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Principals' Perceptions and Self-efficacy in Relation to School Security

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PRINCIPALS' PERCEPTIONS AND SELF-EFFICACY IN RELATION TO SCHOOL SECURITY

by

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ABSTRACT

Principals in the nation's schools have been tasked with managing crisis incidents that may occur with students and others on their campuses on a daily basis. The purposes of this study were to determine the differences, if any, that existed in Central Florida public school principals' perceptions regarding school security, their perceived confidence to address critical crisis incidents on their campuses, their perceptions of the likelihood critical incidents would occur, their perceptions of interaction with law enforcement, the critical incidents they fear the most, and their perceptions of factors impacting the incidents they fear the most.

Principal subgroup mean responses to the *Principal Safety and Security Perceptions Survey* in the three areas of Bandura's (1997) triadic reciprocal causation were examined in the context of principals' gender, longevity, student enrollment, grade configuration, free and reduced lunch rate, presence of a law enforcement officer, and presence of a security plan.

Findings revealed significant differences between categorical groups of principals in multiple areas. It was determined that significant differences in principals' perceptions warrant further study. Recommendations for practice include security policy development and practical application of noted trends.

I dedicate this work to those lighting the path.

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CHAPTER 1
THE PROBLEM AND ITS CLARIFYING COMPONENTS

Introduction

Principals are leaders of schools, and school environments are subject to factors that are often unpredictable. "Expectations of school principals are often grounded in theoretical conceptions of leadership that compete with the day-to-day managerial functions associated with running a school" (Catano & Stronge, 2007, p. 383). Fear, lack of confidence, and inaction are not characteristics that are positively associated with effective leadership. For individuals and leaders such as principals,

> . . . those who believe that potential threats are unmanageable view many aspects of their environment as fraught with danger. They dwell on their coping deficiencies, magnify the severity of possible threats, and worry about perils that rarely (if ever) happen. (Bandura, 1997, p. 140).

Fear, and other leader personal attributes, behaviors, and environmental factors interact to such a degree that motivation, action, and ultimately success in addressing tasks are influenced (Bandura, 1986, 1997). The interaction of these factors is grounded in social cognitive theory and self-efficacy. This study was conducted to examine school principals' perceptions and self-efficacy in the context of school security.

Background of the Study

General public demand for safe schools has been well documented (Addington, 2009; Lawrence & Birkland, 2009; Mayor & Furlong, 2010). Legislative efforts to address public perception regarding school security and the improvement of school security began to influence public policy as early as 1974. In 1978, the United States

Department of Health, Education, and Welfare (HEW), whose name was later changed to the Department of Health and Human Services, released a safe school study commissioned by Congress in 1974 (U.S. Department of Health, Education, and Welfare, 1977). The HEW study was designed to provide a definitive look at the "frequency and seriousness" (p. 1) of crime and violence in schools based primarily on quantitative data gathered from a National Institute of Education (NIE) survey.

In a 2008 survey on crime and safety, the U. S. Department of Education National Center For Educational Statistics (NCES), documented that there was a less than a one in a million chance that an individual would be subject to a school-related violent death. Some 10 years earlier, NCES (1998) reported that violent crime was not present in 90% of American schools and that 43% of schools reported no crime at all. Yet, "perceptions of school violence have been skewed not just by media focus on a few extreme cases, but by researchers who used, and continue to rely on, faulty surveys and polls that exaggerate the danger of violence in schools" (Cornell, 2006, p. 3). Although the likelihood of a terrorist attack or other violent event on campus or in an individual school may have been perceived to be low, the possibility of such an attack alone has been enough to drive the need for preparation for such an event.

Lawrence and Birkland (2004) noted that legislation related to school violence reached a crescendo in 1999 following the most widely publicized school shooting event of the 20th century at Columbine High School in Littleton, Colorado. There was another surge in legislation following the terrorist attacks of September 11, 2001 when schools were identified as potential soft targets for terrorist activities (Ervin, 2006). Addington

(2009) concluded that in an effort to appear to be addressing violent activity on campuses, principals turned to highly visible and often costly measures such as security cameras.

The United States Department of Education (USDOE) Office of Safe and Drug-free Schools published *Practical Information on Crisis Planning* in 2003 and again in 2007 to provide guidance related to school responses to crisis events. This guide outlined what had been identified by the USDOE as best practices regarding school safety and security plans and preparation. It was noted that communities and schools are different, and crisis management plans must be created with those differences that make each school unique in mind (Office of Safe and Drug-free Schools, 2003, 2007). The stated purpose of the guides was to encourage conversation and thought prior to the onset of a crisis, not in the midst of one. The seriousness of crisis planning, as identified in the report, was such that "Every governor, mayor, legislator, superintendent, and principal should work together to make school crisis planning a priority" (Office, 2007 p. 1-9). In relation to school leadership during a crisis, the authors of the guide stated that principals must ". . . make the basic decisions about what type of action is needed and respond within seconds" (Office, 2007 p. 4-2).

The national outcry for safety and security has yielded additional responses. In 2004, the Department of Homeland Security established the National Incident Management System (NIMS) as a part of The Federal Emergency Management Agency [FEMA] (FEMA, 2010). This effort established a system by which agencies from local, state, and federal levels could communicate and work cooperatively during crisis events

of any magnitude. The system provided a structural framework for agency preparation for the onset of a crisis event. Individuals at all levels received training on expectations regarding inter-agency cooperation and resource directives during times of crisis. FEMA and the NIMS systems also provided an overarching context for the control of emergencies once they had occurred in order to ensure coordinated and clear agency responses and avoid continued fallout from crisis events. Schools and school leaders have been included in this training and network of agencies (FEMA, 2010). At the time of this study, almost 40 years had passed since the release of the HEW study (U.S. Department of Health, 1977), but crime and violence in the context of schools, according to Addington (2009), has remained a topic of considerable discussion and national concern.

Statement of the Problem

The literature reviewed for this study assisted the researcher in identifying crisis events in schools as an area of critical importance (Ervin, 2006; FEMA, 2010; Lawrence & Birkland, 2004; Office of Safe and Drug-free Schools, 2003, 2007; U.S. Department of Health, 1977). Related literature was also useful in identifying the principal as leader and decision maker in school crisis events (Ciminillo, 1980; Stephens, 2003; USDOE, 2007). Self-efficacy as discussed by Bandura (1986, 1997) identified a leader's sense of efficacy, such as that of school principals, as a key factor in task approach and success in the preparation and successful implementation of school security requirements. Studies of measures of self-efficacy in principals that were reviewed were limited in the literature

(Tschannen-Moran & Gareis, 2004). The limited availability of studies is especially apparent in relation to school security even though a wealth of research has been conducted on the amount and level of crime and violence in the school setting (NCES, 2010; Office of Safe and Drug-free Schools, 2003, 2007; U.S. Department of Health, 1977). The problem addressed in this study was the limited information available regarding principals' perceptions and self-efficacy in relation to school security.

Purpose of the Study

The purposes of this study were to determine the differences, if any, that existed in principals' perceptions regarding school security, their perceived confidence to address critical crisis incidents on their campuses, their perceptions of the likelihood critical incidents would occur, their perceptions of interaction with law enforcement, the critical incidents they fear the most, and their perceptions of factors impacting the incidents they fear the most. Identifying differences in principals' perceptions and self-efficacy regarding school security may provide focus for current school leaders and further study related to leadership and crisis management.

Significance of the Study

A review of literature on school violence since the 1970s revealed:

> . . . 'school order and safety' signals the coalescence of multiple lines of inquiry that delineate a coherent sphere of research; and that sphere can be integral to other major domains of education research. School safety is relevant to studies of the achievement gap, teacher attrition, classroom management, student engagement and motivation, dropout prevention, community poverty, cultural

> disenfranchisement, and many other topics in education research. (Cornell & Mayer, 2010, p. 8)

Individuals at a school have been identified as resources in the address of crisis should it occur in a school setting. These individuals have extensive knowledge of the facility, faculty, staff, student body, and any environmental factors that could impact a crisis event (Kline & Schonfeld, 1995: Klingman & Ben-Eli, 1981; USDOE, 2007; Weinberg, 1989;). Principals, according to Addington (2009), are influenced by a wide variety of outside groups such as the media, governmental agencies, law enforcement, and community factors that are in a constant state of change. Bandura had expressed a similar thought in 1997: "To understand people's appraisals of external threats and their affective reactions to them, it is necessary to analyze their judgments of their coping capabilities. Efficacy beliefs determine, in large part, the subjective perilousness of environmental events" (p. 140). As the leader of school-based efforts to respond to crisis events, an examination of the perceptions of principals was essential.

