacrifices over the years I thank you and I look forward to being able to again give my undivided attention to all of you.
DEDICATION

This dissertation is dedicated to my family who has sacrificed so much for me and asked for so little in return as I took on this adventure.

To my wife, Tracy, and children, Paige, Nicholas, and Michael, you have given up too much over the last few years and tolerated my absence at family events, nights, weekends and activities to allow me the opportunity to complete this goal of mine. I can never fully repay you for your endless love and patience during this entire process or explain to you how much your tolerance and flexibility meant to me, even when I became a “grunch”. As much as all of you have been supportive of me, I hope to return the support, patience and motivation in all of your dreams and adventures.
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Chapter I

INTRODUCTION

In the years since Columbine, a defining moment in school violence, our nation has seen natural and man-made disasters, pandemics, and violence in our schools that have stressed communities, stretched first responder resources, and affected our schools’ abilities to teach our students in a safe environment. As a result, the focus of schools around the nation has expanded the role of school safety to include crisis management.

Such a focus is not only a school responsibility but also one of the community in which the school resides. As history has shown, school safety is a responsibility that should be taken seriously and continuously addressed. For schools it is also a legal responsibility; one that can hold them “liable if they do not make good-faith efforts to provide a safe and secure school environment” (“Mitigating Hazards in School Facilities”, p. 1). This has led to an understanding that one organization, agency or school cannot properly address the issue of crisis management alone. Instead it is a “shared responsibility, based on each team member doing what it does best and leveraging the expertise and strengths of others” (National Commission on Children and Disasters, p. 19).
According to Homeland Security’s Presidential Directive 8 on National Preparedness Guidance from April 27, 2005, “in 95 percent of all emergencies, bystanders or victims themselves are the first to provide emergency assistance or to perform a rescue on the scene” (p. 47). This fact makes school officials and first responders realize that “when an emergency situation develops on campus, school personnel are typically the first responders” (Kano & Bourque, p. 202). However, some school districts are complacent in their preparation for potential crisis situations within the schools. Witcome (2007) stated that this complacency is not a result of a lack of concern by school officials but rather the statistical reality that a crisis will probably not occur in their particular schools (p. 23). Such beliefs are supported by the research of Sprague, Smith, and Steiber (2002) who found that school related deaths and weapon possession in schools have decreased since 1992. The Center for Disease Control and Prevention (2008) reported that 90% of schools had no reports of serious crimes. These statistics can further promote complacency, as Allen and Ashbaker (2004) stated that “all too frequently, training needs are underestimated” (p. 139).
Focus on Preparedness

The national agenda on emergency management has established, and first responder organizations have accepted, the creation of four phases of crisis management. They include mitigation/prevention, preparedness, response, and recovery. The first phase, mitigation/prevention includes removal of known hazards and actions that can be done prior to a crisis to save lives and property if a crisis was to occur. Mitigating/preventative actions include, but are not limited to, facility upgrades, policy changes, and equipment upgrades. The second phase, preparedness, is the planning for crisis and practice of the established plan. According to the US Department of Education’s Practical Information on Crisis Planning 2007, properly addressing the preparedness phase of emergency management assures a “rapid, coordinated, effective response when a crisis occurs” (p. 3.1). The preparedness phase includes crisis plan development, working with first responders, obtaining supplies and equipment for response to a crisis, and practicing emergency plans. Response is the third phase and it refers to how the organization reacts during the crisis. In the response phase the crisis plan is implemented according to the emergency at hand. It is all the action an organization will take during a crisis. This includes, but is not limited to
evacuation of all people in the organization, triage, coordination with first responders, and communication with the community and media. The final phase is recovery or the restoration of the organization’s operational abilities. This includes addressing the physical damage done to facilities and the emotional/psychological needs of those involved in the crisis.

Homeland Security Presidential Directive 8: National Preparedness (2005) clearly articulated that preparedness for a crisis is not just the responsibility of first responders, but of the public too. Addressing the four stages of emergency management “depend(s) upon citizens having a clear understanding of what it means to be prepared, what the state of preparedness is at a national level, how to help prevent incidents from happening, and how to respond should an event occur” (p. 47). As the national agenda on emergency management established the four phases of emergency management as the foundation for addressing crisis situations, the National Commission on Children and Disasters (2010) identified the foundation of planning and managing disasters at the state and local levels. This report specifically stated that “states and localities supported by Federal emergency preparedness grants should develop disaster capabilities that meet the needs of children” (p. 23).
A 2010 report by the National Commission on Children and Disasters to the President of the United States and Congress found that “gaps in disaster preparedness are prevalent” in facilities that care for school-aged children, including schools (p. 29). With gaps in preparedness clearly an issue, Witcome (2007) suggested “finding a level of preparedness that, for local jurisdictions, makes sense in terms of risk and expense” (p. 23). Hutton and Bailey (2007) believed that “comprehensive school safety plans are an integral part of school management” (p. 29) and this planning needs to include “collaboration with law enforcement officials” (p.29).

To encourage a level of preparedness, federal and state governments have invested time and money into developing resources, materials, and training to assist school districts in crisis planning. Although the federal government has not established laws or national standards requiring schools to have emergency management plans (Ashby, 2007; Shelton, Owens, Song, 2009), a number of state legislatures across the United States have enacted laws requiring school districts to develop crisis plans for emergency situations (Brock, Sandoval, & Lewis, 2001; Pagliocca & Nickerson, 2001). By 2008, 32 states had legislation requiring crisis plans for emergency situations (“Disaster
planning for schools,” 2008) and approximately 95% of all schools have developed crisis plans (GAO, 2007a).

Beyond developing a plan, preparedness requires interaction and practice with first responders. Hutton and Bailey (2007) found that “creating a safe school environment requires extensive communications among schools, law enforcement and social services agencies” (p. 18). They go on to explain that providing staff with professional development associated with the school’s safety plan will improve the effectiveness of the program. Yet, the National Commission on Children and Disasters (2010) reported from the Government Accountability Office (GAO) that 25% of schools districts with emergency management plans did not train with first responders and 66% did not engage community partners in the planning stage (p. 92).

In addition, the conference report Schools: Prudent Preparation for a Catastrophic Terrorism Incident (2003) clearly identified the educational institution as the responsible party for student safety during the school day, but most importantly during a crisis. The school serves as in loco parentis and principals “carry by name accountability” (p. 7). The conference report goes on to explain that “parents and members of the school community will specifically hold individuals in these positions responsible for the prevention and effective
management of incidents” (p. 7). In addition to the responsibility described above, Sparks (2007) analyzed changing organizations and stated that “leaders’ thoughts and actions shape the culture of their organizations” (p. 3). Zimmerman (2011) added that “principals need to identify which of their attitudes, behaviors and beliefs might help or hinder their own professional learning and the effectiveness of change initiatives in their schools” (p. 109). As a result, the focus of this study will be on those who are accountable by title, and whose attitudes, behaviors, and beliefs shape the school environment: principals.

**Preparedness in New Jersey**

The New Jersey Administrative Code 6A:16-5.1 (2009 – 2010), *School Safety and Security Plans*, clearly outlines the responsibility of school districts within the state of New Jersey when it comes to school safety and crisis planning. In October of 2007 The New Jersey Department of Education’s Office of Educational Support Services School Security Unit published its *School Administrator Procedures: Responding to Critical Incidents* in which it stated that “It should be the policy of every school district to enable principals and/or their designee(s) based upon their authority and responsibility to take immediate action in response to an identified
(predetermined) crisis situation prior to emergency responders’ arrival” (p. 4). Such actions “should be guided by their training and experience and consistent with NJAC 6A:16-5.1” (School Administrator Procedures, p. 4).

Although laws related to school safety are in place and school districts meet the standards set by these laws, Allen and Ashbaker (2004) contended that this is “only an initial step toward ensuring adequate preparation for crisis” (p. 140). Brock et. al (2001) noted that the planning and preparation for a crisis need to go further because these plans and preparations are “useless without personnel capable of conducting crisis intervention” (p. 52).

For New Jersey principals the issue of school safety and crisis management becomes more complex than plans and preparation because the training that should guide administrators, as stated in the Office of Educational Support Services School Security Unit’s School Administrator Procedures: Responding to Critical Incidents, is not a requirement for certification as a principal in the state. In fact, an analysis of the programs offered to certify future principals in New Jersey could not find a public or private college or university in New Jersey that offers a class specifically designed to address school emergency preparedness requirements and laws in
New Jersey. Among the courses listed in the syllabi for principal certification provided by the college and universities there was no mention of school emergency preparedness. Only the Foundation for Educational Administration’s New Jersey Expedited Certification for Educational Leadership (NJEXCEL) program, a non-traditional certification program for principals, provides a 15-hour course specifically designated for training future principals in school safety. The only required class specific to law was a school law class required for all students seeking to earn certification as a principal in New Jersey. Reviewing the requirements of school law classes for certification of New Jersey principals also did not identify school emergency preparedness training as part of the class requirements.

**New Jersey Principal Preparedness in Perspective**

When discussing emergency preparedness of principals in New Jersey, there needs to be some perspective with respect to other states. To do so, states were identified based on The National School Safety Center’s 2008 report which recognized California, Colorado, Florida, and Pennsylvania as having the highest number of reported emergency incidents.

California requires a minimum of 3 years teaching and 24 semester hours of graduate level classes to receive a
certificate of eligibility for becoming a principal. The topics for the semester hours include: School Community Relations, Orientation and Assessment, Curriculum Leadership, Educational Leadership, School Law and Ethics, Instructional Strategies and two internships. No specific classes or topics on school safety are required for principal certification eligibility.

With respect to planning, the California Education Code Section 35294.1 et seq., requires the development of a school safety plan by every public school and district in the state that is to be reviewed annually. In addition each school has a school safety committee. Also, California has a statute establishing a School Safety Cadre that is designed for interagency cooperation among educators, community-based organizations, and law enforcement. On the California Department of Education’s disaster preparedness/crisis response webpage http://pubs.cde.ca.gov/tcsii/ch8/dsastrprepcrisrspn.aspx there are links and expectations for response to an emergency outlined for trainings or preparation for principals or staff. Expectations include all staff receiving professional development and training so that school personnel can implement the safety plan.

The requirements for certification in Colorado clearly indicate school safety in the graduate courses required for
The state’s *Principal Standards Matrix Standard Ten: School Site Safety and Maintenance* (International Finance Corporation, nd) lists the following that are addressed in several graduate level classes:

- The principal is knowledgeable about how to assure a safe learning environment in a secure, well-maintained facility.

- Be vigilant about school security and establish measures to evaluate and assure students and staff safety and anticipate potentially dangerous situations.

- Implement safety procedures and precautions within the school and on school property.

- Maintain a close working relationship with the local law enforcement.

- Take a proactive approach to emergency situations and be prepared to provide stress and crisis management and conflict resolution, before, during, and after such situations, as required.

In addition, Colorado’s Department of Education has a robust School Safety Resource Center website

http://www.colorado.gov/cs/Satellite/CDPS-SafeSchools/CBON/1251621089752 that includes model safety
planning exercises, a school safety management plan, protocols for five types of emergencies, an exercise tool kit, links to federal and state resources, and links to state laws and statutes associated with school safety.

The Principal Leadership Standards, 6A-5.080 for Florida list, under the heading of Managing the Learning Environment, the responsibility of high performing leaders to promote a safe environment, and the Florida Department of Education’s critical incident/emergency planning for schools has just a few resources on its initial page. It includes a link for hurricane preparedness, domestic security policy for schools, and safety and security assessments. The last two hold information about the expectations within Florida schools. In the domestic security policy for schools, eight major elements are defined. Among them are training for personnel and working with first responders. The safety and security assessments are yearly best practice checklists for principals to evaluate the effectiveness of their school safety procedures.

The Pennsylvania Department of Education requires a minimum of 30 graduate credits in instruction, evaluation, school law, finance, and school and community relationships. There is no indication of any training opportunities or key elements of school safety within their graduate school training programs for
school principals. Additionally, The Department of Education’s Framework for Principal Preparation Program Guidelines (Pennsylvania Department of Education, 2008) does not list any school safety or preparedness training requirements.

Pennsylvania’s The Pennsylvania Emergency Management Agency’s all hazard school safety planning toolkit (Pennsylvania Office of Emergency Management, nd) lists 47 resources for schools. Within the resource, six recommendations for training are provided and 18 recommended or mandatory trainings for school personnel related to emergency preparedness.

**Emergency Preparedness and Community Resilience**

Research is limited on emergency preparedness for schools, how schools prepare for emergencies, and the actions needed to be fully prepared for all hazard emergencies. So to make connections with the topic of emergency preparedness, one needs to look to areas outside of the school. In the field of sociology and psychology, studies have been conducted for almost 100 years related to community and individual resilience related to community emergencies. The work done by researchers can shed light on how school emergency preparedness parallels community resilience and/or learn from a community’s experiences with emergency preparedness.
The concept of resilience refers to the ability of a community or individual to endure a crisis or emergency and recover from it. Pennings and Grossman (2008) discussed the need for the government and organizations to understand the potential reactions of the community in respect to a crisis or emergency so that governments, organizations, and communities could better prepare themselves. As a result, reviewing literature related to community resilience may shed light on the direction schools should take related to emergency preparedness since schools are often smaller versions of the community in which they are located.

**Problem Statement**

New Jersey Administrative Law Code 6A:16-5.1 clearly articulates the expectations and requirements for an all-hazard emergency preparedness plan for schools. Principals need the appropriate knowledge, attitudinal favorability, and organizational structure to address these expectations and requirements. However, there is little guidance and even less oversight for schools when it comes to properly addressing this law. The level to which public schools and the principals that lead them are compliant with the law in New Jersey varies from district to district and across the state. In addition there may be organizational, political, financial, and/or structural
barriers that limit a principal’s or school’s ability to fully meet requirements of the law. New Jersey’s School Security Task Force (2007) referenced this issue when it recognized that model policies needed to afford sufficient flexibility to local law enforcement and education professionals to modify them according to their specific needs (p. 5). The report goes on to state that if modifications are necessary they should stay consistent with improving school safety and enhancing communication between law enforcement, educators and principals for the best interests of their communities (p. 5).

**Purpose of the Study**

The purpose of this study is to determine how the knowledge and attitudinal favorability of principals and the organizational structure they establish in their schools contribute to emergency preparedness in New Jersey public schools. The study will specifically assess the roles that knowledge obtained through the understanding of specific emergency preparedness terms and the practice of specific emergency preparedness drills play in preparing principals for school emergencies. The attitudinal favorability of the principals will be assessed through their perceptions of the importance of emergency preparedness in the role of the school principal, and of the role that organizational structure
established within the school has on shaping how principals prepare for emergency management. The GAO reported in 2007 that 50% of school districts update their emergency plans annually but an “estimated 10 percent had never updated their plans” (p. 5). The report goes on to state that 25% of school districts never train with first responders and 33% do not practice implementation of their emergency plans with community members (pp. 4-5). One reason for such low percentages may be found in the United States Department of Education’s Practical Information on Crisis Planning: A Guide for Schools and Communities (2007): “the research on what works in school-based crisis planning is in its infancy” (p. 1-4). Drabek (1986) Tierney, Lindell, and Perry (2001) concur that the research is limited on disaster preparedness for schools.

For school safety to be effective, the building administrator must have the training and knowledge necessary to prepare for, react to and recover from a crisis situation. In a report by the National Association of Elementary Principals The K-8 Principal in 2008; A 10 - Year Study 66.4% of building principals surveyed responded that level of involvement with safety and security issues has increased for them. This same report identified that safety and security of students as a major concern for elementary principals increased from 25% in
1998 to 43.4% in 2008 (p. 115). However, no college or university in the state of New Jersey, that provides a certification program for principals, offers safety and security training course work as part of the certification process. Therefore, it is essential to understand where principals have received their knowledge on emergency preparedness, and the level of preparedness they have achieved in implementing the specific state laws for the safety and security of their schools. Additionally, it is important to understand the attitudes of principals toward emergency preparedness. Finally, it is vital to understand the organizational structure established in principals’ buildings to evaluate the level of training and preparedness of the staff.

**Research Questions**

This study addresses four research questions related to school emergency preparedness:

1. What do principals know about emergency preparedness, how did they learn it, and what role does their knowledge of crisis management play in their confidence and emergency preparedness planning behavior for their schools?

2. What attitudinal favorability do principals have about emergency preparedness and what role does this attitudinal
favorability play in their confidence and the emergency preparedness planning behavior for their school?

3. What organizational structures do principals institute for emergency preparedness and what role does this organizational structure play in their confidence and their emergency preparedness behavior for their schools?

4. What role does the interaction of knowledge, attitudinal favorability and organizational structures play on principals’ confidence and their emergency preparedness behavior for their schools?

This study will identify what role knowledge and attitudinal favorability of New Jersey public school principals, and the organizational structure of their schools have on principals’ behavior and confidence in respect to the second phase of emergency management, preparedness, based on federal guidelines, New Jersey state statute, and research on the topic.

**Definition of Terms**

All-Hazard – FEMA defines this term as “natural, technological, or human-caused incidents that warrant action to protect life, property, environment, and public health or
safety, and to minimize disruptions of school activities” (FEMA.gov, nd).

Behavior – One of the two dependent variables of the study. It refers to a self-appraisal of the principal’s level of school emergency preparedness.

Confidence – One of the two dependent variables of the study. It refers to the principal’s assurance that the school emergency preparedness plan properly addresses all types of emergencies.

Crisis and/or emergency – “a sudden, generally unanticipated event that has the potential to profoundly and negatively impact a significant segment of the school population” (Kentucky Center for School Safety, p.??).

Crisis and/or Emergency Planning – written documents that address the four phases of emergency management.

Crisis and/or Emergency Management – “the range of efforts involved in building the capacity to prevent, protect against, respond to, and recover from an incident” (GAO 2007a), p.1).

First Responder – As defined by FEMA, it “includes Federal, State, territorial, tribal, sub-state regional, and local governments, nongovernmental organizations (NGOs), private sector organizations; critical infrastructure owners and operators, and all other organizations and individuals who assume an emergency management role” (FEMA.org, nd). First responder is also synonymous with Emergency Management/Response Personnel.

Principal – The leader of a school who possesses a New Jersey school principal endorsement and is charged with the leadership of that school. This can include a principal or vice principal.

Resilience – the ability of a community or individual to endure a crisis or emergency and recover from it.

**Summary of Chapter I**

The responsibility of preparing for all-hazards emergency situations needs to be a priority for all principals. For more than a decade, the federal government has issued guidance and reports, developed trainings and provided funds that have attempted to prepare principals for a potential emergency situation. Most of what has been provided is best practices due to the fact that the federal government and independent
Researchers have concluded that research on effective emergency preparedness is limited. With this, the responsibility for preparation has fallen on school principals. As a result, this study looks to identify what role knowledge and attitudinal favorability of New Jersey public school principals, and the organizational structure of their schools have on principals’ behavior and confidence in respect to the second phase of emergency management, preparedness, based on federal guidelines, New Jersey state statute, and research on the topic.

Chapter II will review the relevant literature on school emergency preparedness. Some parallels between school emergency preparedness and community resilience will be examined in the literature review to address the limited research within the field of education and emergency preparedness.
Chapter II

LITERATURE REVIEW

Introduction

Over the years reports on school crisis have filled newspapers around the nation. Whether it is a natural or manmade crisis, the issue of how a school prepared for and responded to the crisis took center stage after the event. Even with all of the focus on addressing emergency preparedness in schools and attempts to mitigate dangers before they become a crisis, “Congress has not enacted any broadly applicable laws requiring all school districts to have emergency plans, or have federal agencies issued any regulations imposing such requirements on all school districts” (GAO, 2007a, p. 9). Those laws and requirements have been left to individual states.

Guidance on appropriate preparation for crisis in schools is limited. It is noted in the United States Department of Education’s Practical Information on Crisis Planning: A Guide for Schools and Communities (2007) that “the research on what works in school-based crisis planning is in its infancy” (p. 1-4). Trump (2011) found similar issues with the tracking of school crime and school safety policy: “federal data are limited to a hodgepodge collection of a handful of academic studies” and
those unrelated studies have dictated school safety policy and funding (p. 15).

This literature review is organized in a manner that identifies the rationale for needing to prepare for a school crisis, recommendations, and, where applicable, laws at the federal and state levels, best practices, research on preparedness, and then the elements required to properly prepare for and practice a crisis management plan based on New Jersey Administrative Code 6A:16-5.1 (2009 – 2010), School Safety and Security Plans.

The Need to Prepare Schools for a School Crisis

Each day more than 55.5 million students leave home to go to school in grades kindergarten to 12, where they expect to learn in a safe environment (U.S. Department of Education, 2008). Unfortunately, crisis situations happen within schools that affect the learning environment and those in it (Henry 2000). The National Center for Education Statistics (2008) reported that, between July 1, 2006 and June 30, 2007, schools in the United States recorded 55 violence-related deaths of students and 1.7 million victims of nonfatal crimes. Although homicides that occur in schools constitute less than 2 percent of the total of homicides of school-aged children (National
Center for Education Statistics, 2008), homicide creates a dangerous and crisis situation in those schools and schools must be prepared for such situations.

Peterson and Straub (1992) stated that “because we live in a society that is becoming increasingly complex and volatile, it is essential to develop crisis plans within a school system. When school personnel are prepared to deal with crisis, students can continue to grow emotionally, intellectually and physically” (p. 4). A report Schools: Prudent Preparation for a Catastrophic Terrorism Incident noted that schools no matter location, size, or type “face threats of violence, accidents, and emergencies everyday” (p. 6). For this reason schools need to increase their emergency preparedness by taking an all-hazards approach because the report found “educational achievement and prudent preparation for emergencies and disasters are linked” (p. 5).

The United States Department of Education’s Emergency Response and Crisis Management Technical Assistance Center (2006) concurred, stating that “school districts nationwide should create comprehensive, multi-hazard emergency management plans that focus on the four phases of emergency management: prevention-mitigation, preparedness, response and recovery” (p. 1). That same year Pediatrics published a survey titled, Mass-Casualty Events at Schools: A National Preparedness Survey in
2006 that called for schools to develop emergency plans because “as mass gathering places, schools are prone to mass injury in a natural disaster and unfortunately may serve as a terrorist target” (p. e-11). The Kentucky Center for School Safety’s Emergency Management Resource Guide (2008) and the American Academy of Pediatrics (2008) noted that schools must prepare for all hazard crisis situations. Finally, in her testimony before the Committee of Homeland Security, House of Representatives on May 17, 2009, Director Ashby stated, “the hazards that school districts may face will vary across the country depending upon the natural hazards to which their particular areas are prone and an assessment of other risks for which they need to be prepared, such as pandemic influenza or the discharge of hazardous substances from nearby chemical or nuclear plants” (p. 4).

Although there is consensus on the need for emergency preparedness, a report by the National Strategy Forum (2003) titled School Safety in the 21st Century: Adapting to New Security Challenges Post-9/11 noted that emergency preparedness for individual citizens was more prevalent than emergency preparedness for schools. The authors wrote that when it came to schools “there is an alarming consensus that school emergency preparedness and readiness varies widely” (p.4).
hampering schools emergency preparedness included funding and available time to focus on the topic.

Trump (2011) found funding to be an issue with school emergency preparedness, and he identified two additional issues: (a) making it a priority and (b) complacency amongst the school community. Trump found “inconsistent or nonexistent leadership on school safety issues… is one of the biggest threats to school safety” (p. 6). School emergency preparedness needs to be a priority from the board of education to the superintendent to the building principal. Within the context of complacency, Trump noted that when a school community does not establish policies and procedures, follow them, and/or develop a mindset that a crisis cannot happen within their school they have “put school safety at risk” (p.7).

A survey conducted by Pediatrics (2006) found that 27.1% of school districts had never met with law enforcement and 42.8% had never met with EMS for the purposes of emergency planning and “only 19.9% reported holding regularly scheduled meetings with local law enforcement to discuss emergency planning” (p. e-10). That percentage decreases to only 14.5% of districts reporting regular scheduled meetings with local EMS (p. e-11). Coordination between first responders and school districts is vital because school personnel have limited emergency and
medical training. Graham and Cook (2006) reported that security experts felt that school security was a “mixed bag” with some districts not updating and practicing safety plans, and not investing in the training (p. B01)

Ashby (2009) noted that the majority of school districts had written emergency plans but “many school districts do not have procedures for training regularly with first responders and community members (p. 11).” John Ritchie, principal at Lincoln-Sudbury Regional High School in Massachusetts (as cited in Rathi, 2008), stated: “the most important safety and security devices we have in schools are the people – the classroom teacher, guidance counselor, principal, secretary, lunch lady” (p. 1).

To further support the above, the conference report Schools: Prudent Preparation for a Catastrophic Terrorism Incident (National Strategy Forum, 2003) clearly identified the school as the responsible party for student safety during the school day and when a crisis takes place because of the school’s role as in loco parentis. Principals “carry by name accountability” (p. 7) and as such “parents and members of the school community will specifically hold individuals in these positions responsible for the prevention and effective management of incidents” (p. 7).
Federal Government’s Role in School Emergency Preparedness

Federal laws dictating specific requirements for emergency preparedness in schools are non-existent. Instead recommendations and best practices have been issued over many years through a series of reports, guides and documents. The effect of those recommendations and best practices is not consistent from school district to school district. This issue was addressed in the June 2007 Government Accountability Office (GAO) report that stated that most school districts incorporated “recommended steps to plan and prepare for emergencies... but many plans do not include recommended practices” (GAO, 2007a, p. I).

The federal government has defined its role as supportive in emergency management when dealing with a crisis within a state or local community and will only respond when assistance is requested. Such support includes “guidance, training, and equipment to school districts to assist in emergency management planning” (GAO, 2007a, p. 16).

The US Department of Education’s recommended the creation of a comprehensive multi-hazard emergency plan designed around the four phases of emergency management. The US GAO (2007b) estimated that written emergency plans were present in 95% of all school districts, and of those written plans 99.6% dealt with all-hazard emergencies (Ashby, 2009). However, the Federal
Government contended that the plans “are often not comprehensive, practiced regularly or written in collaboration with the local community (p. 1).”

In 2007 the GAO (2007b) issued a report on a research study conducted on the “role of states in how school districts prepare for emergencies” (p.51). The study was conducted with two surveys. One was issued to each of the education and administering agencies in all 50 states and the District of Columbia. Forty-nine states responded to the survey. The other was a stratified random sample of 27 public school districts in six states. The study found that 32 states had a law or policy requiring a written emergency plan for schools. Forty-nine states provided school district funding for emergency planning. This report also noted that 71% of respondents reviewed school emergency management plans at least once per year, while 4% did not review their plans (p.12). Thirty-seven of the 49 states responding provided training, and 47 of 49 provided guidance in respect to emergency preparedness for schools. In addition, the study found that 95% of respondents had a plan for their school campus, but only 76% had identified Incident Command Structure (ICS) positions for staff (p.20). It was also reported that more than 25% of respondents with emergency plans do not practice with first responders.
Federal Government Emergency Preparedness Recommendations

Unless requested to assist, the federal government’s role is advisory through recommendations, trainings and equipment distribution. Through this role, the federal government has made a number of recommendations to states and school districts in an effort to enhance emergency preparedness in schools. Examples of this guidance include the issuance of the following guides:

1. *Creating Safe and Drug-Free Schools: An Action Guide* (1996). This document identified the community’s responsibility in school safety, stated that it should be a priority among the school, parents and community, recommended the development of an action and contingency plan, and encouraged support from the outside.

2. *Early Warning, Timely Response: A Guide to Safe Schools* (1998). This evidence-based guide was a collaboration between the federal government, national associations, researchers, educators, parents, and students to assure schools across the country had a “comprehensive violence prevention plan in place”

and in an effort to assist school districts in violence prevention planning through evidence based practices.

4. The Final Report and Findings of the Safe School Initiative: Implications for the Prevention of School Attacks in the United States (2002). This document was developed to study school shootings and identify patterns, similarities or identifiable actions on the part of the shooters to prevent future threats of violence in schools.

5. Practical Information on Crisis Planning: A Guide for Schools and Communities (2007). This guide was issued in an effort to identify “critical concepts and components of good crisis planning, stimulate thinking about the crisis preparedness process, and provide examples of promising practices” for school districts, schools and their communities (p 1-3).

6. Emergency Management: Status of School Districts’ Planning and Preparedness (2007). This document was issued to assess the emergency preparedness of states and school districts across each district, and identify the role and responsibility the federal government played in issuing best practices and disseminating information to assist in further preparing states and schools for crisis situations.
7. National Incident Management System (2008) (NIMS). This document was issued to continue the nation’s effort in addressing all four parts of an emergency: mitigating, preventing, responding to and recovering from a crisis. The document looked to provide a consistent manner of response during an emergency across federal, state, local and private jurisdictions. The initial request for NIMS compliance across the nation was from the federal government in 2004.

8. A Guide to School Vulnerability Assessments: Key Principles for Safe Schools (2008). This guide was issued to school districts and schools to help in “identifying and prioritizing risks” (p.1) to schools, mitigate as many as possible before a crisis and prepare for emergencies for those risks that cannot be mitigated.