This study was conceived to provide insight into principals' perceptions in relation to school security and their beliefs regarding their ability and preparation to address crises in the school setting and related factors. It was also believed that findings related to this study would be useful in providing additional foci in the preparation of future school leaders as well as in the implementation of crisis management strategies.

Definitions

For the purposes of this study, the following definitions have been applied throughout the study:

Law enforcement. Individuals and agencies responsible for enforcing laws and maintaining public order and public safety. Law enforcement includes the prevention, detection, and investigation of crime and the apprehension and detention of individuals suspected of law violation (Law Enforcement, 2012).

Principal demographics. Demographic information gathered for analysis in this study including: gender, length of tenure as a principal, and school level served.

School characteristics. For the purposes of this study, defined by the researcher as characteristics unique to each school setting used for analysis including: size of school population, percentage of students qualifying for free or reduced lunch, presence of law enforcement on campus, and presence of a crisis management or security plan.

Normal school day. For the purposes of this study defined by the researcher as the time supervision officially begins for students at the beginning of school including bus arrival, breakfast, and entry and waiting areas until the students are officially considered out-of-school including dismissal, bus exiting traffic, car pick-up traffic; and walking and bike rider traffic have exited campus. This does not include after-school activities, clubs, detentions, field trips, or organized competitive activities occurring beyond normal dismissal times.

Crisis. "an urgent situation in which all group members face a common threat" (Hamblin, 1958, p. 322).

Organizational crisis. "a low-probability, high impact event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means

of resolution, as well as by a belief that decisions must be made swiftly" (Pearson & Clair, 1998, p. 60).

Social Cognitive Theory (SCT). "a multifaceted causal structure that addresses both the development of competencies and the regulation of action" (Bandura, 1997, p. 14).

Self-efficacy. "Peoples' judgments of their capabilities to organize and execute courses of action required to attain designated types of performance" (Bandura, 1986, p. 391).

Conceptual Framework

Leaders' (principals') actions are impacted by self-efficacy. ". . . Efficacious individuals are motivated, persistent, goal-directed, resilient, and clear thinkers under pressure" (McCormick, Tanguma, & Lopez-Forment, 2002, p. 36).

Glanz and Schwartz (2008) reported that people, environment, and behavior are in a constant state of interaction. As a tenet of social cognitive theory (SCT), the interaction of these factors produces varied results. Bandura (1977) introduced the conceptual connection of self-efficacy with SCT in which results manifest themselves based on an individual's belief that results can be created. Bandura's (1986) expansion on his original theory introduced the concept of reciprocal determinism in which performance can be altered by belief in one's ability to accomplish a task and actual success completing the task (Pajares, 2002). Triadic reciprocity, as subsequently discussed by Bandura (1986, 1997), was represented as the interaction between behavior, personal factors, and

environmental factors. Bandura (1997) asserted that cognitive functions, self-regulation, and reflection impact an individuals' ability to change behavior, environmental factors, and personal factors based on the ongoing reciprocal influences of behavior, environmental factors, and personal factors.

Those tasked with managing crisis situations that may involve students in schools have been forced to deal with the potential of highly undesirable outcomes on a daily basis. School safety has arguably become the primary job of all school staff from the principal to the part time custodian but primarily remains the responsibility of the school principal (FEMA, 2011). It was also noted by Stephens (2003) that the individual most responsible for the effort to provide a safe academic environment and workplace was the school principal.

In the context of social cognitive theory, confidence and motivation to effectively meet task related demands has been identified as a component of principal self-efficacy (Bandura, 1997). Pajares (2002) succinctly summarized Bandura's theory as follows:

> . . . [It] posits that factors such as economic conditions, socioeconomic status, and educational and familial structures do affect human behavior directly. . . they affect it to the degree that they influence people's aspirations, self-efficacy beliefs, personal standards, emotional states, and other self-regulatory influences. (Pajares, 2002, para. 7)

McCollum and Kajs (2007) commented further on the importance of a sense of efficacy: "Without a sense of efficacy, school administrators will not pursue challenging goals and will not attempt to surpass obstacles that get in the way of such goals" (p. 32). This sense of efficacy manifests itself as the belief that an individual has to effectively work through

the actions necessary to accomplish goals or deal with situational challenges (Bandura, 1986, 1997). Although studies have been conducted to measure efficacy in educational settings, many have focused on teachers and few have focused on principals (Tschannen-Moran & Hoy, 2001; Tschannen-Moran & Gareis, 2004).

The principal's leadership position in the school environment demands focus on multiple targets of high importance including school security. Ciminillo (1980) discussed the pressures associated with the principal's role and maintaining security on a school campus. He concluded that:

> The principal must be part sociologist, part security technologist, part human relations expert, and part curriculum innovator. At the same time, the rapid development of crime as a school problem has put many principals into a state of uncertainty regarding the priority of measures to be taken to safeguard the educational process. (Ciminillo, 1980, p. 89)

Certainty and uncertainty fall within the construct of self-efficacy as determining factors in ultimate task success. Thus, a closer examination of differences in principals' perceptions in relation to school security and ". . . state of uncertainty regarding the priority of measures to be taken to safeguard the educational process" (Ciminillo, 1980, p. 89) were the purposes of this study.

Research Questions

Following are the research questions that were used to guide this study:

1. To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a

normal school day overall and based upon principal demographics and school characteristics?

2. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
3. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their preparation to manage critical crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
4. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
5. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
6. To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course

of a normal school day based upon principal demographics and school characteristics?

Delimitations

This study was limited by the following factors:

1. This study examined school principals in the central region of the state of Florida. Generalization of results may not be possible with other regions in Florida or in other states.
2. In an effort to reduce skewed results based on extraordinarily large or small school district size, neither the largest nor smallest school districts in the state were included. The selection of school districts of varied sizes was purposeful in order to ensure a representative cross section of school district sizes in the state of Florida.
3. Charter schools, private schools, virtual schools, home schools, and other forms of schools that were not publicly funded K12 schools were not included in this study.
4. A normal academic school day for the purposes of this study included the part of the school day when academic classes were in session. After-school or extra-curricular activities such as sporting events and community activities were not included.
5. No school principals were eliminated from the study based upon school Title 1 status, free and reduced lunch rate, or percentage of minority students enrolled.

6. The number of survey items used for analysis varied for individual research questions. Several survey questions were comprised of multiple responses. These multiple response questions covered readiness and likelihood of the various types of school-related crisis events included in the survey.

Methodology

Details of the methodology used in this research are outlined in the following sections. Detailed information regarding these methods follow in Chapter 3.

Population and Sample

The population identified for this study was comprised of 1,057 principals from 637 public elementary, 198 middle, and 222 high schools in 15 Central Florida school districts. Principals of alternative schools, charter schools, virtual schools, and private schools were excluded from the study.

School districts were chosen for their (a) location within a short distance of Florida's I-4 corridor which runs from Daytona Beach on the east Central Florida coast to St. Petersburg on the west Central Florida coast, and (b) variability in size. Five of the 15 school districts were considered to be large due to the existence of more than 80 principals (student membership > 70,000). Five school districts were categorized as medium due to their employing between 35 and 79 principals (student membership < 70,000 but greater than 35,000), and five school districts were considered small due to the employment of 34 or fewer principals (student membership < 35,000). No formal

definition of small, medium, and large school districts exists in Florida statutes. The Florida Department of Education's Office of Education and Accountability Services reported school district sizes were typically generalized based on student membership in relation to the membership size of other school districts. In 2001, the Florida Department of Education, published guidelines for school size which identified school district sizes as follows: small school districts were school districts with membership less than 25,000; medium school districts had membership less than 50,000; and large school districts were school districts with membership greater than 50,000. No methodology was identified in the determination of these categorical divisions. The divisions used in this study were similar to those identified in the guide.

Principals' perceptions or self-reports were the focus of this study. School district factors were not considered as a part of the comparison beyond the number of principals employed in the school districts surveyed. Individual schools led by principals in school districts were examined in the context of specific principal demographics including school characteristics for comparison of principals' perceptions regarding school security and self-efficacy.