9. National Response Framework (2008). This document was issued to enhance NIMS and further explain how federal, state and local governments respond to crisis through best practices. This document produced companion documents for federal, state, and local leaders and emergency managers that clearly delineates roles and responsibilities.
Additionally, on-line and on-site training for emergency preparedness and practices is offered through various federal government departments. This includes training in Incident Command Systems (ICS), a system designed to coordinate response to a crisis among multiple agencies. The ICS system is a command, control, and coordination model that aligns with NIMS. ICS trainings are available on-line and range from 100 to 700 level courses, with variations at each level for the specific types of responders to an emergency. This includes school personnel trained in emergency preparedness. Specifically ICS 362 Multi-Hazard Emergency Planning for Schools has been designed for school personnel.

**State Government Emergency Preparedness Recommendations**

In the GAO report (2007a) *Emergency Management: Most School Districts Have Developed Emergency Management Plans, But Would Benefit from Additional Federal Guidance* a study is mentioned that was conducted in which 49 of 50 states responded. In the study 32 states were found to require emergency management plans, 18 states required emergency management plans to include specific hazards, 18 states required emergency management plans to be reviewed or updated by the school or another organization, 21 states required drills or training for teachers and/or students in emergency preparedness, 9 states involved parents in
the emergency management planning process, 16 states involved first responders in the planning process, and 10 states involved community organizations in planning (p. 58).

New Jersey Emergency Preparedness Recommendations

New Jersey’s directive on school emergency preparedness is centered on Administrative Code 6A:16-5.1, School Safety and Security (2009). It requires each school district to develop and implement written comprehensive plans for the safety and security of all public schools in a school district. Details of planning procedures, who should be engaged in the development of the plans, the emergencies that need to be addressed and the occurrence of practice drills of the plan are outlined. See Appendix A for the specific language in Administrative Code 6A:16-5.1.

Private / Non-Profit Recommendations for Emergency Preparedness

National, state, and county recommendations have been made to address emergency preparedness. Along with these organizations are a plethora of private and non-profit organizations that also provide such recommendations.

The National Association of School Psychologists (2013) identified several suggestions for reinforcing school safety.
The list included annual reviews of school safety policies and procedures, meeting with community first responders to review plans and address needs, and the provision of training and professional development to staff in crisis training.

**Principal Attitudes Toward Responsibilities**

Examining further, beyond laws, mandates, and training, the emergency preparedness of principals, it is important to gain an understanding of the attitudes of principals toward this administrative responsibility. Emergency preparedness is an administrative responsibility and mandate in the state of New Jersey. A survey study and review of literature and job analysis was conducted by Rayfield and Diamantes (2004) that asked the question “What makes the principal’s position desirable and what makes this important leadership position less desirable?” (p. 253).

Rayfield and Diamantes found that the pool of candidates for the principal position is diminishing, the responsibilities of principal are complex, expanding, and require a “great deal of commitment and talent” (p. 255). The researchers found several areas of the position satisfying to principals and among a number of areas identified as neutral or not satisfying
compliance with state mandates was one of those identified areas.

**Emergency Preparedness, Community and Individual Resilience**

There is limited research on emergency preparedness for schools, how schools prepare for emergencies, and the actions taken to be fully prepared for all hazards emergencies. In the field of sociology and psychology the opposite is true. Studies related to community and individual resilience have been conducted for almost 100 years.

The concept of resilience refers to the ability of a community or individual to endure a crisis or emergency and recover from it. Pennings and Grossman (2008) discussed the need for the government and organizations to understand the potential reactions of the community in respect to a crisis or emergency as there is a potential for community actions to result in further damage or loss of life.

Reviewing literature related to community and individual resilience can shed light on the direction schools should take related to emergency preparedness since schools are often smaller versions of the community in which they are located.
Hildreth (2007) found that a community’s response to an emergency or crisis goes beyond the emergency or crisis itself. It begins with the “proper training, preparation, and integration of all facets of government and of emergency response into our emergency operations plans (EOPs)” (p 59). Kapucu (2008) reported similar findings related to preparation before an emergency or crisis and the structures in place for members of the community. Therefore, resilience is vital to a community and individual.

Chandra et al. (2011) defined community resilience in their publication Building Community Resilience to Disasters: A Roadmap to Guide Local Planning as “ongoing and developing capacity of the community to account for its vulnerabilities and develop capacities that aid that community” (p.2) in three areas. The first area focuses on prevention, mitigation, and withstanding an emergency or crisis. The second is recovery to the point the community can be self-sufficient. The third area is using the knowledge learned from the emergency or crisis to learn from and be better prepared for the next. Chandra et al. focused on issues around health related incidents, but their resilience definition is transferable to other types of emergencies and/or crisis.
The issue of community resilience was identified as vital to emergency preparedness in 2009 with the National Health Security Strategy. Chandra et al. (2011) explained the vital nature of community resilience by stating it is “critical to national health security” (p. 1) with the fact that during an emergency or crisis resources that the community traditionally relies on to remediate it will be limited and the community itself will need to address the emergency or crisis and address issues associated with the aftermath of the emergency or crisis. Chandra et al. (2011) argued that if a community can address the issue of resilience prior to an emergency or crisis, that community will be better prepared to address one if it were to occur and has the potential of limiting the period of recovery required by the community.

Kapucu (2008) reviewed Florida’s resilience in respect to the four hurricanes that hit the state in 2004. In the study the author’s research was focused on answering four questions revolving around community response to each county’s attempt to encourage action during these hurricanes, using the examples set in these situations in other disaster situations, developing conclusions from these events to improve emergency management in the future, and how “disaster resilient communities” (p. 244) were developed to protect the communities. This study was
conducted using a survey sent to the 67 county emergency managers in Florida in the fall of 2004. The return rate was 92%. The results of the study found a complicated interaction among local, county, and state government organizations, businesses in the private sector, and individuals within the community (p. 256) that must come together during a crisis. To do so, efforts must be made during the preparedness phase to build trust and cooperation. As a result of trust and cooperation during the emergency preparedness phase, the public and private organizations were able to communicate with the community, which saved lives and accelerated the recovery period. The study also identified the benefits of support from elected officials and the use of technology during the emergency. All of the above were established in the preparedness phase of emergency management and instituted during the emergency.

Comfort (2005) analyzed the effect of Hurricane Katrina on Louisiana and emergency preparedness and identified five lessons to be learned. The first lesson was that the federal government, even with revisions to its emergency management system and procedures after 9/11, was not prepared to deal with the size or scope of such an event that had an impact on such a large area. Comfort found that the hurricane was just one part of the
emergency and the resulting levee breaks. The second was that the policies and plans implemented within the City of New Orleans were not functional, as the city’s infrastructure collapsed. Third, leadership was not prepared or trained to deal with this level of event and could not understand the complexity of events that were transpiring. Fourth, errors made within the four phases of emergency management were not recognized fast enough or corrected in a way that improved conditions. Comfort found that the “emergency response system as a whole lost its capacity to acknowledge and correct its mistakes” (p.6). Fifth, there must be an ability for communities to be prepared to deal with their own crisis with support from state and national resources. This issue of resiliency was lacking during Hurricane Katrina. To further support this last lesson on resilience, Comfort made five recommendations for future emergency management systems. His fourth and fifth recommendations address community and individual resilience by stating the need to “engage the residents of the community at risk in managing their own safety and security by giving them valid, current information on the threat and clear alternatives for action to protect their lives, property, and near neighbors” (p. 7). In addition there must be a network of organizations to support the community and each other. This includes investing in and
providing “public education, training, and information infrastructure to enable collective action to reduce risk” (p. 7).

Furedi (2007) presented a counter argument and addressed a change in thinking with respect to community and individual resilience that has researchers looking at vulnerability. Furedi identified the change being a “shift away from the sociological to an ecological perspective on disasters” (p. 484), based on a belief that the world we live in is “increasingly out of control and dangerous place” (p. 487). As such, ecological perspectives can be skeptical of community resilience and believe it may have limited applicability (p. 484). Specifically, Furedi stated that disasters that have a severe effect on communities are more likely to be technological than natural. And produce a division within the community not resilience.

When looking into why there are two significantly different views, Furedi pointed out issues and responses within those communities researched, and how individuals “view adversity and pain” (p. 485).

The Impact of Resilience on School Emergency Preparedness

A review of the literature on community resilience sheds light on what principals should be considering in respect to
school emergency preparedness. Although some of what was learned from the literature will not be the direct responsibility of a school principal, he/she will have responsibility for student and staff if an emergency occurs in or around his/her school.

It is clear that there needs to be cooperation among government agencies, private business, schools, and the community. During the literature review two terms were used to articulate this need: relationship and network. The school principal needs to encourage and build a relationship of cooperation with local government, first responders, and businesses within the community. This is vital for emergencies that may overwhelm one responding agency and the school would need to respond. The second term, network, is the interplay between various government, public, and non-public organizations prior to, during, and after an emergency. Depending on the size and scope of the emergency, part or all of the established network of organizations can be called into action to assist.

In addition to relationships and networks, the literature makes clear the need for training. This training is vital for those who will be expected to respond during an emergency. Hildreth (2008) supported training and encouraged advanced training. The most evident person who needs training is the principal in a school but he/she will not be the sole responding
party. As a result training must include those within the school so the school community is prepared to address any emergency that confronts it.

The literature also supports the ability to communicate and provide vital information. Within a school, communication will be vital during an emergency for those inside the school and those outside. Lack of communication in a school can create an even worse situation.

Technology is another vital aspect in emergency preparedness identified in community resilience that schools can incorporate, as well as, information gathering to improve decision making. Comfort (2005) stated that by using technology to gather information during an emergency those who must respond to it and make vital decisions will have a “common operating picture” (p.6). This will allow for a more informed decision and provide the same information to all of the decision makers. Within a school emergency a common operating picture through the use of technology would allow first responders, the school principal and others responding agencies the opportunity to develop consensus on responses necessary to address the emergency.
Summary of Chapter II

Chapter II described the best practices and recommendations for emergency preparedness by federal, state, county and private/non-profit organizations. These best practices and recommendations were based on analysis of prior events, standard procedures and protocols developed over the years, and the expectation that multiple organizations will need to work together during a crisis. Limited research related to emergency preparedness for schools is available for review. In order to draw some parallels to emergency preparedness research, evidence was provided in the area of community resilience. Research on this topic established recommendations for emergency preparedness that can have practical uses in schools.

Chapter III will outline the research design and methodology of this study. It will include the purpose of the study, a conceptual framework, an explanation of the dependent and independent variables, a description of the instrument used for the study and how it was determined to be valid and reliable, an explanation on how the sample was identified, the procedures for data collection, and the process used for data analysis.
Chapter III

RESEARCH DESIGN AND METHODOLOGY

Introduction

Chapter II described the best practices and recommendations for emergency preparedness by federal, state, county and private/non-profit organizations. These best practices and recommendations were based on analysis of prior events, standard procedures and protocols developed over the years, and the expectation that multiple organizations will need to work together during a crisis. As stated previously, and evidenced by the use of best practices and recommendations, there is limited research related to emergency preparedness with respect to various government and non-government organizations. Schools are included in this limited pool of research. In order to draw some parallels to emergency preparedness research, evidence was provided in the area of community resilience. Research on this topic established recommendations for emergency preparedness that can have practical uses in schools.

Purpose of the Study

The purpose of this study was to determine how the knowledge and attitudinal favorability of principals and the
They contribute to emergency preparedness in New Jersey public schools. This study specifically assessed the role that knowledge obtained through the understanding of specific emergency preparedness terms and the practice of specific emergency preparedness drills plays in preparing principals for school emergencies. The attitudinal favorability of the principals was assessed through their perceptions of the importance of emergency preparedness in the role of the school principal, and of the role that organizational structure established within the school has on shaping how principals prepare for emergency management.

**Research Questions**

The research questions for this study were as follows:

1. What do principals know about emergency preparedness, how did they learn it, and what role does their knowledge of crisis management play in their confidence and emergency preparedness planning behavior for their schools?

2. What attitudinal favorability do principals have about emergency preparedness and what role does this attitudinal favorability play in their confidence and the emergency preparedness planning behavior for their school?
3. What organizational structures do principals institute for emergency preparedness and what role does this organizational structure play in their confidence and their emergency preparedness behavior for their schools?

4. What role does the interaction of knowledge, attitudinal favorability and organizational structures play on principals’ confidence and their emergency preparedness behavior for their schools?

**Hypotheses**

There were four hypotheses in this study. The null hypotheses were:

1. The level and sources of training in emergency preparedness [aka knowledge] is not associated with principal’s confidence or emergency preparedness planning behavior in the past year;

2. The attitudinal favorability attached to emergency preparedness by the principal is not associated with their confidence or emergency preparedness planning behavior in the past year;

3. The organizational structure of the school and its preparedness planning are not associated with the
principal’s confidence or emergency preparedness behavior over the past year;
4. The interaction of knowledge, attitudinal favorability and organizational structures are not associated with a principal’s confidence and their emergency preparedness planning behaviors.

**Conceptual Framework**

The conceptual framework for this study was based on cognitive dissonance theory (developed by Leon Festinger; which examines the tension a person experiences between belief and perception. Cognitive dissonance increases in an individual based on the importance of an issue or a behavior and how that issue or behavior conflicts with the person’s belief. School emergency preparedness is an important issue that is the responsibility of a building principal.

Issues of importance, behaviors, or tough decisions result in increased dissonance and as a result may cause discomfort when there are inconsistencies between belief and perception. When an individual feels this discomfort action is taken to relieve it. Three actions are possible to relieve the tension: (a) a change in behavior; (b) a justification of the individual’s
belief or behavior by changing the conflicting cognition; or (c) justifying the behavior by adding cognitions.

As a result, cognitive dissonance was the center-piece of persuasion among individuals and influences a change in individual beliefs, values, attitudinal favorability, and behaviors. Within this study the principal’s beliefs were consistent with the dependent variables, confidence and behavior. The dependent variable, behavior, related to the principal’s school emergency preparedness performance or actions and assessed through a self-appraisal survey question. The dependent variable, confidence, related to a principal’s emergency preparedness confidence in meeting the requirements of school emergency preparedness. Both dependent variables were important elements associated with school emergency preparedness. If the principal’s belief in his/her emergency preparedness behavior was not at a level he/she felt could provide a safe environment for the school community, or the principal did not have the confidence that his/her emergency plan addressed all types of emergencies, then action must be taken in the areas of the independent variables of knowledge, attitudinal favorability and organizational structure.

Cognitive dissonance went to the core of a principal’s emergency preparedness behavior and confidence by examining how
the variables were aligned with each other or were in conflict with the principal’s perceptions, the dependent variable of behavior, or actions, the dependent variable of confidence.

Therefore, this conceptual framework examined how the requirements of school safety shaped the confidence, and behavior of principals in respect to school emergency preparedness.

**Dependent Variables**

The dependent variables for this study were confidence and emergency preparedness behavior. Principal confidence, related to school emergency preparedness, focused on how confident the principal was with specific school emergency preparedness best practices and if the principal had enough knowledge to prepare staff and student for all school emergencies requirements. Specifically, the dependent variable of confidence was the principal’s ability to plan for and meet the requirements of various school emergency situations. The dependent variable of emergency preparedness behavior focused on the principal’s self-reported level of emergency preparedness and was based on the principal’s actions and performance in preparation for school emergencies.
Independent Variables

The independent variables for this study were knowledge, attitudinal favorability, and organizational structure. The variable of knowledge, with respect to emergency preparedness, focused on where and how often the principal gained knowledge on emergency preparedness, how he/she stayed aligned with national and state school safety requirements and the knowledge sources used by the principal. The variable of attitudinal favorability was focused on the importance principals assigned to emergency preparedness and training opportunities. The organizational structure variable focused on the school emergency plan, the contents of the plan, revisions of the plan, and who organizes plan revisions and training.

Instrument

The instrument used for this study was an on-line survey that I developed (see Appendix C). Resources in the development of the survey included, How to Conduct Surveys: A Step by Step Guide and How to Ask Survey Questions by Arlene Fink (1995), and Research Design: Qualitative, and Quantitative and Mixed Methods Approaches by John W. Creswell (2003). The survey was administered online to randomly selected principals. In addition to the survey questions, demographic data was collected.
The survey included seven sections. Section I and II are demographic information on the principals and their training related to school emergency preparedness. This included staff in the school, the district’s annual budget, and the district’s district factor group. Section II had questions that collected demographic data on the principal. This included gender, years in current position and current building, total years in administration and education, highest degree earned, emergency preparedness requirements, emergency preparedness classes taken for certification, emergency preparedness classes taken while principal, and the number of hours spent in training for emergency preparedness. Collected demographic information allowed for potential correlations between demographic factors and answers within the survey.

Section III included questions about a principal’s knowledge. This section was designed to address the first research question: What do principals know and what role does their knowledge of crisis management play in emergency preparedness of their schools?

Section IV addressed a principal’s role in school emergency preparedness. This section was designed to also address the first research question: What do principals know and what role
does their knowledge of crisis management play in emergency preparedness of their schools?

Section V addressed a principal’s attitudinal favorability toward school emergency preparedness. This section was designed to address the second research question: What attitudinal favorability do principals have about emergency preparedness and what role does this attitudinal favorability play in emergency preparedness of their school?

Section VI addressed the organizational structure for school emergency preparedness within a principal’s school. This section was designed to address the third research question: What organizational structures do principals institute for emergency preparedness and what role does this organizational structure play in the emergency preparedness of their schools?

The independent variable of knowledge was operationalized to determine the principal’s level of school emergency preparedness knowledge. The survey section on school administrator knowledge included five knowledge items. The first two questions asked principals to rate their familiarity with two key terms in emergency preparedness on a 5-point Likert scale that ranged from very familiar to not familiar with the term. The next question asked principals to rate their level of preparedness on a scale from outstanding to inadequate. The
range included five choices. The fourth question asked for a principal’s primary source of knowledge and provide three choices. Question 5 provided principals an opportunity to identify their primary source of knowledge from seven choices on seven types of emergencies.

The independent variable of attitudinal favorability was operationalized through one question that asked principals to rate their attitudinal favorability of emergency preparedness on a 5-point Likert scale that ranged from strongly disagree to strongly agree on 12 separate emergency preparedness items.

The independent variable of organizational structure was operationalized by several questions. The first was a yes/no question on the presence of a written plan, the second was a question on the frequency of revisions of the plan with five choices. The third asked who initiated the revision with nine answer choices. The fourth asked the last time the plan was reviewed in the last 12 months with the staff. The next six questions asked if the school had met specific drill requirements within the last 12 months. Three choices to answer were provided.

A statistical analysis of the dependent variables of confidence and behavior was conducted through a chi-square analysis of each dependent variable and its interaction with
each independent variable. For the section on the school administrator’s role the confidence level of principals was assessed through question 19A. The question associated with the principal’s emergency preparedness behavior, question 16, was assessed through a chi-square analysis with each independent variable.

**Instrument Validity and Reliability**

A panel of seven principals was assembled; two from the elementary level, two from the middle level, and three from the high school level to examine the instrument’s design, structure, and validity. Validity is defined as the “extent to which any measuring instrument measures what it is intended to measure” (Carmines & Zeller, 1979, p. 17). Validity was assessed using face validity. The panel of seven principals provided recommendations for change within the questions and the manner in which they were worded, formatting of the survey, and identified unclear or difficult questions. Revisions and adjustments were implemented in the final instrument based on the panel’s recommendations.

**Sample Population**

For this study the subjects were New Jersey public school principals. This included all types of public schools as defined
by the New Jersey Department of Education, ranging from kindergarten to 12th grade, vocational, technical or institute schools, public schools for the handicapped, and magnet schools.

The list of schools was secured through the New Jersey Department of Education, which provides an Excel spreadsheet listing all public schools in New Jersey on their website under the New Jersey School Directory page: (http://education.state.nj.us/directory/pub.php). This list was used to identify potential subjects. The website provided by the New Jersey Department of Education provides mailing addresses, phone numbers, and website addresses for all New Jersey public schools. Each was used to access the identified population and their email addresses.

Publically funded nursery/preschools, evening high schools, evening vocational-technical schools, and night schools were excluded from the pool of subject sources, as they do not always operate within the same administrative structure of having a principal leading the school. As a result, 93 public schools were removed from the list, leaving 2384 schools eligible for selection. Two hundred forty schools were then randomly selected from the list of eligible public schools, which was approximately 10% of the total public school population.
Sampling

The method for selecting participants in the study was a simple random sample without replacement. Hinkle, Wiersma and Jurs (2003) described this method as selecting a member of the population for the sample and not replacing the member in the population. They went on to state that “in sampling without replacement, a simple random sample is one in which all possible samples of a given size have the same probability of selection” (p. 142). The participants for this study were principals. As defined in chapter I, a principal is the leader of a school in possession of a New Jersey school principal endorsement and is charged with the leadership of that school. This can include a principal or his/her designee. The designee is often the vice/assistant principal in that building because he/she also possesses a New Jersey school principal endorsement. Therefore, the principal certificate is required for principals and vice/assistant principals.

The random sample without replacement was initiated through a random number generator in Microsoft Excel. The program created a random whole number through the function: =INT(RAND()*100). Once the random number was generated, every Nth school was identified until a total of 240 schools were identified. The number of schools identified represented
approximately 10% of the total number of eligible schools in the state of New Jersey.

**Data Collection**

The instrument was formatted for Survey Monkey (www.surveymonkey.com). Those who were selected were emailed an introductory letter (see Appendix A) explaining the topic of the survey, timeline, procedures associated with completing the survey, and a link to the survey with a unique web address that has an individual identifier number.

All data collected from participants completing the on-line survey were automatically downloaded into an SPSS file by me and immediately transferred and stored on a 2 gigabyte USB flash drive (a.k.a. memory stick) that was password protected and locked in the file cabinet of the my home office.

Selected principals from the sample received an emailed letter requesting participation through a unique URL comprised of 8 additional characters at the end of the survey address. Principals who did not complete the survey within 10 days received a reminder email that includes their unique URL. A second follow up email with the unique URL was provided 7 days after the first follow up email.
Data Analysis

Before testing the relationship between the independent variables of knowledge, attitudinal favorability, and organizational structure, and the dependent variables of confidence and behavior, indexes of each independent variable were constructed based upon measurable questionnaire items in each section of the survey. The distribution of each item in a variable cluster was dichotomized at the mean and recoded as either below the mean, which would equate to a low score of (0), or above the mean, which would equate to a high score of (1). A 0 indicated that the principal was below the mean for the specific question, and a 1 indicated a score above the mean for that question.

The rationale for using the mean instead of the median for the responses of each independent variable in the development of the indexes was that the range of values was limited to 1 through 5 on the Likert scale or a limited response on an ordinal scale. Thus, there was a minimal chance of a score being an outlier. The mean also provided a better measure of the central tendency of the data set. The use of the median was ruled out because it had the potential of producing an inaccurate representation of the data due to the fact that its use required cut rules that might eliminate or misrepresent a
response. The questions used to develop the index for each independent variable are provided in Table 1.

After the index for each independent variable, a chi-square analysis was conducted to address the first three hypotheses. For the independent variable of knowledge, a chi-square analysis was conducted for knowledge and confidence, and knowledge and behavior. For the independent variable of attitudinal favorability a chi-square analysis was conducted for attitudinal favorability and confidence, and attitudinal favorability and behavior. For the independent variable of organizational structure a chi-square analysis was conducted for organizational structure and confidence, and organizational structure and behavior. The fourth research question was analyzed through a multiple linear regression of the three independent variables and each of the dependent variables.

Table 1

*Survey Questions Used for Independent Variable Indexes and Dependent Variables Used for Chi-square and Regressions*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey Questions Used</th>
<th>Type of Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variable: Knowledge</td>
<td>14. How familiar are you with the term “All Hazards” approach to school emergency preparedness?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>15. How familiar are you with the National Incident Management System, NIMS, in emergency preparedness?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>Variable</td>
<td>Survey Questions Used</td>
<td>Type of Question</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td>16. Overall, if you were to rate your level of emergency preparedness as a building principal it would be:</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>24. In the last 12 months, my school’s emergency plan was reviewed with building staff:</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>25. Have you conducted a lockdown drill at your school in the last 12 months?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>26. Have you conduct an evacuation drill at your school in the last 12 months?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>27. Have you conducted a shelter in place drill at your school in the last 12 months?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>28. Have conducted a parent reunification drill at your school in the last 12 months?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>29. Have you conducted a table top drill at your school in the last 12 months?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>30. Have you conducted an emergency preparedness drill with first responders in the last 12 months?</td>
<td>Likert Scale</td>
</tr>
<tr>
<td></td>
<td>20A. Assuring that your school’s emergency preparedness plan properly addresses all types of emergencies.</td>
<td>Likert Scale</td>
</tr>
</tbody>
</table>

Independent Variable: Attitudinal Favorability
<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey Questions Used</th>
<th>Type of Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>20B.</td>
<td>Assuring that your school’s emergency preparedness plan is updated annually.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20C.</td>
<td>Providing the staff in your building with the school emergency preparedness knowledge needed to respond during an emergency.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20D.</td>
<td>Providing the staff in your building with the school emergency preparedness training necessary to respond during an emergency.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20E.</td>
<td>Providing the students in your building with the school emergency preparedness knowledge needed to respond during an emergency.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20F.</td>
<td>Providing the students in your building with the school emergency preparedness training necessary to respond during an emergency.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20G.</td>
<td>Leading your school, during an emergency, according to your emergency preparedness plan.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20H.</td>
<td>Directing staff to take action during an emergency.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>Variable</td>
<td>Survey Questions Used</td>
<td>Type of Question</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>20I. D</td>
<td>Directing students to take action during an emergency.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20J. W</td>
<td>Working collaboratively with local emergency responders during an emergency (emergency medical services, fire, police, etc.).</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>20K. P</td>
<td>Preparing your school facility with the resources, materials, and supplies needed for an emergency.</td>
<td>Likert Scale</td>
</tr>
<tr>
<td>24. I</td>
<td>In the last 12 months, my schools emergency plan was reviewed with building staff:</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>25. H</td>
<td>Have you conducted a lockdown drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>26. H</td>
<td>Have you conduct an evacuation drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>27. H</td>
<td>Have you conducted a shelter in place drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>28. H</td>
<td>Have conducted a parent reunification drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>29. H</td>
<td>Have you conducted a table top drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>30. H</td>
<td>Have you conducted an emergency preparedness drill with first responders in the</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Variable</td>
<td>Survey Questions Used</td>
<td>Type of Questions</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Independent Variable:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Structure</td>
<td>21. Does your school have a written emergency plan?</td>
<td>Dichotomous</td>
</tr>
<tr>
<td></td>
<td>22. My school’s emergency plan was last revised (revised means thoroughly reviewed, checked, and substantively adjusted to meet current school emergency preparedness needs):</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>23. Who initiated the revision to your emergency plan?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>24. In the last 12 months, my school’s emergency plan was reviewed with building staff:</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>25. Have you conducted a lockdown drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>26. Have you conduct an evacuation drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>27. Have you conducted a shelter in place drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>28. Have conducted a parent reunification drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>29. Have you conducted a table top drill at your school in the last 12 months?</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td></td>
<td>30. Have you conducted an</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Variable</td>
<td>Survey Questions Used</td>
<td>Type of Questions</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td></td>
<td>emergency preparedness drill with first responders in the last 12 months?</td>
<td></td>
</tr>
<tr>
<td>31. Emergency preparedness plans for my school are prepared at the:</td>
<td>Ordinal Scale</td>
<td></td>
</tr>
<tr>
<td>32. Emergency preparedness training for my school is organized at the:</td>
<td>Ordinal Scale</td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: Behavior

16. Overall, if you were to rate your level of emergency preparedness as a building principal it would be: Likert Scale

Dependent Variable: Confidence

19A. Assuring that your school’s emergency preparedness plan properly addresses all types of emergencies. Likert Scale

Summary

This chapter described the research design and methodology of the study. This included the purpose of the study, research questions, hypothesis, and conceptual framework. The dependent and independent variables were identified, along with the instrument used to study them and how each variable would be operationalized. This was followed with a description of how the survey instrument was found to be valid and reliable. Finally, the chapter concluded with a description of the sample, how
sampling will be conducted, the process for data collection and how the data will be analyzed.

Chapter IV will report the results of the data analysis for each variable through the development of indexes, descriptive statistics, chi-square analysis, and multiple regression analysis.
Chapter IV

DATA ANALYSIS AND FINDINGS

Introduction

This chapter reports the results of the data analysis and discusses the findings from the on-line survey distributed to New Jersey principals. Through this survey principals reported on their knowledge, attitudinal favorability, and organizational structure, toward emergency preparedness in schools. The identified independent variables of knowledge, attitudinal favorability, and organizational structure for emergency preparedness are hypothesized to predict a principal’s confidence in their ability to respond to emergencies and their emergency preparedness behavior in New Jersey Public schools. Indexes were constructed for all of the independent variables. Chi-squared analysis were undertaken to address the study’s first three research questions. Two multiple linear regressions were used to analyze the last research question.