Instrumentation

For the purposes of this study, the researcher developed a web-based survey, the *Principal Safety and Security Perception Survey* (PSSPS) which is shown in Appendix A. Benbenishty, Astor, and Estrada (2008) identified clear guidelines for utilizing surveys to gather data for use in the establishment of school based interventions. Key components

were (a) anonymity, (b) clear administration procedures, and (c) the use of internet-based surveys.

The instrument format was developed after examination of the *Oregon Safe Schools Survey* utilized by Sprague, Colvin, and Irvin (1995), and the National Center for School Statistics [NCES] (2008) *School Survey on Crime and Safety Principal Questionnaire*.

In 2000, Sprague, Smith, and Stieber (2002) conducted a safe school survey of all principals in the state of Oregon using Sprague et al.'s 1995 instrument. The survey was conducted electronically and quantified the existence of particular violent crime elements in schools and protective elements that existed in the same schools. The survey also included five open ended questions that related to school-based safety needs. The open ended questions were concerned with the identification of the following:

1. what is the most pressing safety need in your school,
2. what school safety activities does your school do best,
3. what topics are most important for training and staff development,
4. what are the biggest barriers to improved school safety measures, and
5. what other factors not included in this survey do you believe affect school safety (Sprague et al., 2002, p. 58)?

The single open ended question utilized in the survey for the present study was fashioned after examination of those reported by Sprague et al. (1995).

A list of crisis events was developed in part utilizing the crisis list in the *Principal's Questionnaire of the School Survey on Crime and Safety* distributed in 2008 by the NCES. This survey was used to gather data from principals regarding specific crisis events in terms of school practices and programs, parent and community

involvement at school, school security, staff training, limitations on crime and prevention, frequency of crime and violence, total number of incidents, disciplinary problems and actions, and school characteristics. Many of the questions included in the NCES survey were forced choice questions. These questions required a yes or no answer or a response represented by a number or a percentage. Questions in the PSSPS survey, though similar to some questions in the NCES survey, differed in that questions regarding beliefs and level of agreement were answered through the use of a broader and more distinct Likert-type scale. Bandura (2006) believed that measuring efficacy was more effectively accomplished utilizing a continuum of responses (such as a Likert-type scale) as opposed to forced choice questions. This was also discussed by Tschannen-Moran & Hoy, 2001.

Section two of the PSSPS survey elicited seven demographic and school characteristic identifiers from principals. Those identifiers were gender, years of service as a principal, grade configuration, student enrollment, size of the school population served, percentage of students on free and reduced lunch, presence of a law enforcement officer, and the presence of a school security plan. Subpopulations based on responses to each of these seven demographic identifiers were then examined in relation to (a) section three questions regarding current beliefs, (b) section four questions regarding current level of agreement, (c) section five questions regarding perception of likelihood, and (d) section six open-ended question and related factors.

Survey questions were designed to identify differences among groups in each of the three aspects of self-efficacy as reported in Bandura's (1997) triadic of reciprocity.

Personal attributes were identified through demographic information and school characteristics including gender, years of service as a principal, grade configuration, student enrollment, percentage of students on free and reduced lunch, presence of a law enforcement officer, and the presence of a school security plan. Environmental factors included perceptions of the likelihood of specific events, perceptions of funding expended on school security, perceptions of interaction with law enforcement, perceptions of the safeness of their community setting, and factors influencing responses to the event principals most feared. Behavioral factors included perceived readiness to lead, perceived readiness to address specific events, and the critical crisis event individuals feared the most. This study was not conducted to examine the impact of varying levels of influence in each of the areas of reciprocity as identified by Bandura (1986).

Table 1 provides the linkage between the research questions associated with this study and the survey items.

Table 1

Relationship Between Research Questions and Survey Items

Research Questions	Survey Items
1. To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a normal academic school day overall and based upon principal demographics and school characteristics?	8, 9
2. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	20
3. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their training to manage critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	10, 11, 15
4. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	19
5. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	12, 13, 14, 16, 17, 18
6. To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course of a normal academic school day based upon principal demographics and school characteristics?	21, 22, 23

Data Collection and Analysis

Data collection was accomplished through the use of a web-based survey, Principal Safety and Security Perception Survey (Appendix A) designed by the researcher and housed on Surveymonkey (2012), an online survey collection site. Following Institutional Review Board (IRB) approval to conduct research (Appendix B), and approval from school districts to conduct research within each school district (Appendix C), identified principals were contacted via email. Appendix D contains copies of initial and interval contacts with potential participants in the study. The initial email contact on January 11, 2012 informed potential participants of the focus of the study and encouraged participation by establishing a peer connection with the researcher. This email also explained the process associated with the completion of the survey and provided assurances of confidentiality regarding the responses to the survey once it was completed. In addition to thanking the principals in advance for their participation, the email also explained that an email would follow providing a link to the survey and that the survey would take only a short time to complete.

Within one week of the initial email, potential participants received an email with a short reminder of the purpose of the study and a web-link to the survey instrument housed on a web-based data collection service (Appendix D). This service was used to ensure confidentiality in collecting and quantifying the responses of survey participants for analysis.

Two weeks following the initial delivery of the web-link to survey participants, another email was delivered to those who had not completed the survey encouraging their participation and thanking them for their participation (Appendix D). This process continued every two weeks for a total of six weeks or three follow-up contacts.

Data collected from the survey instrument were analyzed using Statistical Package for the Social Sciences (SPSS) to conduct an examination of descriptive statistics and representative percentages. All responses were cross-tabulated to determine results that potentially warranted further investigation. Further analysis using SPSS included an examination of differences in group responses to questions through the use of the Kruskal-Wallace test of variance by (a) gender, (b) years as a principal, (c) grade configuration, (d) student enrollment, (e) percentage of free and reduced lunch, (f) the presence of law enforcement on campus, and (g) the existence of a school security plan. Statistically significant $\rho<.05$ statistics as identified by the Kruskal-Wallace test were further examined post hoc for significance through the use of the Mann-Whitney test. Spearman correlations were also performed to determine dependent relationships between group ranked responses. The open-ended question data were examined for each of the demographic variables and school characteristics through trends in the context of commonly associated synonyms and related phrases in the group responses. The Kruskal-Wallace test was also used to examine differences in group responses to perceived safety of the school setting served and influences impacting responses to the open ended question. Post hoc Mann-Whitney tests and Spearman correlations were also conducted on these data.

Assumptions

The following assumptions were made by the researcher in completing this study: (a) principals included in the study met State of Florida criteria for leading a public school, including at least Masters Level Principal Certification, completion of a preparatory principal internship, and teaching for at least 3 years; (b) principals included in the study were familiar with vocabulary included in the study associated with school level security preparation, law enforcement, and crisis events; (c) the questions included in the survey accurately measured principal belief and level of agreement; and (d) analysis of the data associated with this study represented an accurate measure of actual principal perceptions regarding school security and self-efficacy.

Organization of the Study

This study of principals' perceptions and self-efficacy in relation to school security includes five chapters. The content of Chapter 1 includes: (a) the background of the study, (b) statement of the problem, (c) purpose of the study, (d) significance of the study, (e) conceptual framework, (f) research question, (g) definitions of terms, delimitations and limitations, (h) methods, and (i) assumptions.

Chapter 2 provides a review of relevant literature including a historical overview of principal leadership in school security, the types and frequency of crisis events in schools, law enforcement collaboration in schools, governance of school security, self-efficacy, principal self-efficacy, and studies of principals' perceptions relating to school

security. Chapter 3 describes in detail the methodology utilized in the completion of this study including the population, instrumentation, and data collection and analysis.

Chapter 4 of the study reports the findings of the Chapter 3 analysis including descriptive statistics, testing the research questions, and additional analysis. Chapter 5 of the study contains a summary of the study, discussion of the findings, implications for policy and practice, and recommendations for further research.

CHAPTER 2
REVIEW OF THE LITERATURE AND RELATED RESEARCH

Introduction

Chapter 2 has been written to provide, in part, a rationale for the examination of differences in principals' perceptions and self-efficacy in relation to school security. The discussion presented in this chapter focuses on principal leadership, and contributing influences potentially impacting principal beliefs, perceptions, and decision making.

The literature reviewed included a historical overview of principal leadership in school security, the types and frequency of crisis events in schools, law enforcement collaboration in schools, governance of school security, self-efficacy, principal self-efficacy, and studies of principals' perceptions relating to school security. This review was conducted by searching existing literature to examine principal leadership in school security and safety, types and frequency of school crisis incidents, federal statutes and regulations, U. S. Department of Education emergency planning guidelines, Florida state statutes and rules, social cognitive theory, self-efficacy, principal self-efficacy, and studies of principal perceptions related to school security. The literature examined was largely obtained through online searches of ERIC, EBSCO Host, World Cat, Theses and Abstracts, and resources available through the University of Central Florida Library.

Historical Overview of Principal Leadership in School Security

Early Principal Ties to School Security

Pierce, in his 1935 book, provided an expansive look at the progression of the principal role from its inception through 1935 by examining numerous school board documents and related literature of the time. The job expectation of keeping students safe has been a part of principals' responsibilities since the role of the principal emerged in the early 19th century. Once multiple teachers were established at school sites, a lead teacher or principal teacher was determined to be needed. As cited by Pierce (1935), the Cincinnati Board of Education defined principal teacher duties in 1839 to include safeguarding the school house and its furnishings in addition to instruction related expectations. By the mid-1800's the duties of principals were becoming more focused. Pierce (1935) noted this progression in the comments of a Cleveland, Ohio school board president in 1868 who called for principals' duties to include ". . . establishing and enforcing of rules for the preservation of good order about the school" (p. 31).

One of the earliest documented examples of principals' efforts to secure campuses was in the city of Chicago in 1913 where principals gained the support of local police to help provide a safe environment for students. Similar cooperation was obtained by principals from police in New York to monitor local parks where students played (Pierce, 1935). Pierce also reported that principals in New York were authorized in 1911 to conduct surveys of the community to determine the safety of the locality and its potential impact on school activities. Greater clarity came in 1918 in the publication of the

Cardinal Principles of Secondary Education which established the developing principal role as having ultimate responsibility for all functions of the school (Commission on the Reorganization of Secondary Education, 1918).

A notable increase in the visibility of principal leadership in security matters began to take place in the 1920s in response to increasing populations in cities. Principal leadership was credited with responsibility for a drop in automobile related fatalities of students after school safety patrols were taken over by principals in 1924 (Pierce, 1935). A detailed account of principal engagement with security appeared when the Twenty-ninth Annual Report of the City Superintendent showed that in 1927, principals in New York were

> instructed to keep in touch with the police station and with patrolmen on duty with respect to the safety of children in playgrounds newly opened. It was suggested that the principals develop such auxiliary support as the school and neighborhood might provide, utilizing the services of monitors with special insignia, of socially-minded people of the neighborhood, and of volunteers recommended by parents' associations. Principals were also expected to furnish the patrolmen of their districts with lists of suggestions designed to aid in the safeguard of children, from time to time. Principals were requested to call meetings of parents, at which they were to provide three speakers selected from aldermen, assembly men, local clergy, police department or civic associations, to address parents on the subject of safety (Pierce, 1935, p. 146).

Annual superintendent reports from Chicago in 1925 and 1926 (Pierce, 1935) detailed principal participation in the creation of regulations related to fire drills. This included a model fire drill and the distribution of a model fire drill film to schools. Principals were also expected to secure facilities to meet all codes related to potential fire threats on school grounds.

The Evolution of Principal Leadership in Relation to Security

Little has changed in the principal role from the perspective of being ultimately responsible for all functions of the school as defined in the *Cardinal Principals of Secondary Education* (Commission, 1918). Stephens (2003) identified the individual most responsible for the effort to provide a safe academic environment and workplace as the school principal. Though the responsibility of the principal in relation to security had not substantially changed at the time of the present study, the nature of threats and the tools utilized by principals to address them have. Schools were environments unique to the communities where they operated and present crisis-related complications that were representative of the culture, environment, and resources that were available to address them (Office of Safe and Drug-free Schools, 2007).

School security leadership expectations reflected changes in the perceived threats in the communities where schools were established and functioned. Principals' security practices in the late 1970s and early 1980s were profoundly impacted by the 1977 Department of Health, Education, and Welfare *Safe Schools Study* which quantified the "frequency and seriousness" (p. 1) of crisis events in the school setting. Subsequent reports of crime and violence in schools published by the National Center for Education Statistics (NCES) such as *Violence and Discipline Problems in U.S. Public Schools 1996-97* published in 1998, *Students' Reports of School Crime: 1989 and 1995* (NCES, 1998), and *Indicators of School Crime and Safety* (NCES, 2002, 2004, 2006, 2008, 2010) provided an ongoing look at the statistics associated with security and specific crisis incidents in schools around the United States. These reports relied on self-reports from

stakeholders involved with schools including principals, students, and teachers. Ciminillo (1980) discussed the pressures associated with the principal role and maintaining security on a school campus. The author concluded that

> The principal must be part sociologist, part security technologist, part human relations expert, and part curriculum innovator. At the same time, the rapid development of crime as a school problem has put many principals into a state of uncertainty regarding the priority of measures to be taken to safeguard the educational process. (p. 89)

School security leadership efforts from principals also reflected changes in general public perception of school needs in response to crisis incidents that were widely publicized by media sources. Modern expectations of principal leadership regarding school security have largely been impacted by media coverage of crisis incidents such as the 1999 tragedy at Columbine High School in Littleton, Colorado. Although this event was not the only incident of its type during that time frame, mass coverage of the event including cameras live on the scene as it unfolded prompted quick and relentless demand from the public for safer and more secure school environments. The Columbine event was identified as the most widely publicized school crisis incident of the 20th century and resulted in more legislative action (35%) on school violence in a two-month period than any other time frame prior to the 106th Congress (Addington, 2009; Lawrence & Birkland, 2004). The impact of the Columbine tragedy on principals was noted in both public perceptions of schools and mandates regarding school security. Lawrence and Birkland (2009) reported that the pervasive national discussion regarding the Columbine event in 1999 was the precursor to many of the changes that had occurred in school security.

Evidence of change in public perceptions and principal practices were observed in a *USA Today* poll as to parental reactions to the Columbine tragedy (Addington, 2009). It indicated that 57% of responding parents had made inquiries as to the level of security at the school their child attended post Columbine. More than half of principals surveyed post Columbine reported that they sought parental participation in improving school security (U.S. Department of Education, 2007). In a Pew research survey report a year after Columbine, 37% of parents reported improvements in school security at the schools their children attended, marking a noticeable change in principal security practice (Pew Research Center, 2000). This was reinforced by the results of the 2000 *USA Today* poll in which 70% of parents recognized changes in school security efforts (Addington, 2009).

Post Columbine School Security

The principal's role as security leader post Columbine has drawn much scrutiny and oversight. Thompkins (2000) reported that during the 1990s, a period where national crime statistics were declining overall, school violence levels rose. Media coverage of high profile cases understandably raised the interest and concern of stakeholders in relation to violence in schools. However, NCES (1998) reported that violent crime was not present in 90% of American schools and that 43% of schools reported no crime at all. Yet public opinion dominated the discussion ". . . perceptions of school violence have been skewed not just by media focus on a few extreme cases, but by researchers who used, and continue to rely on, faulty surveys and polls that exaggerate the danger of violence in schools" (Cornell, 2006, p. 3). Mayer and Furlong (2010) reported that

although events such as school homicides may drive public perception of schools as being unsafe, the actual numbers were such that the average of 21 homicides per year would be the equivalent of one homicide per school every 6,000 years. Principals found themselves in a position where isolated extreme crisis incidents were driving policy decisions and where crisis events in general were either underreported or were not in perspective with the level of public response.

Additional high profile crisis incidents have had similar impact on principals and school security since Columbine. There was a surge in focus on security in educational settings following the terrorist events of September 11, 2001 when schools were identified as potential soft targets for terrorist activities. The *Washington Post* (Ervin, 2006) reported that computer disks were found in Iraq in October of 2004 containing school security and evacuation plan information from six large school districts around the United States. Although the Virginia Tech shootings of 2007 did not occur on a public school campus, the public response bore similar reactions from the general public in relation to school security scrutiny (Davies, 2008).

Principals, in response to mandates from both the public and governing bodies, implemented a wide variety of school security measures in response to high profile crisis incidents. Some of those changes include those that follow.

(a) Heightened physical school security through measures such as access control, security lighting, metal detectors, security cameras, ID badges, dress codes, clear backpack policies, school site-based law enforcement, and gated schools.
(b) Increased communication through measures such as clarifying communication between stakeholder groups including administrators, teachers, students, parents, and community and law enforcement agencies.
(c) Zero tolerance policies in regard to drugs, weapons, and bullying.