The results in this chapter are presented in the following sequence: sample characteristics; research question 1, answered through the development of the index for knowledge and a chi-square analysis of the relationship between knowledge and each dependent variable; research question 2, answered through the
development of the index for attitudinal favorability and chi-square analysis of the relationship between attitudinal favorability and each dependent variable; research question 3, answered through the development of the index for organizational structure and chi-square analysis of the relationship between organizational structure and each dependent variable; research question 4, answered with two multiple regressions to analyze the relationship between all the independent variables and each dependent variable; and a summary of the data analysis results.

Sample Characteristics

A total of 240 emails requesting participation in the study were sent in the initial solicitation. From the initial request, four emails were returned undeliverable and one principal did not wish to respond to the survey. According to Fowler (1995), a refusal to respond to the survey counts toward the total number of eligible respondents, but undeliverable or non-working emails do not. As a result, N=236 was used to calculate the response rate to the survey. Therefore, 101 of 236 principals responded to the survey for a return rate of 42.4%. Within the 101 respondents, 93 or 93% of the respondents completed the survey for a useable return rate of 39.4%. The remaining eight respondents were not included in the study because they completed 50 percent or less of the survey.
Table 2

Percent Distribution of Respondents by School Level

<table>
<thead>
<tr>
<th></th>
<th>Elementary School</th>
<th>Middle School</th>
<th>High School</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents (n=101)</td>
<td>47</td>
<td>22</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>Sample (n=240)</td>
<td>62.7</td>
<td>16.1</td>
<td>15.3</td>
<td>5.9</td>
</tr>
<tr>
<td>Population (n=2384)</td>
<td>62</td>
<td>17.8</td>
<td>16.6</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Table 2 presents the distribution of respondents by school level and a comparison to the distribution of the sample and of the population of all NJ building principals. It illustrates that out of the 101 principals participating in the survey, 47% were principals of elementary schools, 22% of middle schools, 23% of high schools, and 8% of other schools. The survey sample was made up of 62.7% principals at the elementary level, 16.1% were principals at the middle school level, 15.3% at the high school level, and 5.9% of principals in the sample had schools considered other. The state of New Jersey’s principal population at the time of the study was 62% being principals of elementary schools, 17.8% being principals of middle schools, 16.6% being principals of high schools, and 8% of other schools.

1The other responses included a preschool through fifth grade school, primary school, preschool to first grade school, preschool to age 21 special education school, kindergarten to eighth grade school and preschool to eighth grade school.
principals of high schools, and 3.4% being principals of other schools. Although the sample and totals from the population are similar in all four categories, three of the four being very similar, the respondents under-represented elementary schools, and over-represented the other four categories.

Table 3

Percent Distribution of Respondents by Number of Certified Teachers in the School

<table>
<thead>
<tr>
<th></th>
<th>≤ 25</th>
<th>26 - 75</th>
<th>76 - 100</th>
<th>≥100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents (n=101)</td>
<td>10</td>
<td>66</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Sample (n=236)</td>
<td>26.8</td>
<td>57</td>
<td>9.4</td>
<td>6.8</td>
</tr>
<tr>
<td>Population (N=2384)</td>
<td>31</td>
<td>56.5</td>
<td>6.5</td>
<td>5.9</td>
</tr>
</tbody>
</table>

Table 3 presents the distribution of respondents, the sample, and the population by number of certified teachers in the school (school size). From the responding schools the number of certified teachers was at 10% for schools up to 25 teachers, 66% had 26 - 75 teachers, 15% had 76 - 100 teachers, and 9% had more than 100 teachers. The sample of schools had 26.8% with less than or equal to 25 certified staff, 57% had between 26 and 75 certified staff, 9.4% had between 76 and 100 and 6.8% had over 100 certified staff. For the population, 31% had less than or
equal to 25 certified staff, 56.5% had 26 to 75 certified staff, 6.5% had 76 to 100 and 5.9% had over 100 certified staff. Small school principals (with the number of certified staff at or below twenty-five) were under-represented in both the sample and among respondents in this analysis as compared to the state population. Larger school respondents (greater than 100 staff) were slightly over-represented compared to the sample and population.

Table 4
Percent Distribution of Respondents by Location of School

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
<th>Suburban</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents (n=101)</td>
<td>9</td>
<td>72</td>
<td>19</td>
</tr>
<tr>
<td>Sample (n=236)</td>
<td>10.2</td>
<td>84.3</td>
<td>5.5</td>
</tr>
<tr>
<td>Population (N=2384)</td>
<td>9.6</td>
<td>80.4</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Table 4 presents the distribution of respondents, sample, and population by location of school. For the respondents, 9% of the schools were located in a rural part of the state, 72% in a suburban section, and 19% were urban. For the sample, 10.2% were located in a rural part of the state, 84.3% were located in a suburban part of the state and 5.5% were located in an urban part of the state. Within the state of New Jersey population
9.6% were located in a rural part of the state, 80.4% were located in a suburban part of the state and 9.9% were located in an urban part of the state. Rural principals had similar representation between the sample, respondents, and the population. Suburban principals were over-represented in the sample and under represented in the respondents as compared to the population. Urban principals were over-represented for respondents and under-represented in the sample as compared to the population.

Table 5

Percent Distribution of Respondents by District Factor Group (DFG)

<table>
<thead>
<tr>
<th>DFG</th>
<th>Respondents (n=99)</th>
<th>Sample (n=236)</th>
<th>Population (N=2384)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>7.1</td>
<td>14</td>
<td>5.6</td>
</tr>
<tr>
<td>B</td>
<td>7.1</td>
<td>9.3</td>
<td>12.5</td>
</tr>
<tr>
<td>CD</td>
<td>13.3</td>
<td>12.3</td>
<td>12</td>
</tr>
<tr>
<td>DE</td>
<td>11.2</td>
<td>13.6</td>
<td>16</td>
</tr>
<tr>
<td>FG</td>
<td>18.4</td>
<td>12.3</td>
<td>13.9</td>
</tr>
<tr>
<td>GH</td>
<td>13.3</td>
<td>15.3</td>
<td>12</td>
</tr>
<tr>
<td>I</td>
<td>9.2</td>
<td>14.8</td>
<td>16.7</td>
</tr>
<tr>
<td>J</td>
<td>7.1</td>
<td>2.5</td>
<td>8.5</td>
</tr>
</tbody>
</table>
Table 5 presents the distribution of respondents, sample, and population by district factor grouping (DFG). For the respondents, 7.1% were DFG A, 7.1% were DFG B, 13.3% were DFG C-D, 11.2% were DFG D-E, 18.4% were DFG F-G, 13.3% were DFG GH, 9.2% were DFG I, 7.1% were DFG J, 8.2% were vocational or other, and 5.1% did not know. The sample was comprised of 14% being DFG A, 9.3% being DFG B, 12.3% being DFG CD, 13.6% being DFG DE, 12.3% being DFG FG, 15.3% being DFG GH, 14.8% being DFG I, 2.5% being DFG J, and 5% being other. As compared to the population of the state DFG with 5.6% being DFG A, 12.5% being DFG B, 12% being DFG CD, 16% being DFG DE, 13.9% being DFG FG, 12% being DFG GH, 16.7% being DFG I, 8.5% being DFG J, and 2.4% being other. Respondents and the sample over-represented DFG A, B, D-E and I as compared to the population. Respondents, the sample, and the population were similarly represented for DFG C-D. Respondents for DFG F-G were over-represented as compared to the population but similarly represented when the sample was compared to the population. Respondents were similarly represented in DFG G-H and over represented in the sample as compared to the population. Respondents for DFG J were similarly represented as compared to the population but under-represented when the sample was compared to the state.
Table 6

Percent Distribution of Respondents by Gender

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>No Response or vacant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents (n=96)</td>
<td>55.8</td>
<td>44.2</td>
<td>0</td>
</tr>
<tr>
<td>Sample (n=236)</td>
<td>51.7</td>
<td>47.9</td>
<td>0.4</td>
</tr>
<tr>
<td>Population (N=2384)</td>
<td>52.2</td>
<td>47</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Table 6 presents the distribution of respondents by gender. The principals responding were 44.2% female, and 55.8% male. Five respondents skipped this question which resulted in an n=96. For the sample 51.7% were male, 47.9% were female and 0.4% were listed as vacant. As compared to the population distribution by gender at the time of this survey, 52.2% were male, 47% were female and 0.8% was listed as vacant. The sample and respondents were representative with the population.

Summary of Sample Characteristics

The respondents were compared to the sample and the population of New Jersey principals in five categories. This included school type, certified teachers, location of school, district factor group, and gender. Comparison of the respondents
to the sample and the whole population of principals in New Jersey yielded some basic representativeness in two categories, including DFG and gender. The respondents were under-represented when compared to the population at the elementary level and small schools and urban districts were over-represented. However, the sample and respondents were representative of the population with respect to gender, school location, and rural principals.

**Research Question 1**

The first research question of this study was: What do principals know about emergency preparedness, how did they learn it, and what role does their knowledge of crisis management play in their confidence and emergency preparedness planning behavior for their schools? To answer this question a knowledge index was constructed, and then a chi-square analysis for knowledge and the dependent variable of behavior, and a chi-square analysis for knowledge and the dependent variable of confidence.

**Index of Knowledge**

The index for the independent variable, knowledge, was composed of a total of 10 items, which are identified in Table 1. Knowledge questions were based on a principal’s familiarity with specific emergency preparedness terms and their experience.
The sources of knowledge (i.e. books, articles, training) were not included in this index. Knowledge questions asked principals how familiar they were with emergency preparedness terms and their level of emergency preparedness. Index scores ranged from 3 to 9 out of a possible 10 with an n=88. Table 7 shows the distribution of respondents for the knowledge index.

Table 7

Distribution of Index Score for Independent Variable of Knowledge

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>n</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>88</td>
<td>3.00</td>
<td>9.00</td>
<td>5.43</td>
<td>1.59</td>
</tr>
</tbody>
</table>

Table 7 shows the mean of the sum of knowledge questions was 5.43 with an n = 88 and a standard deviation of 1.59. Principals’ scores were well below the maximum for the independent variable of emergency preparedness knowledge.
Chi-square Analysis of Knowledge and Behavior

Table 8

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Index</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>.00</td>
<td>39</td>
</tr>
<tr>
<td>Expected</td>
<td>26.7</td>
<td>22.3</td>
</tr>
<tr>
<td>Count</td>
<td>1.0</td>
<td>9</td>
</tr>
<tr>
<td>Expected</td>
<td>21.3</td>
<td>17.7</td>
</tr>
</tbody>
</table>

A chi-square test was performed on the independent variable of knowledge and dependent variable of behavior, with an n=88. This test found 39 principals had a low index score on knowledge and a low index score in behavior when the expected number was 26.7. There were 10 principals who had a low knowledge index and a high behavior index with an expected count of 22.3. There were nine principals who scored a high index for knowledge and a low index for behavior with an expected number of 21.3 and 30 principals scored a high index for both knowledge and behavior when the expected number was 17.7. A relationship was found between the variables, $X^2(1)=27.97, p=.00$. 
Chi-square Analysis of Knowledge and Confidence

Table 9

Chi-square Analysis of Knowledge and Confidence

<table>
<thead>
<tr>
<th></th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Index</td>
</tr>
<tr>
<td>Count</td>
<td>.00</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Expected Count</td>
</tr>
<tr>
<td>Count</td>
<td>1.0</td>
</tr>
<tr>
<td>Expected Count</td>
<td></td>
</tr>
</tbody>
</table>

A chi-square test was performed on the independent variable of knowledge and dependent variable of confidence, with an n=88, 13 principals had a low index score on knowledge and a low index score in confidence when the expected number was 22.3. There were 36 principals who had a low knowledge index and a high confidence index with an expected count of 26.7. There were 27 principals who scored a high index for knowledge and a low index for confidence with an expected number of 40 and 12 principals scored a high index for both knowledge and confidence when the expected number was 21.3. A relationship was found between the variables, $X^2(1)=15.97$, $p=.00$. 
Summary of Research Question 1

A relationship was found between emergency preparedness knowledge and confidence, and emergency preparedness knowledge and behavior with a $p=.00$ in both chi-square tests. Therefore, the level and sources of training in emergency preparedness [aka knowledge] is associated with principal’s confidence and emergency preparedness planning behavior in the past year.

Research Question 2

The second research question of this study asked about the extent of the principal’s attitudinal favorability toward emergency preparedness and what role this attitudinal favorability plays in their confidence and the emergency preparedness planning behavior for their school. To answer this question an attitudinal favorability index was constructed, and then a chi-square analysis for attitudinal favorability and the dependent variable of behavior and a chi-square analysis for attitudinal favorability and the dependent variable of confidence were conducted.

Index of Attitudinal Favorability

The index for the independent variable, attitudinal favorability, was composed of one question with 18 items (see Chapter III), asking principals how much the principal agreed
on a five point Likert scale, from strongly disagree to strongly agree, with specific beliefs and understandings related to school emergency preparedness. Index scores ranged from 2 to 12 out of a possible 18 with an n=84. Table 10 shows the distribution of respondents for the attitudinal favorability index.

Table 10

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>n</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudinal Favorability</td>
<td>84</td>
<td>2.00</td>
<td>12.00</td>
<td>10.08</td>
<td>2.85</td>
</tr>
</tbody>
</table>

Table 10 shows the mean of the attitudinal favorability questions was 10.08 with an n = 84 and a standard deviation of 2.85.
**Chi-square Analysis of Attitudinal Favorability and Behavior**

Table 11

<table>
<thead>
<tr>
<th>Attitudinal Favorability</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>Index</td>
</tr>
<tr>
<td>Expected Count</td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>1.0</td>
</tr>
<tr>
<td>Expected Count</td>
<td></td>
</tr>
</tbody>
</table>

A chi-square test was performed on the independent variable of attitudinal favorability and dependent variable of behavior, with an n=84. This test found 22 principals had a low index score on attitudinal favorability and a low index score in behavior when the expected number was 26.3. There were 24 principals who had a low attitudinal index and a high behavior index with an expected count of 19.7. There were 26 principals who scored a high index for attitudinal favorability and a low index for behavior with an expected number of 21.7 and 12 principals scored a high index for both attitudinal favorability and behavior when the expected number was 16.3. This was not
significant at the .058 level. A relationship was not found between the variables, $X^2(1) = 3.604$, $p = .058$.

**Chi-square Analysis of Attitudinal Favorability and Confidence**

Table 12

<table>
<thead>
<tr>
<th>Index</th>
<th>Confidence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>.00</td>
<td>29</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudinal Favorability</th>
<th>Expected Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>20.8</td>
</tr>
<tr>
<td>Expected Count</td>
<td>25.2</td>
</tr>
</tbody>
</table>

| Favorability Count | 1.0         |
| Expected Count     | 17.2        |

<table>
<thead>
<tr>
<th>Confidence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>29</td>
</tr>
</tbody>
</table>

A chi-square test was performed on the independent variable of attitudinal favorability and dependent variable of confidence, with an $n=84$. This test found 29 principals had a low index score on attitudinal favorability and a low index score in confidence when the expected number was 20.8. There were 17 principals who had a low attitudinal index and a high confidence index with an expected count of 25.2. There were 9 principals who scored a high index for attitudinal favorability
and a low index for confidence with an expected number of 17.2
and 29 principals scored a high index for both attitudinal
favorability and confidence when the expected number was 20.8.
This was significant at the .000 level. A relationship was found
between the variables, \( X^2(1)=13.01, p=.00 \).

**Summary of Question 2**

A relationship was found between attitudinal favorability
to emergency preparedness by the principal and confidence.
However, a relationship was not found between attitudinal
favorability attached to emergency preparedness by the principal
and behavior. Therefore, the attitudinal favorability attached
to emergency preparedness by the principal is associated with
their confidence but is not associated with emergency
preparedness planning behavior.

**Research Question 3**

The third research question of this study was: What
organizational structures do principals institute for emergency
preparedness and what role does this organizational structure
play in their confidence and their emergency preparedness
behavior for their schools? To answer this question an
organizational structures index was constructed, and then a chi-
square analysis for organizational structures and the dependent
variable of behavior and a chi-square analysis for
organizational structures and the dependent variable of confidence were conducted.

**Index of Organizational Structure**

The index for the independent variable organizational structure was composed of 12 items (see Table 1), asking principals about written emergency plans, revisions to plans, review of plans with staff, and the frequency of specific drills in the previous 12 months. Index scores ranged from 2 to 8 out of 12 with an n=85. Table 13 shows the distribution of respondents for the organizational structure index.

Table 13

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>n</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational questions using question index scores</td>
<td>85</td>
<td>2.00</td>
<td>8.00</td>
<td>5.05</td>
<td>1.38</td>
</tr>
</tbody>
</table>

Table 13 shows the sum of the organizational questions was 5.05 with an n = 85 and a standard deviation of 1.38.
Chi-square Analysis of Organizational Structure and Behavior

Table 14

<table>
<thead>
<tr>
<th>Organizational Structure</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Index</td>
</tr>
<tr>
<td>Count</td>
<td>34</td>
</tr>
<tr>
<td>Organizational Expected Count</td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>13</td>
</tr>
<tr>
<td>Expected Count</td>
<td>17.1</td>
</tr>
</tbody>
</table>

A chi-square test was performed on the independent variable of organizational structure and dependent variable of behavior, with an n=85. This test found 34 principals had a low index score on organizational structure and a low index score in behavior when the expected number was 29.9. There were 20 principals who had a low organizational structure index score and a high behavior index with an expected count of 24.1. There were 13 principals who scored a high index for organizational structure and a low index for behavior with an expected number...
of 17.1 and 18 principals scored a high index for both organizational structure and behavior when the expected number was 13.9. A relationship was not found between the variables, $X^2(1)=3.523, p=.061$.

**Chi-square Analysis of Organizational Structure and Confidence**

Table 15

<table>
<thead>
<tr>
<th>Organizational Structure</th>
<th>Index</th>
<th>.00</th>
<th>1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>.00</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td>Expected Count</td>
<td>24.1</td>
<td>29.9</td>
<td></td>
</tr>
</tbody>
</table>

A chi-square test was performed on the independent variable of organizational structure and dependent variable of confidence, with an n=84. This test found 19 principals had a low index score on organizational structure and a low index score in confidence when the expected number was 24.1. There were 35 principals who had a low organizational structure index score and a high confidence index with an expected count of
29.9. There were 19 principals who scored a high index for organizational structure and a low index for confidence with an expected number of 13.9 and 12 principals scored a high index for both organizational structure and confidence when the expected number was 17.1. A relationship was found between the variables, $X^2(1)=5.429$, $p=.02$.

**Summary of Question 3**

A relationship was found between the organizational structure of the school and confidence. However, a relationship was not found between the organizational structure of the district and behavior. Therefore, the organizational structure of the district and its preparedness planning are associated with the principal’s emergency preparedness confidence but is not associated with the principal’s behavior.

**Research Question 4**

The fourth research question of this study was: What role does the interaction of knowledge, attitudinal valence and organizational structures play on principals’ confidence and their emergency preparedness behavior for their schools? To answer this question a regression analysis for all three independent variables and the dependent variable of behavior and
a second regression analysis for all three independent variables and the dependent variable of confidence were run.

Regression Analysis of Knowledge, Attitudinal Favorability, and Organizational Structures, and Confidence

Table 16

Summary Statistics for Multiple Regression of the Interaction of the Independent Variables of Knowledge, Attitudinal Favorability and Organizational Structure, and the Dependent Variable of Confidence

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>F</th>
<th>$R^2$</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>88</td>
<td>2.79</td>
<td>.867</td>
<td>38</td>
<td>.000</td>
</tr>
</tbody>
</table>

This multiple linear regression examined the impact of knowledge, attitudinal favorability and organizational structures on confidence. As reported by $R^2$, 86.7% of the variance in confidence is explained by knowledge, attitudinal favorability and organizational structures. This regression model had an $F$ value of 2.79, degrees of freedom of 38, an $n=88$, and was significant with a $p=.000$.

Looking closer at the data in this model, two questions were significant. The first had a standard coefficient of $-.247$ and resulted from the question related to the last time there was a revision of the schools emergency plan and was found to be
a significant predictor of confidence with a $p=.023$. Significant and negative, the standardized coefficient indicated that the longer it was from the last time there was a revision of the school emergency plan the emergency preparedness confidence of the principal decreased.

Additionally a standard coefficient of .330 resulted from the question related to the principal preparing the school facility with the resources, materials, and supplies needed for an emergency and was found to be significant for confidence with a $p=.045$. Significant and positive, the standard coefficient indicated that by providing the school facility with the resources, materials, and supplies the emergency preparedness confidence of the principal increased.

**Regression Analysis of Knowledge, Attitudinal Favorability and Organizational Structures, and Behavior**

Table 17

*Summary Statistics for Multiple Regression of the Interaction of the Independent Variables of Knowledge, Attitudinal Favorability and Organizational Structure, and the Dependent Variable of Behavior*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$n$</th>
<th>$F$</th>
<th>$R^2$</th>
<th>$df$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior</td>
<td>88</td>
<td>3.44</td>
<td>.748</td>
<td>38</td>
<td>.000</td>
</tr>
</tbody>
</table>
This multiple linear regression examined the impact of knowledge, attitudinal favorability and organizational structures on behavior. As reported by $R^2$, 74.8% of the variance in behavior is explained by knowledge, attitudinal valence and organizational structures. This regression model had an $F$ value of 3.44, degrees of freedom of 38, an $n=88$, and was significant with a $p=.000$.

Looking closer at the data in this model, a standard coefficient of .478 resulted from the question related to the principal preparing the school facility with the resources, materials, and supplies needed for an emergency and was found to be significant for confidence with a $p=.034$. Significant and positive, the standard coefficient indicated that by providing the school facility with the resources, materials, and supplies the emergency preparedness behavior of the principal increased.

**Summary of Research Question 4**

A relationship was found between the interaction of knowledge and attitudinal favorability, and organizational structures and a principal’s confidence and their emergency preparedness planning behaviors. Both multiple linear regressions were significant with a $p=.00$. Therefore, the interaction of knowledge, attitudinal favorability and
organizational structures are associated with a principal’s confidence and their emergency preparedness planning behaviors.

**Summary of Chapter IV**

This chapter reported the results of the data analysis and discussed the findings from the on-line survey distributed to New Jersey principals. The identified independent variables of knowledge, attitudinal favorability, and organizational structure for emergency preparedness were hypothesized to predict a principal’s confidence in their ability to respond to emergencies and their emergency preparedness behavior in New Jersey Public schools. Indexes were constructed for all of the independent variables and descriptive statistics were generated. Two chi-square analyses were completed to address the first three research questions of the study. Multiple linear regressions were used to analyze the last research question.

The results in this chapter were presented in the following sequence: sample characteristics, research question 1, with the index for knowledge and a chi-square analysis of the relationship between knowledge and each dependent variable; research question 2, with the index for attitudinal favorability and chi-square analysis of the relationship between attitudinal favorability and each dependent variable; research question 3,
with the index for organizational structure and chi-square analysis of the relationship between organizational structure and each dependent variable; and research question 4 with two multiple regressions to analyze the relationship between all the independent variables and each dependent variable.

Chapter V will report a summary of the study, findings, conclusions, implications, future research, and a summary.
Chapter V

FINDINGS, CONCLUSIONS AND IMPLICATIONS

Introduction

Chapter V is separated into six sections. The first section summarizes the study and includes summaries of the purpose, literature review, research questions, a description of the survey sample, the survey instrument, and the procedures for data analysis. The second section summarizes the findings found in Chapter IV. The third section discusses the limitations of this study. The fourth section discusses the implications for future research in the field of school emergency preparedness. The fifth section discusses recommendations for educational policy. The final section will be a summary.

Summary of the Study

School violence has resulted in the death and injury of students, staff and community members all across the United States. Recent incidents of school violence put a focus on school emergency preparedness and since school principals are the leaders of their buildings, school emergency preparedness has become one of the principal’s primary responsibilities. Therefore, the purpose of this study was to understand the school principal’s level of emergency preparedness in New Jersey
public schools and how the principal’s confidence and behavior affect emergency preparedness.

The review of relevant literature found that there was a limited, but growing, amount of literature on school emergency preparedness. The literature review revealed a need for school districts to have written crisis plans with multiple responses for the multitude of emergencies they may encounter. Additionally, the literature discussed the need for resources, training, and time to practice emergency drills. From past school emergencies, the federal government created best practice recommendations for school emergency preparedness. The literature cited in this dissertation, on best practices, indicated the need to continually review emergency plans and practice with first responders. It also found that states across the United States have increased the requirements for school emergency preparedness, including requiring written plans, providing funding, training and resources. New Jersey was one of those states requiring written emergency plans and practice drills. The current law (listed in Appendix A) requires school personnel to be trained on the emergency preparedness drill and practice an emergency preparedness drill once a month, in addition to the required fire drill. As a way to draw upon additional relevant literature, due to the limited school
emergency preparedness literature, literature on community resilience was included. Community resilience has been studied for almost a century by those in the sociology and psychology fields. Connections to what should be done by schools as they prepare for school emergencies by including literature on community resilience in respect to crisis situations. The inclusion of literature on community resilience identified the need to and benefits of preparing the community for an emergency. The connection would then be the school community as compared to the overall community being prepared for an emergency. Within the school community, the literature recognized a need to identify potential crisis situations, create plans, train staff, fund emergency preparedness activities, supplies and material, and find time for school emergency preparedness. Assuring that these emergency preparedness needs were met fell upon the school principal. Trump (2011) found that school leadership was vital in the school emergency preparedness process. Trump stated “inconsistent or nonexistent leadership on school safety issues... is one of the biggest threats to school safety” (p. 6).

This study had four research questions that centered on the principal’s behavior and confidence as they related to school emergency preparedness. The first research question asked what
the principal knew about emergency preparedness, how he/she
learned it, and what role their knowledge of emergency
management played on their confidence and emergency preparedness
planning behaviors for his/her school. The second question asked
about the principal’s attitudinal favorability toward emergency
preparedness and what role this attitudinal favorability played
toward the principal’s confidence and emergency preparedness
planning behaviors. The third question asked about the
organizational structures the principal instituted for school
emergency preparedness in the school and what role the structure
played on their confidence and emergency preparedness planning
behaviors. The fourth research question asked what role the
interaction of knowledge, attitudinal valence, and
organizational structures played on principals’ confidence and
their emergency preparedness behavior for their schools.

The survey sample for this study was identified from the
population of New Jersey public school principals ranging from
kindergarten to 12th grade schools, vocational, technical or
institute schools, public schools for the handicapped, and
magnet schools. The method for selecting participants in the
study was a simple random sample without replacement and a
random number generator in Microsoft Excel to identify the
initial random starting number.
This study used a quantitative survey instrument that included seven sections. Sections I collected school and district demographic information. Section II collected demographic data on the principal. Section III surveyed the principal’s knowledge of emergency preparedness. Section IV surveyed the principal’s role in school emergency preparedness. Section V surveyed the principal’s attitudinal favorability toward school emergency preparedness. Section VI surveyed the principal’s organizational structure for school emergency preparedness within a principal’s school. Section VII surveyed the principal on obstacles related to school emergency preparedness.

The procedures for data analysis began with developing indices for the three independent variables. These indices were developed by calculating the mean of the responses to each item in the survey, and then assigning participants who scored at or above the mean a +1 score or those below the mean a 0. Each of the areas was added together for each participant to provide an index—ranging from 0 to 4—that indicated the level of emergency preparedness for each participant. Basic descriptive statistics followed the indices for each variable and a chi-square analysis was conducted to address the first three hypotheses. The fourth hypothesis was analyzed through a multiple
linear regression of the three independent variable and each dependent variables.

**Findings**

**Demographics**

There were 236 principals identified for the survey from a list on the New Jersey Department of Education’s website. This list included all principals in New Jersey public schools, and from this identified pool of candidates 101 principals responded. The respondents were then compared to both the sample and the entire state of New Jersey in five categories. This included school type, certified teachers, location of school, district factor group, and gender. Comparing the respondents to the sample and the whole population of principals in New Jersey found some basic representativeness in two categories including sections of the District Factor Group (DFG) in category C-D with the respondents equaling 13.3%, the sample equalling 12.3%, and the state equaling 12%, and gender which found respondents were 44.2% female, 55.8% male, with five respondents skipping this question. The sample was comprised of 51.7% male, 47.9% female, and 0.4% listed as vacant. Gender, compared to the state distribution by gender at the time of this survey, 52.2% male, 47% female and 0.8% listed as vacant. The respondents were under-represented when compared to the state of New Jersey at
the elementary level with 47% respondents coming from the elementary level as compared to 62.7% in the sample and 62% in the state of NJ. Small schools, which are schools with less than or equal to 25 teachers, were also under represented (10%), as compared to 26.8% from the sample and 31% from the state. Urban districts were over-represented with 19% of urban principals responding, as compared to 5.5% from the sample and 9.9% for the state. Respondents to the survey for level of school found that 47% were principals of elementary schools, compared to the survey sample of 62.7% principals at the elementary level, and at the state level the population was 62% being principals of elementary schools. However, the sample and respondents were consistent with the state of New Jersey for rural principals with urban principal respondents making up 9% of the total respondents as compared to the sample at 10.2% and the 9.6% from the state.