(d) Increased awareness by raising awareness of warning signs, increased supervision and watching for unusual behavior, noticing students in isolation or outcasts, and attempts to respond to student emotional duress.
(e) Limiting student privileges such as transitioning to mandatory school uniforms, strict dress codes, and elimination of gang insignia and colors.
(f) Instituting emergency crisis plans and training including the introduction of lockdown drills for active shooters, tactics for managing violent behavior, school procedures involving covering windows and locking doors, and bomb related evacuation plans.
(g) Implementing bully prevention programs through providing support for victims, and intervention with bullies.
(h) Increasing mental health counseling services through identification of intent to harm self or others, and character education instruction.
(i) Allowing cell phones to be used on campus. (Sorrentino, 2005; "Nine ways school," 2011; U.S. Department of Education, 2007)

Additionally, research provided by sources such as the U.S. Department of Education, Federal Bureau of Investigation, and the United States Secret Service provided school principals with guidance in the assessment of potential threats in order to preemptively act and prevent crisis incidents (Brunner, Emmendorfer, & Lewis, 2009).

Years of change in the role could potentially leave principals in schools with a modified sense of their ability to complete tasks required of them.

> Schools nationwide are grappling with serious problems ranging from random outbreaks of violence and crumbling facilities to staff shortfalls and chronically low academic expectations for students, but many people believe that a scarcity of capable education leaders ranks among the most severe of the problems (Institute for Educational Leadership, 2000 p. 1).

Goodwin, Cunningham and Eagle (2005) in their historical examination of the principal role suggested that the layering of responsibilities on the principal was not the product of evolution, but of an "accumulation of expectations that have increased the complexity of the position until it has reached a bifurcation point where change is inevitable" (pp. 1-2).

Types and Frequency of Crisis Incidents in Schools

First hand experiences and review of specific events have yielded a core of common areas that most experts agree are important to address in the process of security preparation (Office of Safe and Drug-free Schools, 2007). Following is an examination of relevant literature regarding crisis incidents on school campuses. The frequency and type provide the potential for impacting principals' decision making, perceptions, and efficacy beliefs.

School Shootings

Violent crime in school settings provided the context of principal focus for the two decades following the Columbine High School shootings. The Final Report and Findings of the Safe School Initiative [FFRSFI] (Vossekuil, Fein, Reddy, Borum, & Modzeleski, 2002) conducted by the United States Secret Service in conjunction with the USDOE revealed many aspects germane to the study of school-related violence. Targeted violence was defined as violent acts ". . . in school settings, school shootings and other school-based attacks where the school was deliberately selected as the location for the attack and was not simply a random site of opportunity" (p. 4). In the study, it was determined the earliest attack meeting the targeted violence criteria occurred in 1974 where a student armed with guns and personally made bombs pulled a fire alarm and shot at first responders who arrived on the scene.

Characteristics of targeted violence in school environmental settings as a result of the examination of related incidents were identified in the FFRSFI (Vossekuil et al., 2002) as follows:

> In almost three-quarters of the incidents, the attacker killed one or more students, faculty or others at the school (73%, n=27). In the remaining incidents, the attackers used a weapon to injure at least one person at school (24%, n=9). In one incident, a student killed his family and then held his class hostage with a weapon.
>
> More than one-half of the attacks occurred during the school day (59%, n=22), with fewer occurring before school (22%, n=8) or after school (16%, n=6). Almost all of the attackers were current students at the school where they carried out their attacks (95%, n=39). Only two attackers were former students of the school where they carried out their attacks at the time of those attacks (5%, n=2).
>
> All of the incidents of targeted school violence examined in the Safe School Initiative were committed by boys or young men (100%, n=41). In most of the incidents, the attackers carried out the attack alone (81%, n=30). In four of the incidents, the attacker engaged in the attack on his own but had assistance in planning the attack (11%, n=4). In three incidents, two or more attackers carried out the attack together (8%, n=3) (p. 15).

A variety of factors have been associated with school shootings. Fascination with weapons, access to guns, and leakage were key components identified as a result of the study of recent school shootings. Fascination with weapons manifested itself in the form of gathering or hoarding weapons. Video games associated with the use of guns or weapons were also identified as examples of weapon fascination. Access to guns was a clear factor for most school shooting incidents. Laws such as the Brady Handgun Violence Prevention Act of 1993, the National Instant Criminal Background Check System (NICS), and waiting periods before the purchase of a handgun had an impact on access to guns. However, it was evident that determined shooters, whether adults or students, could get access to guns if they wanted. Leakage referred to the sharing of

information with others. Students and adults tended to share their plans with individuals prior to the actual crisis incident (Wike & Frasier, 2009).

Evidence presented by Wike and Frasier (2009) regarding the characteristics of a school shooter suggested that the typical shooter: (a) was fascinated with weapons, (b) had suicidal thoughts, anger, or was depressed, (c) had poor relationship skills or was not accepted by peers, and (d) was bullied or victimized socially. Shooters would often fantasize or attribute malicious intent to what were often innocuous actions or activities due to prolonged exposure to bullying and/or victimization by peers. Generally, this was found to lead to isolation (Verlinden, Hersen, & Thomas, 2000). Shooters appeared to lack coping and social problem-solving skills, often resulting in pent up anger or anxiety (O'Toole, 2000).

Table 2 provides a chronology of school shootings in the United States during the last quarter of the 20th century and the first decade of the 21st century. The chronology documents school shootings that resulted in injury and death in the United States from 1979 through 2008.

Table 2

K-12 Campus Shootings in the United States Resulting in Injuries and Fatalities: 1979-2008

Date	School/State	Deaths	Wounded
1/1979	Grover Cleveland Elementary School / CA	2	9
1/1983	Parkway South Junior High School / MO	1	2
1/1985	Goddard Junior High School / TX	1	2
1/1988	Hubbard Woods Elementary School / IL	1	5
9/1988	Oakland Elementary School / SC	2	7
1/1989	Cleveland Elementary School / CA	5	30
11/1995	Richland High School / TN	2	1
2/1996	Frontier Junior High / WA	3	0
2/1997	Bethel Regional High School / AK	1	2
10/1997	Pearl High School / MS	2	14
12/1997	Heath High School / KY	3	5
3/1998	Jonesboro School / AR	5	10
5/11998	Lincoln County High School / TN	1	0
5/1998	Thurston High School / OR	2	25
4/1999	Columbine High School / CO	14	23
11/1999	Deming Middle School / NM	1	0
2/2000	Buell Elementary School / MI	1	0
3/2000	Beach High School / GA	2	0
5/2000	Lake Worth Middle School / FL	1	0
3/2001	Santana High School / CA	2	13
3/2001	Lew Wallace High School / IN	1	0
5/2001	Ennis High School / TX	2	0
1/2002	Appalachian School of Law / VA	3	3
4/2003	Red Lion Area Junior High School / PA	1	0
9/2003	Rocori High School / Cold MN	2	0
3/2005	Red Lake High School / MN	7	7
11/2005	Campbell County High School / TN	1	2
8/2006	Essex Elementary School / VT	1	1
9/2006	Shepherd University / WV	2	0
9/2006	Platte Canyon High School / CO	1	6
9/2006	Weston Schools / WI	1	0
10/2006	Amish schoolhouse / PA	5	6
1/2007	Henry Foss High School / WA	1	0
10/2007	Cleveland High School / OH	1	2
2/2008	E. O. Green Junior High School / CA	1	0
11/2008	Dillard High School / FL	1	0

Note. Adapted from G. Massengill et al. (2007) and *US News and World Reports* (2008).

Non-Fatal Victimization

Although fatalities as a result of school shootings and other violent offenses have not been prevalent, victimization of students at school has been much more likely to occur. Rape, aggravated assault, sexual assault, robbery, simple assault, and theft was actually reported as higher on school campuses in 2007 for the first time since 1992 (NCES, 2009). With the exception of theft, students were more likely to be reportedly victimized violently at school, 51 times per 1,000 reports, as opposed to 41 times per 1,000 reports away from school.

Teachers in secondary schools reported being victimized through threats of injury from students at higher rates than elementary teacher at 8% and 7% respectively. However, there were more reports of being actually physically attacked by students from elementary teachers (6%) than by secondary teachers (2%) (NCES, 2009).