**Dependent and Independent Variables**

The dependent variables for this study were confidence and emergency preparedness behavior. Principal confidence specifically examined the principal’s ability to plan for and meet the requirements of various school emergency situations. The dependent variable of emergency preparedness behavior focused on the principal’s self-reported level of emergency
preparedness and was based on the principal’s actions and performance in preparation for school emergencies.

The independent variables for this study were knowledge, attitudinal favorability, and organizational structure. The variable of knowledge focused on the principal’s knowledge of specific emergency management terms and the practicing of specific emergency management drills. The variable of attitudinal favorability was focused on the importance principals assigned to emergency preparedness and training opportunities. The organizational structure variable focused on the school emergency plan, the contents of the plan, revisions of the plan, and who organizes plan revisions and training.

The findings from this study are presented in Table 18.

Table 18
Research Findings

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Behavior</th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Findings Significant</td>
<td>Findings Significant</td>
</tr>
<tr>
<td>Attitudinal Favorability</td>
<td>Not Significant</td>
<td>Findings Significant</td>
</tr>
<tr>
<td>Organizational Structure</td>
<td>Not Significant</td>
<td>Findings Significant</td>
</tr>
<tr>
<td>Knowledge, Attitudinal Favorability, Organizational Structure</td>
<td>Findings Significant</td>
<td>Findings Significant</td>
</tr>
</tbody>
</table>
The findings of this study clearly indicate that there is considerable variance between the independent variables and confidence with an $R^2 = .867$ and the independent variables and behavior with an $R^2 = .748$. For emergency preparedness training of principals this has important implications for properly training staff, as these independent variables are strong predictors of a principal’s emergency preparedness behavior and confidence. The results further indicate that principal confidence plays a role in school emergency preparedness. In each statistical analysis with the independent variables of knowledge, attitudinal favorability, and organizational structure, and when the three independent variables were combined, all the findings were significant with this dependent variable. This indicates that principal confidence has an important place in school emergency preparedness.

The findings associated with the principal’s behavior were not as conclusive. Statistical significant findings were found with behavior and the independent variable of knowledge and when all three independent variables were combined. However the findings were not significant with behavior and attitudinal favorability, and behavior and organizational structure. However, it should be noted that the sample for these statistical analyses was small, with $n = 84$ for the chi-square
analysis of attitudinal favorability and behavior and \( n = 85 \) for the chi-square of organizational structure and behavior. These statistical analyses may have been significant with a larger sample, since each of the non-significant findings were near the standard for significance (\( p = .05 \)). Attitudinal favorability had a \( p = .058 \) and organizational structure had a \( p = .061 \).

**Limitations**

This study focused on New Jersey public school principals’ school emergency preparedness behaviors and confidence. The study found that a principal’s confidence was a significant indicator of school emergency preparedness. From this research study the following limitations are presented, based on this research study:

1. Lack of research on the topic. The United States Department of Education’s *Practical Information on Crisis Planning: A Guide for Schools and Communities* (2007) states that “the research on what works in school-based crisis planning is in its infancy” (p. 1-4). Trump (2011) found similar issues with the tracking of school crime and school safety policy by stating that “federal data are limited to a hodgepodge collection of a handful of academic studies” and those unrelated studies have dictated school safety policy and funding (p. 15). Research studies, dissertations, and post
crisis analysis reports will add to the body of research and help to identify the key elements of school emergency preparedness. As the research grows our knowledge of the variables presented in this study will grow and other variables may be identified.

2. Respondents of the survey represented New Jersey public school principals. However, the respondents did not align with the population of New Jersey public school principals in all of the demographic categories. This indicates that the results may be specific to the pool of respondents. Although some comparison can be made in the categories in which the respondents and the population were similar, generalizations to the whole population cannot be made. As the research is still limited in this subject area the study, based on the respondents, still has value in adding to the knowledge base.

3. The survey was inclusive of all types of public schools in New Jersey and across all demographic areas. The emergency preparedness needs of high schools in a suburban area may not be the needs of an elementary principal in an urban area. There is value in understanding the overall school emergency preparedness needs of all types of public schools
in New Jersey but value could be added to the research by looking at a specific demographic area.

4. The survey was limited to public school principals in New Jersey. Generalizations made about the findings of this study based on the respondents may not be made for principals of non-public schools and/or principals outside of New Jersey. The requirements for New Jersey public school principals were specifically outlined in Administrative Code 6A:16-5.1. The items outlined in this administrative code may not be relevant to principals outside of New Jersey or non-public principals in New Jersey. However, the data collected can provide guidance related to school emergency preparedness beyond what the study was limited to here.

**Implications for Future Research**

The need to add to the literature on school emergency preparedness is paramount. As it will provide school principals and everyone else who has school safety responsibilities, enters a school or has a family member in a school the necessary information and resources that can lead to a safer school environment for all, and assure a better emergency response should a crisis occur.
Based on the research and data of this study, the following implications for future research are provided:

1. There is limited research on the topic of school emergency preparedness. This was documented in Chapter II and above in the Limitations section. As a result any research done in school emergency preparedness will add to the body of research, but there needs to be additional research conducted on school emergency preparedness for principals. The principal is the leader of the building and the one that students and staff look up to in the best and worst situations. Focusing future research on the school principal could lead to better programs and trainings in school emergency preparedness and may lead to better prepared principals. This is supported by some of the limited research. *Schools: Prudent Preparation for a Catastrophic Terrorism Incident* clearly identified the educational institution as the responsible party for student safety during the school day but most importantly during a crisis because it serves as in loco parentis and within schools principals “carry by name accountability” (p. 7) the responsibility for assuring the safety of everyone in the school. The report goes to explain that “parents and members of the school community will
specifically hold individuals in these positions responsible for the prevention and effective management of incidents” (p. 7). In addition to the responsibility described above, Sparks (2007), in analyzing changing organizations, stated that “leaders’ thoughts and actions shape the culture of their organizations” (p. 3).

2. Examine specific levels of public school principals in New Jersey. This study did not distinguish between school levels and did not analyze any data related to the differences between types of school, rather it included all levels of public schools regardless of the type of public school. Further research should be done within specific levels to identify if there are specific needs associated with the pre-school, elementary, middle, high, vocational, and special services areas. School safety is a legal responsibility that holds the institution “liable if they do not make good-faith efforts to provide a safe and secure school environment” (“Mitigating Hazards in School Facilities”, p. 1). A better understanding of the specific needs of specific types of schools can shed light on how to properly prepare for school emergencies in these locations. This study was not designed to delineate differences in specific school levels but a
study designed to do so may add to the body of research on school emergency preparedness and identify specific needs relevant to specific levels of schools.

3. This study was inclusive of principals in rural, suburban, and urban areas. However, the school emergency preparedness needs of a principal in one specific geographic location should be examined to determine if they are different from a principal in another geographic location. This study was not designed to delineate differences in specific geographic areas and did not analyze date in a manner that could distinguish between rural, suburban, and urban principal emergency preparedness needs or the differences between these locations. However, a study designed to do so may add to the body of research on school emergency preparedness and specifically identify the knowledge, attitudinal favorability, and organizational structure that is most beneficial to school emergency preparedness in a specific geographic location.

4. The dependent variable of behavior and the independent variable of attitudinal favorability, and the dependent variable of behavior and the independent variable of organizational structure were not significant. Behavior
as a dependent variable, referred to as a self-appraisal of the principal’s level of school emergency preparedness, needs to be examined further in respect to its relevance in school emergency preparedness. It was not significant for the two independent variables listed above, but was significant in respect to knowledge and the combination of all three independent variables. Further research on the dependent variable may clarify why it was significant in two statistical analyses and not in two others, and if behavior is an essential part of a principal’s school emergency preparedness.

5. The independent variable of confidence in this study related to the principal’s confidence that all requirements of school emergency preparedness were met. Each of the statistical analyses conducted using the dependent variable of confidence was found to be significant. Therefore, confidence must be examined more closely to identify the elements that lead to principal confidence and how those elements can be achieved by other principals when dealing with school emergency preparedness.

6. The dependent variables of behavior and confidence should be examined further to determine if there is any
interaction between these two dependent variables or if one is dependent upon the other.

**Recommendations for Educational Policy**

School emergency preparedness requirements are clearly outlined in New Jersey’s Administrative Code 6A:16-5.1 Based on this study and the data analysis the following recommendations are made for educational policy:

1. Specific school emergency preparedness programming needs to be established for New Jersey public school principals. Currently there are no requirements for school emergency preparedness training to be part of the principal certification process. As documented in Chapter II only the New Jersey EXCEL program provides 15 hours of school emergency preparedness training as part of their principal certification program. If school emergency preparedness is the responsibility of the school principal then it must be part of the certification process.

2. Policy should be enacted to clearly identify the responsibilities of school principals and first responders, dual training obligations, and mandated drill expectations. The literature cited in the literature review indicated that successful emergency preparedness for a crisis is a result of “shared responsibility, based on each team member
doing what it does best and leveraging the expertise and strengths of others” (National Commission on Children and Disasters, p. 19). The establishment of policy that clearly identify the responsibilities of school principals and first responders, dual training obligations, and mandated drill expectations will solidify the shared responsibility of both parties during a school emergency.

3. Policy should be enacted to identify the types of emergency preparedness training provided to students and staff to determine the most effective methods in preparing for a crisis. Allen and Ashbaker (2004) found that “training needs are underestimated” (p. 139). The current law requires a review of the plan and practicing of specific types of emergencies. However, training is left to the school district. Policy needs to specifically outline types of training and hours required to assure not only compliance with the law but understanding of the emergency preparedness plan.

4. The implementation of policy to address Federal best practices into a principal’s emergency preparedness planning, training, and practice. Documents from the federal government in 2004 and 2008 outlined the best practices for emergency preparedness and implementation of
NIMS. NIMS training and implementation are not a common practice for New Jersey public school principals, yet it is mandated for first responders. As a result there may be a disconnect between school leaders and first responders when a crisis occurs on who has specific responsibilities during a crisis.

Summary

Our nation’s schools and those who lead, teach in, and learn at them have experienced a number of natural and man-made disasters that resulted in injury and loss of life. As a result, federal best practices and state laws have required schools to make school emergency preparedness a priority. The principal has an essential part in assuring the safety of the school and all that enter it. The principal is also responsible for assuring that the school emergency preparedness materials, resources, plans, and training are appropriate for his/her school. This was confirmed in the literature, as Sparks (2007) found that leadership was vital in organizations when he stated “leaders’ thoughts and actions shape the culture of their organizations” (p.3). Therefore the purpose of this study was to understand the school principal’s level of emergency preparedness in New Jersey public schools and how the principal’s confidence and behavior affect emergency preparedness through a qualitative survey. The
areas examined included the principal’s training, attitudinal favorability, and organizational structure in relationship to school emergency preparedness.

By examining New Jersey public school principals’ confidence and behaviors this study added to the limited but growing literature and addressed areas that can assist principals in improving school emergency preparedness because, as Zimmerman (2011) stated, “principals need to identify which of their attitudes, behaviors and beliefs might help or hinder their own professional learning and the effectiveness of change initiatives in their schools” (p. 109).
References


Practical Information on Crisis Planning; A Guide for Schools and Communities. This reference needs to be completed.


Appendix A

Administrative Code 6A:16-5.1

(a) Each school district shall develop and implement comprehensive plans, procedures and mechanisms that provide for safety and security in the public elementary and secondary schools of the school district. The plans and procedures, which shall be in written form, and the mechanisms, at a minimum shall provide for:
   a. The protection of the health, safety, security and welfare of the school population;
1. The prevention of, intervention in, response to and recovery from emergency and crisis situations;
2. The establishment of and maintenance of a climate of civility; and
3. Supportive services for staff, students and their families

(b) The chief school administrator shall consult with law enforcement agencies, health and social services provider agencies, emergency management planners and school and other community resources, as appropriate, in the development of the school district’s plans, procedures and mechanisms for school safety and security.

1. The plan, procedures and mechanisms shall be consistent with the provisions of this section and the format and content established by the Domestic Security Preparedness Task Force, pursuant to N.J.S.A App. A:9-64 et seq., and the Commissioner of Education.
2. The plans, procedures and mechanisms shall be reviewed annually and updated, as appropriate.

(c) The district board of education shall disseminate a copy of the school safety and security plan to all district board of education employees.

1. New district board of education employees shall receive a copy of the school safety and security plan, as appropriate, within 60 days of the effective date of their employment.
2. All district board of education employees shall be briefed in writing, as appropriate, regarding updates and changes to the school safety and security plan.

(d) The district board of education shall develop and provide an in-service training program for all district board of education employees to enable them to recognize and appropriately respond to the safety and security concerns, including emergencies and crisis, consistent with the district board of education’s plans, procedures and mechanisms for school safety and security and the provisions of the section.

1. New district board of education employees shall receive the in-service training, as
appropriate, within 60 days of the effective date of their employment.

2. The in-service training program for all district board of education employees shall be reviewed annually and updated, as appropriate.

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   a. The protection of the health, safety, security and welfare of the school population;
      1. The prevention of, intervention in, response to and recovery from emergency and crisis situations;
      2. The establishment of and maintenance of a climate of civility; and
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(b) The chief school administrator shall consult with law enforcement agencies, health and social services provider agencies, emergency management planners and school and other community resources, as appropriate, in the development of the school district’s plans, procedures and mechanisms for school safety and security.
   1. The plan, procedures and mechanisms shall be consistent with the provisions of this section and the format and content established by the Domestic Security Preparedness Task Force, pursuant to N.J.S.A App. A:9-64 et seq., and the Commissioner of Education.
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1. New district board of education employees shall receive the in-service training, as appropriate, within 60 days of the effective date of their employment.

2. The in-service training program for all district board of education employees shall be reviewed annually and updated, as appropriate.
Dear Principal,

I am a doctoral student currently enrolled at Seton Hall University’s College of Education and Human Services in the Educational Administration Department. In addition to working on my doctoral studies, I am the Assistant Superintendent for
Personnel in Hillsborough Township Public Schools. The purpose of this letter is to request your participation in an on-line survey related to my doctoral dissertation research.

I am currently studying New Jersey public school principals’ knowledge about, and attitudes toward school emergency preparedness. Your participation in the survey will provide insight into the topic of school emergency preparedness in New Jersey public schools. You are one of 240 New Jersey public school principals selected to participate in the survey.

The survey is separated into seven sections. The first two sections include demographic information about you and your school, the third and fourth sections are related to your knowledge about, and your role in school emergency preparedness, the fifth section is related to your attitude toward emergency preparedness, the sixth section is related to the organizational structure associated with emergency preparedness in your school, and the last section is related to any obstacles you may face when addressing school emergency preparedness. The survey includes mostly multiple choice questions. Completing the survey will require about 15 minutes of your time.

Your participation in this survey is voluntary. By participating, you indicate your informed consent and willingness to participate. Should you choose not to participate or change your mind while completing the survey, please disregard the survey or stop at any point during the process. This survey is confidential. You have been randomly selected for the survey, and no identifiable information related to your identity will be incorporated into the study. You can access the survey at:

www.surveymonkey.com/s/roccosurvey?c=008

The URL address to be used by survey participants will be attached to the survey response for tracking and follow-up purposes. Participants’ identity will remain confidential and not be incorporated into the study. This information will only be accessible to me, collected on a USB data key, and secured in a locked file cabinet in my home office for a period of three years. All data will be destroyed after three years. Should your district’s Acceptable Use Policy (AUP) not allow participation in educational surveys, please disregard this request for
During your participation in the survey should you need to stop at any time please click on the “Exit Survey” button on the top right of the screen. When returning to the survey, using the provided URL address, you will be directed to the next unanswered question. If you encounter a problem with the survey while answering the questions, please contact me at scottrocco@gmail.com.

Data collected from this survey will only be accessible to me and collected on a USB data key that will be maintained in a locked file cabinet in my home office for a period of three years. All data will be destroyed after three years. The Institutional Review Board (IRB) for Human Subjects Research of Seton Hall University has reviewed and approved this research study. As a result the IRB believes the procedures for this research study adequately safeguard the subjects’ privacy, welfare, and civil rights. The chairperson of the IRB, Dr. Mary Ruzicka can be reached at 973-313-6314.

Thank you for your participation in this study.

Sincerely,

Scott Rocco
Doctoral Candidate, Seton Hall University
Appendix C

Survey
School Emergency Preparedness Survey Introduction Page

Dear Principal,

Thank you for participating in the on-line survey related to my doctoral dissertation research. I am studying New Jersey public school principals’ knowledge about, and attitudes toward school emergency preparedness. Your participation in the survey will provide insight into the topic of school emergency preparedness in New Jersey public schools. You are one of 240 New Jersey public school principals selected to participate in the survey.

The survey is separated into seven sections. The first two sections include demographic information about you and your school, the third and fourth sections are related to your knowledge about, and your role in school emergency preparedness; the fifth section is related to your attitude toward emergency preparedness, the sixth section is related to the organizational structure associated with emergency preparedness in your school, and the last section is related to any obstacles you may face when addressing school emergency preparedness. The survey includes mostly multiple choice questions. Completing the survey will require about 15 minutes of your time.

Your participation in this survey is voluntary. By participating, you indicate your informed consent and willingness to participate. Should you choose not to participate or change your mind while completing the survey, please disregard the survey or stop at any point during the process.

The URL address to be used by survey participants will be attached to the survey response for tracking and follow-up purposes. Participants’ identity will remain confidential and not be incorporated into the study. This information will only be accessible to me, collected on a USB data key, and secured in a locked file cabinet in my home office for a period of three years. All data will be destroyed after three years. Should your district’s Acceptable Use Policy (AUP) not allow participation in educational surveys, please disregard this request for participation.

During your participation in the survey should you need to stop at any time please click on the ‘Exit Survey’ button on the top right of the screen. When returning to the survey, using the provided URL address, you will be directed to the next unanswered question. If you encounter a problem with the survey while answering the questions, please contact me at scottrocco@gmail.com.

The Institutional Review Board (IRB) for Human Subjects Research of Seton Hall University has reviewed and approved this research study. As a result the IRB believes the procedures for this research study adequately safeguard the subjects’ privacy, welfare, and civil rights. The chairperson of the IRB, Dr. Mary Ruzicka can be reached at 973-313-6314.

Thank you for your participation in this study. Please click the NEXT button at the bottom of the page to start the survey.

Sincerely,
Scott Rocco
Doctoral Candidate, Seton Hall University
<table>
<thead>
<tr>
<th>Section 1: School and District Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>As you start the survey, please keep the following items in mind as all the pages are formatted the same way:</td>
</tr>
<tr>
<td>1. At the bottom of each page are PREV and NEXT buttons. PREV will send you back to the last page you completed and NEXT will move you to the following page in the survey.</td>
</tr>
<tr>
<td>2. At the top right of each page is an EXIT THIS SURVEY button. Should you wish to stop your participation in the survey at any time please click on this button and you will leave the survey.</td>
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<tr>
<td>3. Should you be unable to complete the survey in one sitting, you can also use the EXIT THIS SURVEY button. Upon re-entering the URL address into your Internet browser, you will be brought to the next question or page in the survey. Please make every attempt to complete the survey in one sitting.</td>
</tr>
<tr>
<td>Should you have any problems with the site, please contact me at <a href="mailto:scottrocco@gmail.com">scottrocco@gmail.com</a></td>
</tr>
</tbody>
</table>

1. **Level of your school:**
   - Elementary
   - Middle
   - High
   - Other (please specify) [ ]

2. **Number of students in your school as of October 15, 2011:**
   - Up to 250 students
   - 251 – 500 students
   - 501 – 750 students
   - 751 – 1000 students
   - More than 1000 students

3. **Number of certified teachers in your school as of October 15, 2011:**
   - Up to 25 teachers
   - 26 – 75 teachers
   - 76 – 100 teachers
   - More than 100 teachers

4. **Location of school:**
   - Rural
   - Suburban
   - Urban
5. District factor group (DFG) of school district:
   - A
   - B
   - C-D
   - D-E
   - F-G
   - G-H
   - I
   - J
   - Vocational or Other
   - Do Not Know
### Section II: Principal's Information:

6. **Gender:**
- Female
- Male

7. **Number of years in current position:**

8. **Total years in school administration at level of vice principal or higher:**

9. **Total years employed professionally in education (teaching and administration):**

10. **Highest degree earned:**
- EdD or PhD
- Masters plus credits towards EdD or PhD
- Masters Degree
- Bachelor's Degree

11. **Were you required to take school safety / emergency preparedness class(es) (excluding school law classes) to be certified as a school principal?**
- Yes
- No

12. **Estimated number of hours you have accumulated in school safety / emergency preparedness training, classes, and / or professional development to be certified in your current position (excluding school law classes):**

13. **Estimated number of hours you have accumulated in school safety / emergency preparedness training, seminars, and / or professional development classes you have taken while a principal (excluding school law classes):**
Section III: School Administrator Knowledge of Emergency Preparedness:

14. How familiar are you with the term “All Hazards” approach to school emergency preparedness?

- Very familiar with the term and have knowledge about it
- Recognize term and have some knowledge about it
- Recognize term but have limited knowledge about it
- Recognize term but have no knowledge about it
- Not familiar with term

15. How familiar are you with the National Incident Management System, NIMS, in emergency preparedness?

- Very familiar with the term and have knowledge about it
- Recognize term and have some knowledge about it
- Recognize term but have limited knowledge about it
- Recognize term but have no knowledge about it
- Not familiar with term

16. Overall, if you were to rate your level of emergency preparedness as a building principal it would be:

- Outstanding
- Above Average
- Average
- Below Average
- Inadequate

17. Is your primary source of knowledge on emergency preparedness for schools from:

- You being trained by others
- You independently seeking information on the topic
- A mix of both training by others and your independent seeking of information.
18. Mark your primary source (the choices in the columns) of emergency preparedness knowledge and / or training for the following issues (the choices in the rows). If you do not have a primary method, state No Knowledge Source. Mark only one source per category.

<table>
<thead>
<tr>
<th></th>
<th>Articles and/or Books</th>
<th>Classes and/or Professional Development from District Personnel</th>
<th>Classes and/or Professional Development from Outside Providers</th>
<th>Local, County and/or State First Responders</th>
<th>New Jersey Department of Education’s School Preparedness and Emergency Planning website</th>
<th>Other (specify in space provided below)</th>
<th>No Knowledge Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock Down</td>
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<td>No Knowledge Source</td>
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<tr>
<td>Evacuation</td>
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<td>No Knowledge Source</td>
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<tr>
<td>Shelter-in-Place</td>
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<td>Fire Drill</td>
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<tr>
<td>Active Shooter</td>
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<tr>
<td>Bomb Threat</td>
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<tr>
<td>Reverse Evacuation</td>
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<td>No Knowledge Source</td>
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<tr>
<td>Other (please specify)</td>
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<td>No Knowledge Source</td>
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</tbody>
</table>

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Section IV: School Administrator’s Role in Emergency Preparedness:

19. Using a scale of 1 to 5, rate your level of confidence in school emergency preparedness when handling school emergencies.

1=Not Confident
2=Somewhat Confident
3=Confident
4=Very Confident
5=Extremely Confident

How confident are you in your role, as principal of your school, when it comes to the following aspects of emergency preparedness:

<table>
<thead>
<tr>
<th>aspect</th>
<th>Not Confident</th>
<th>Somewhat Confident</th>
<th>Confident</th>
<th>Very Confident</th>
<th>Extremely Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assuring that your school's emergency preparedness plan properly addresses all types of emergencies.</td>
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<tr>
<td>Assuring that your school's emergency preparedness plan is updated annually.</td>
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<tr>
<td>Providing the staff in your building with the school emergency preparedness knowledge needed to respond during an emergency.</td>
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<tr>
<td>Providing the staff in your building with the school emergency preparedness training necessary to respond during an emergency.</td>
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<td>Providing the students in your building with the school emergency preparedness knowledge needed to respond during an emergency.</td>
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<tr>
<td>Providing the students in your building with the school emergency preparedness training necessary to respond during an emergency.</td>
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<td>Leading your school, during an emergency, according to your emergency preparedness plan.</td>
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<tr>
<td>Directing staff to take action</td>
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<tr>
<td>Task</td>
<td>Option 1</td>
<td>Option 2</td>
<td>Option 3</td>
<td>Option 4</td>
<td>Option 5</td>
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<tr>
<td>Directing students to take action during an emergency.</td>
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<tr>
<td>Working collaboratively with local emergency responders during an emergency (emergency medical services, fire, police, etc.).</td>
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<tr>
<td>Preparing your school facility with the resources, materials, and supplies needed for an emergency.</td>
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</tbody>
</table>
## Section V: School Administrator’s Attitude Toward Emergency Preparedness

20. Using a scale of 1 to 5, indicate your level of agreement with the following attitudinal statements toward school emergency preparedness.

1 = Strongly Disagree  
2 = Disagree  
3 = Undecided  
4 = Agree  
5 = Strongly Agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am satisfied with the amount of knowledge I have on emergency preparedness for my school.</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>I seek out additional information about school emergency preparedness.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
<tr>
<td>I seek out additional training about school emergency preparedness.</td>
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<td>☐</td>
</tr>
<tr>
<td>I believe the proper amount of time has been provided for school emergency preparedness to assure my school is as safe as possible.</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
<td>☐</td>
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<tr>
<td>I understand the requirements for school emergency preparedness provided by New Jersey law.</td>
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<tr>
<td>I take time to address all the emergency preparedness requirements required by law.</td>
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<td>☐</td>
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<tr>
<td>I believe I was prepared for this responsibility (emergency preparedness) when I took classes to receive my principal’s certificate.</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>I provide my staff with ample time to learn about emergency preparedness at my school.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>I provide ample time to practice emergency preparedness drills at my school.</td>
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<td>☐</td>
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<tr>
<td>Statement</td>
<td>Yes</td>
<td>No</td>
<td>Mountain Range</td>
<td>Desert</td>
<td>Forest</td>
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<td>--------------------------------------------------------------------------</td>
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<tr>
<td>I believe emergency preparedness should be taken seriously by all staff.</td>
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<td>I know my emergency preparedness responsibilities as the principal of my school.</td>
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<td>I believe there is too much time allotted to emergency preparedness in my school.</td>
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Section VI: School Administrator’s Emergency Preparedness Organizational Structure

21. Does your school have a written emergency plan?
   ○ Yes
   ○ No

22. My school's emergency plan was last revised (revised means thoroughly reviewed, checked, and substantively adjusted to meet current school emergency preparedness needs):
   ○ This year
   ○ Last year
   ○ 2 years ago
   ○ 3 or more years ago
   ○ Do not know the last time it was revised

23. Who initiated the revision to your emergency plan?
   ○ You as principal
   ○ A district administrator
   ○ A county administrator
   ○ A community first responder
   ○ A parent
   ○ A community official
   ○ A policy change or revision
   ○ A crisis or emergency event
   ○ Other (please specify)

24. In the last 12 months, my school's emergency plan was reviewed with building staff:
   ○ Once
   ○ Twice
   ○ Three times
   ○ Four times or more
   ○ Never
25. Have you conducted a lock-down drill at your school in the last 12 months?
   - Yes
   - No
   - Not familiar with the term

26. Have you conducted an evacuation drill at your school in the last 12 months?
   - Yes
   - No
   - Not familiar with the term

27. Have you conducted a shelter-in-place drill at your school in the last 12 months?
   - Yes
   - No
   - Not familiar with the term

28. Have you conducted a parent reunification drill at your school in the last 12 months?
   - Yes
   - No
   - Not familiar with the term

29. Have you conducted a table top drill at your school in the last 12 months?
   - Yes
   - No
   - Not familiar with the term

30. Have you conducted an emergency preparedness drill with first responders in the last 12 months?
   - Yes
   - No
   - Not familiar with the term

31. Emergency preparedness plans for my school are prepared at the:
   - District level
   - School level
   - Other (please specify)
32. Emergency preparedness training for my school is organized at the:

- [ ] District level
- [ ] School level
- [ ] Other (please specify)
Section VII: Obstacles to Emergency Preparedness

At the end of this page you will see two buttons PREV and DONE. Once complete please click DONE to submit your responses. Thank you for your participation.
Scott Rocco

33. Are there any obstacles to meeting your emergency preparedness responsibilities as a building administrator?

- Yes
- No (if no, do not answer last question.)

34. As the principal of your school, rank order the TOP THREE obstacles to achieving emergency preparedness within your school with:

1 being BIGGEST obstacle
2 being SECOND biggest obstacle
3 being THIRD biggest obstacle

<table>
<thead>
<tr>
<th>District Initiatives and Mandates</th>
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<tr>
<td>Focus on Academics</td>
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<tr>
<td>Federal Initiatives and Mandates</td>
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<tr>
<td>Lack of Support from Community First Responders</td>
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<tr>
<td>Lack of Support from District Administration</td>
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<td>Lack of Support from School Staff</td>
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<td>Money</td>
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<td>Staff Supervision</td>
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<tr>
<td>State Initiatives and Mandates</td>
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<td>Time</td>
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