Between 7% and 9% of students reported having been victimized in a violent offense involving a weapon between 1993 and 2007 as reported in the 2009 NCES survey. Of all students surveyed, 6% reported carrying a weapon during the school day in 2007, with 9% of male students and 3% of females reporting that they carried a weapon.

Rape as a crime has been underreported. The Rape, Abuse & Incest National Network (RAINN) reported in 2009 that 68% of sexual assaults were not reported to police. The Network indicated that victims were assaulted almost two thirds of the time by someone they knew and that 38% were committed by a friend or acquaintance. Of the victims, 44% were reported to be school age or under the age of 18 (RAINN, 2009). The

Centers for Disease Control (CDC) reported in 2011 that survey data showed 11.8% of girls and 4.5% of boys from grades 9 through 12 were forced to have sexual intercourse at some time in their lives (Sexual Violence, 2012).

Fights, overall, involved primarily male students, with 16% reporting having been part of a physical altercation. A lesser percentage of 9% of female students were identified as participating in fights. The reporting of fight involvement decreased with students in higher grades with ninth graders reporting the highest percentage at 16% and 12th graders reporting the least at 9%.

Dinkes, Kemp, and Baum (2009) reported that in 2005 bullying behavior was noted as occurring for 42.9% of students in Grade 6 settings and 23.5% of students in Grade 12 settings. It was also reported that bullying behavior was similar in both rural and suburban school settings, occurring for about 29% of students.

Findings from the NCES survey (2011) regarding victimization included:

- During the 2009-10 school year, the rate of violent incidents per 1000 students was higher in middle schools (40 incidents) than in primary or high schools (21 incidents each).
- Some 46 percent of schools reported at least one student threat of physical attack without a weapon, compared to 8 percent of schools reported such a threat with a weapon.
- Some 10 percent of city schools reported at least one gang-related crime, a higher percentage than that reported by suburban (5 percent), town (4 percent), or rural schools (2 percent).
- A higher percentage of middle schools reported that student bullying occurred at school daily or at least once a week (39 percent) than did high schools or primary schools (20 percent each).
- For students involved in the use or possession of a weapon other than a firearm or explosive device at school, 40 percent of students received out-of-school suspensions lasting 5 or more days, 36 percent of students received other disciplinary actions (e.g., suspensions for less than 5 days, detention, etc.), 19 percent of students received transfers to specialized schools, and 6

> percent of students received removals with no continuing services for at least the remainder of the school year (Neiman, 2011 pp. 3-4)

School survey responses percentages from the NCES (2011) report revealed that major barriers to crime prevention efforts included inadequate funds (25%), alternative placement programs (21%), and federal special education policies (16%). It was reported that although only 41% of schools had written plans for when a change in the national threat level is moved to red, 94% or more had plans in place for natural disasters and bomb related incidents.

Bomb Threats

According to a Center for Problem-oriented Policing report *Bomb Threats in Schools* (Newnan, 2005), statistics on the number of actual bomb threats in school settings were limited and unreliable because of inconsistencies in reporting. The statistics relied solely on the reports that had been received by law enforcement. Threats had not been consistently reported but represented a major disturbance of the school environment. During the 1997 school year, one Maryland school district reported 150 bomb threats and arrests totaling 55 related to the threats (Newman, 2005).

Between the years of 1990 and 2002, 1,055 bombs were reported by the Bureau of Alcohol, Tobacco, and Firearms (ATF) as having been placed in school settings. Of the 1,055 incidents, only 14 involved a threat made prior to the actual discovery of the explosive device. Bomb threats typically were delivered by telephone, although they were noted as also being delivered by email, letter, website, face to face, and by hand

gesture. Typical response to a bomb threat was reported as the same response as that for an actual bomb. Bomb threats caused major disruptions in school activities and were committed for many reasons including humor, anger, and manipulation as well hate and ideology (Newman, 2005).

The specificity of the bomb threat was prominent in assessing the authenticity of the threat. Bomb threats have been categorized based upon criteria that responders use when developing responses to bomb threats. A generalized summary of the types of threats was offered by Newman (2005) as (a) conditional threats, (b) instrumental threats, (c) getting even threats, and (d) hate (ideological, religious, ethnic) threats.

Newnan (2005) addressed the tentative nature of responses to threats of explosives on school campuses in the following way:

> How seriously should a threat be taken? The seriousness of a bomb threat is self-evident because of the potential for widespread destruction that can be wrought by a bomb, compared to other weapons that are usually aimed at particular targets. However, if, as we have noted already, 90 percent of bomb threats are hoaxes (either there is no bomb at all or the "bomb" is a fake), how seriously should the threat be taken? Since the extent of disruption caused by bomb threats is considerable whether the bomb is real or not, all such threats are often responded to on the assumption that a real bomb does exist. In fact, the law throughout the United States tends to treat false bomb threats almost as severely as real bomb threats and makes little exception for juveniles. Yet in the hurly-burly of the school setting, many threats are made in the normal course of the day among students and between teachers and students, some of which allude to explosives. The majority of such threats are never reported to the police. For example, a student states to his gym teacher, "All jocks deserve to be blown up." The seriousness with which to take this threat depends on how it is delivered. If the student was laughing or joking, the teacher may pay no mind to it. If made by a student with a history of such pronouncements, the threat may be taken more seriously. It is therefore important for schools to develop a response plan that includes criteria for making assessments of seriousness and for adopting responses commensurate with that assessment (p. 11).

School Fires

According to the United States Fire Administration/National Fire Data Center report on School Fires (2004, 2007), most school fires begin in school lavatories. Findings also revealed that 32% of school fires were suspicious and most likely set, 29% resulting from cooking incidents, and 9% resulting from heating incidents. The reports also revealed that in Kindergarten through Grade 12, most fires occurred at the beginning or end of the school year with a spike in elementary school fires during the month of July. It was also reported that fatalities from fires on school campuses were rare, and none were reported between the years of 2002 and 2005. School fire data were collected using the National Fire Incident Reporting System (NFIRS) (School Fires, 2004, 2007).

An annual average of 14,700 fires reportedly occurred on school campuses nation-wide. During the period examined in the 2007 report, property damage as a result of school fires totaled an estimated $85,000,000. Approximately 43% of fires on school campuses damaged the building structure; 36% occurred outside on the school campus; kitchen or cooking related fires accounted for 20% of fires; 6% involved an automobile fire; and approximately 28% were limited to fires in trash cans (School Fires, 2007).

Suspicious fires accounted for 47% of the fires that damaged structures in secondary schools. Fires of this nature represented the largest cause of structural fires in middle and high schools. In elementary schools suspicious fires were responsible for 25% of fires damaging school structures, second only to cooking-related fires at 27% (School Fires, 2007).

Chemical Spills

Chemical spills or the release of potentially harmful substances in or near the school setting represented ever present threats to school security. Unterberg, Melvold, Roos, and Scofield (1988) defined chemical spills as the exposure of chemicals created artificially that threaten the surrounding environment. The authors identified four basic types of spills: (a) liquids or solids that are released into water, (b) liquids spilled on ground, (c) solid materials released to air or on ground, and (d) gasses released to air (p. 5).

School environments are exposed to chemical threats on site, in the surrounding community, and by transportation sources according to the World Health Organization (2004). In 2006, the U.S. Environmental Protection Agency produced the *Chemical Management Resource Guide for School Administrators* and identified a list of five potentially hazardous chemical categories that may be present in or near the school environment. Table 3 lists these chemical categories.

Table 3

Possible Hazardous Chemical Categories on a School Campus

Chemical Type	Description and Examples
Flammables / Explosives	Chemicals that have the potential to catch fire rapidly and burn in the air. Liquids, gases, and solids (in the form of dusts) can be flammable and/or explosive. Examples include: paint thinner; laboratory solvents (acetone, alcohols, acetic acid, hexane); adhesives (some).
Corrosives	Chemicals that can burn, irritate, or destroy living tissue or corrode metal through direct chemical action. This category includes strong acids and bases (alkalines), as well as dehydrating agents and oxidants. Examples include: sulfuric, nitric, and hydrochloric acids; potassium, ammonium, and sodium hydroxides (bases); hydrogen peroxide or chlorine (oxidants); acetic acid.
Oxidizers / Reactives	Chemicals that react violently when combined with heat, light, water, or atmospheric oxygen, causing explosions or violent chemical reactions. Examples include: nitrates; chlorates; nitrites; peroxides; picric acid (crystallized); ethyl ether (crystallized); water reactive metals (e.g., sodium).
Toxics	Any substance that, even in small amounts, can injure living tissue when ingested, inhaled, or absorbed into the skin. Examples include: mercury; arsenic; lead; asbestos; cyanide.
Compressed Gases	Gases stored under high pressure such that cracks or damage to the tanks and valves used to control these gases could cause significant physical harm to those in the same room. Examples include: acetylene; helium; nitrogen.

Source: *Section II Hazardous Chemicals and Products in Schools*, p. 6, U. S. Environmental Protection Agency (2006).

In 2010, it was estimated that 74,000,000 students and staff members worked and learned in school environments around the country each year. These individuals were exposed to the potential of short and long term hazardous chemical events on a daily basis (Vossekuil et al., 2002). Statistics were limited for accidents related to chemical exposure in schools, although a search of the internet produced multiple reports of accidents in school labs across the country.

One report, *An Analysis of Laboratory Safety in Texas*, did quantify descriptive data related to school lab accidents in general in 2001(Fuller, Picucci, Collins, & Swann, 2001). A total of 115 responses from a sample of 475 potential respondents produced the following statistics in relation to approximately half of an academic school year. Of the respondents, 36% affirmed having a total of 460 minor lab accidents (requiring no medical attention), and 79% reported having fewer than five minor accidents. A total of 7% of respondents affirmed 10 or more minor accidents, and 85 major accidents (requiring medical attention) were reported by 13% of respondents with 75% of that group reporting only one major accident. Accidents in the study were classified into categories of heat burns, foreign materials in the eye, explosions, chemical burns, faulty equipment injury, electrical shock, and accidents requiring classroom evacuation.

Custody Related Abduction from School

In 2002, the U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention produced the *National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children* (NISMART) report in October of 2002 (Hammer,

Finkelhor, & Sedlak, 2002). Raw statistics regarding children abducted by family members were provided from a NISMART survey of adult caretakers and children in 1999. The survey population was comprised of 16,111 families. Phone interviews were conducted with an 80% rate of cooperation from households that met eligibility criteria. Of 37,787 potentially eligible children between the ages of 10 and 18, 60% or 5,015 eligible children also participated in an interview (Hammer et al., 2002).

It was estimated that 203,900 cases of family abductions took place during 1999. Of those abductions, 117,200 were listed as caretaker missing. Caretaker missing referred to situations where the child's location was unknown to the caretaker. Of the 117,200 caretaker missing cases, 56,500 were reported to authorities or child protection services. Of the children abducted, 44% were age five or younger, and 7% were ages 15 to age 17. It was noted that abductions were more likely to occur with children who were not living with both parents. A total of 53% of children were abducted by the biological father, and 23% were abducted by the biological mother. The other largest group committing the abduction was grandparents at a rate of 14% (Hammer et al., 2002).

The location of the child prior to the abduction was identified as a factor in that the majority of abductions occurred when the child was lawfully in the custody of the abductor at the time of the abduction. Children were abducted from their own homes or yards 36% of the time and in a friend or neighbor's yard 37% of the time. Abductions from school or daycare represented the least likely location (7%) of those reported of a child prior to the abduction (Hammer et al., 2002).

Gang Related Activity at School

The National Center for Education Statistics report *Indicators of School Crime and Safety: 2011* (2011) provided information related to gang activity and crime reported during the 2009-10 school year. Key findings related to gang activity included:

> Sixteen percent of public schools reported that gang activities had occurred during the 2009-10 school year, and 2 percent reported that cult or extremist activities had occurred during this period. The percentages of public schools that reported gang activity at all at their schools during the year decreased from 20 percent in 2007-08 to 16 percent in 2009-10 (Indicator 7) (p. V).

The report also indicated that gang activity was reported more frequently at city schools (28%) than at suburban schools (15%) or rural schools (9%).

Student reports of gang activity were slightly higher than those reported by the adults in the buildings. Information from students included:

> In 2009, about 20 percent of students ages 12–18 reported that gangs were present at their school during the school year. This was a decrease from the 23 percent of students who reported a gang presence in 2007. A higher percentage of students from urban schools (31 percent) reported a gang presence at their school in 2009 than students from suburban and rural schools (17 percent and 16 percent, respectively). While the percentage of students from suburban schools who reported a gang presence at their school was lower in 2009 than in 2007 (17 vs. 21 percent), the percentages of students from urban and rural schools who reported a gang presence were not measurably different between the same years.... In 2009, approximately 22 percent of students attending public schools reported that gangs were present at their school compared with 2 percent of students attending private schools (NCES, 2012 p. 36).

Student reports varied by race, ethnicity, and grade level. Gender showed no measurable differences; however, male reports in 2009 (25%) were higher than in 2007 (21%).

The Office of Juvenile Justice and Delinquency Prevention Comprehensive Gang Model report (Comprehensive Gang Model, 2009) provided the following guidelines for

data collection as schools address gang related issues. Guidelines included: (a) enrollment of the school, (b) racial composition of the school, (c) gender composition of the school, (d) number of students who receive free/reduced-price lunch, and (e) other critical variables as determined locally.

Suicide in School

The number of deaths by suicide on a school campus or sports or athletics area was less than 10 between 2003 and 2011 as reported by the National Violent Death Reporting System (Centers for Disease, 2011). However, the Centers for Disease Control and Prevention reported that:

> A nationwide survey of youth in grades 9-12 in public and private schools in the United States (U.S.) found that16% of students reported seriously considering suicide, 13% reported creating a plan, and 8% reporting trying to take their own life in the 12 months preceding the survey. Each year, approximately 157,000 youth between the ages of 10 and 24 receive medical care for self-inflicted injuries at Emergency Departments across the U.S. (Youth Suicide, 2011 para. 2).

In the youth ages 10-24 category, 81% of attempted suicide resulting in fatality were male versus 19% female. Native Alaskans or Native Americans were more likely to attempt suicide resulting in fatality, and Hispanic youth were more likely to report attempting suicide than white or black youth. Suicide in general was identified as the third leading cause of death in young people 10-24 years of age (Youth Suicide, 2011). In a conflicting report, the NCES *Indicators of School Crime and Safety 2010* reported 14 deaths from suicide on school campuses nationwide in the school year from July 1, 2008 to June 30, 2009 based on a survey and self-reports of school students, teachers, and

principals (NCES, 2010). Statistics were difficult to substantiate due to inconsistencies in reporting.

Law Enforcement Collaboration In Schools

The U. S. Department of Education's Safe and Drug-free Schools Program in cooperation with the U. S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention produced the *Fostering School-Law Enforcement Partnerships* report in 2002 (Atkinson, 2002). A school-law enforcement partnership was identified as a process as opposed to an event, and provided the potential for positive outcomes such as

(a) Schools, law enforcement agencies, and community groups are better able to work together in developing innovative, systemwide, long-term approaches to reducing and preventing different kinds of crime and disorder in and around schools.
(b) Schools and law enforcement agencies can have measurable impacts on targeted crime and disorder.
(c) Duplication of efforts is reduced.
(d) Students, school personnel, parents, and community members have less fear of crime and violence.
(e) Schools and communities show improved quality of life. (p. 1)

Community policing was introduced in the 1980s as an alternative to traditional policing in communities by the placement of a law enforcement officer or school resource officer (SRO) in the school community. Table 4 displays the differences between traditional and community policing efforts.

Table 4

Traditional Policing Compared to Community Policing in Schools

Traditional Policing in Schools	Community Policing in Schools
Reactive response to 911 calls	Law enforcement officer assigned to the school "community
Incident driven	Problem oriented
Minimal school-law enforcement interaction, often characterized by a "us vs. them" mentality	Ongoing school law-enforcement partnership to address problems of concern to educators, students, and parents
Police role limited to law enforcement	Police role extended beyond law enforcement to include prevention and early intervention activities
Police viewed as source of the solution	Educators, students, and parents are active partners in developing solutions
Educators and law enforcement officers reluctant to share information	Partners value information sharing as an important problem-solving tool
Criminal incidents subject to inadequate response; criminal consequences imposed only when incidents reported to the police	Consistent responses to incidents is ensured – administrative *and* criminal, as appropriate
Law enforcement presence viewed as indicator of failure	Law enforcement presence viewed as taking a positive, proactive step to create orderly, safe, and secure schools

Note. Adapted from *Fostering School-Law Enforcement Partnerships* (Guide 5), Safe and Secure: Guides to Creating Safer Schools, by Anne J. Atkinson, 2002, p. 7.

Unpublished report findings, from a national survey by the Center for Criminal Justice Research at the University of Cincinnati (Travis & Coon, 2005) conducted with funding from the U.S. Department of Justice, showed trends related to the use of law enforcement in various capacities in public school settings. School principals and law

enforcement officers were surveyed. Results identified a "wide variety of perceptions as to precisely why schools came to have school resource officers" (p. 84). The most widely agreed upon of the choices offered in the survey by both school staff and police officers interviewed was national media attention about school violence. The most widely agreed upon reason for not having a school resource officer was lack of need for one. Schools and officers reported schools would benefit from an officer on campus at different levels with 45.1% of schools reporting it would be a benefit and 70.5% of officers indicating it would be a benefit. Differences in school and officer perceptions of law enforcement participation in activities at the school level were extreme. Across 42 categories of activities, law enforcement's perception of its involvement in school activities was significantly different and greater than that in all but two of the schools. Perceptions related to collaborative activities such as writing plans to deal with shootings, riots, hostages, and bomb scares yielded significant differences between schools and law enforcement. Schools reported greater involvement from law enforcement for those activities; however, there was significantly different and less involvement than officers reported for meetings to discuss school issues, specific incidents, program development, risk assessment, and planning for increase security. The same study, however, reported that 42.2% of schools with a school resource officer had law enforcement collaboration in the development of safety and security measures versus only 20.9% of schools without a school resource officer.

In a study of 19 school resource officer programs, the U. S. Department of Justice funded a report titled *Comparison of Program Activities and Lessons Learned among 19*

School Resource Officer (SRO) Programs and found that school principals and assistant principals had three primary concerns regarding SRO programs. Those concerns were (a) who is in charge, (b) who makes the decision to arrest, and (c) why isn't "my" SRO available all the time (Finn et al., 2005, p. 63). One conclusion of the report was that "The law enforcement agency and the school system should collaborate on the (program) assessment by interviewing or obtaining written assessments from principals and assistant principals" (p. 6). Prevalence of use of SROs in schools was reported as follows.

> By 1999 there were at least 12,000 law enforcement officers serving full-time as SRO's. Thirty percent of local police departments, employing 62 percent of all officers, had full-time SRO's during 1999. Local police departments had about 9,100 full-time SRO's assigned to schools. A majority of the departments serving 10,000 or more residents had SRO's. An estimated 38% of sheriffs' departments, employing 63% of all officers, had deputies assigned full-time as SRO's. Nationwide, about 2,900 sheriffs' deputies worked as SRO's during 1997 (Finn et al., 2005, p. 11).

Governance of School Security

Constitutions

The Tenth Amendment to the United States Constitution (2011) provided that "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people" (Amendment 10). States were, therefore, responsible for the establishment of policy or statutory regulation of a system of education for the populace, and all states in the United States have established systems of education as a part of their state constitutions. Each has been unique in particular ways such as funding. The United States Constitution has no specific

requirement to provide a safe school environment, but interpretation of the document has supported related legislation.

Among other provisions, Article IX of the Constitution of the State of Florida (2009) called for a ". . . uniform, efficient, safe, secure, and high quality system of free public schools. . . " (Title XLVIII, Chapter 1002, Section 1). The Florida State Legislature, through various statutes, has defined the requirements that have been prescribed to enable local school boards to accomplish this task. Among these tasks was the establishment of a safe and secure educational environment (Florida, 2009).

Federal Response To Security Preparation

As has been noted, school violence related legislation peaked in 1999 following the Columbine High School shootings in Littleton, Colorado (Lawrence & Birkland, 2004). Further legislation resulted after the events of September 11, 2001 when schools were identified as potential soft targets for terrorist activities (Ervin, 2006). Federal response was pervasive.

Information was available regarding school crisis planning from The U.S. Department of Education's Office of Safe and Drug-free Schools. *Practical Information on Crisis Planning: A Guide for Schools and Communities* (PIOCP) published originally in 2003 and revised in 2007, offered a comprehensive look at school crisis management from the perspectives of (a) mitigation and prevention, (b) preparedness, (c) response, and (d) recovery (Office of Safe and Drug-free Schools, 2007, pp. 1.6 -1.7). The document warned and cookbook approaches to crisis planning and did not support cutting

and pasting plans from one school district to another. Community and school differences warranted plans tailored to the specific needs of specific populations.

The vast majority of research included in the PIOCP guide regarding the efficacy of security planning came in the form of experiential evidence and interviews. Actual evaluations of security plans were limited due to the low number of incidents that have occurred nationwide. However, first hand experiences and review of specific events yielded a core of common areas that most experts agreed were important to address in the process of security preparation. The PIOCP document was designed to provide guidance related to school responses to crisis events. This guide outlined best practices, as identified by the USDOE, regarding school safety and security plans and preparation. The guide spelled out the fact that all communities and schools are different and that crisis management plans must be created with those differences that make each school unique in mind. There was no one right answer to a crisis. The guide's stated purpose was to encourage conversation and thought prior to the onset of a crisis, not in the midst of one (Office of Safe and Drug-free Schools, 2007).

In 2004, the U. S. Department of Homeland Security established the National Incident Management System (NIMS) as a part of The Federal Emergency Management Agency (FEMA, 2010). This effort established a system by which agencies from the local, state and federal levels could communicate and work cooperatively during crisis events of any magnitude. FEMA and the NIMS systems provided an overarching context for the control of emergencies once they occurred. How agencies respond should be coordinated and clear in order to avoid continued fallout from crisis events. The system

also provided a structural framework for agency preparation for the onset of a crisis event. Individuals at the local, state, and federal levels received training on the expectations regarding inter-agency cooperation and resource directives during times of crisis. Schools were a part of this network of resources (FEMA, 2010).

Environmental Regulations

The Occupational Safety and Health Administration (OSHA) division of the United States Department of Labor put specific regulations in place related to emergency plans utilized when addressing environmental crisis events. Regulations related to workplace safety, which would apply to public schools, were also identified by the U.S. Environmental Protection Agency (EPA) (Electronic Code, 2012). All of these regulations were outlined in the United States Code of Federal Regulations [CFR] (2012). Hazards, prevention, and response requirements related to workplace safety were identified in CFR 29, Part 1910. The CFR was a compilation of all federal regulations enabled by federal statutes. In addition, these regulations were supported by the Centers for Disease Control and Prevention (CDC). The United States Department of Health and Human Services (DHHS) and the National Institute for Occupational Safety and Health (NIOSH) also endorsed a Safety Checklist Program for Schools. This publication outlined a compilation of CFR regulations that were applicable to schools and provided checklists related to each area of safety prevention and response (Centers for Disease Control and Prevention, 2004). In relation to crisis situations that could potentially endanger individuals on a school campus other than general workplace safety

precautions, guidelines were offered for chemical spills, fires, and the handling of materials, chemicals, and tools where applicable. Regulations address prevention and evacuation. Table 5 outlines the content of the NIOSH Safety Checklist Program Manual.

Table 5

Content of National Institute for Occupational Safety and Health (NIOSH) Safety Checklist Program Manual

Chapter	Chapter Titles and Content
1	Making Sense of Regulations--provides background information and criteria for effective implementation.
2	How to Establish an Effective Occupational Safety and Health and Environmental Safety Program--provides preparation steps in creating a checklist program.
3	Implementing a Safety Checklist Program--provides guidelines for a checklist program including hazard identification specific to particular courses. This section also provides examples of effective implementation.
4	Safety Checklists--provides an alphabetical listing of checklists for all current environments and hazards as well as references to applicable CFR regulations.
Appendix A	Resource Agencies and Organizations--provides resource agencies and organizations and relevant contact information.
Appendix B	Using the Safety Checklist Program to Teach Students---provides tips for involving students in the checklist program.
Appendix C	Suggestions for Facilitating Inspections--provides strategies for interacting with regulatory inspections.
Appendix D	Emergency Procedures in Public Secondary Schools in the Event of a Chemical Spill--provides reviews emergency response procedures.
Appendix E	Text of Selected Regulations--provides linked access to regulations in the CFR that were applicable to workplace safety.
Additional Resources	Safety and health materials available for use.
Acknowledgments	Acknowledged those compiling the checklist program materials.
Disclaimer	Declared that NIOSH did not endorse any company or organization it mentioned in the program materials.

Note: Adapted from *About the NIOSH Safety Checklist Program*, 2004. Centers for Disease Control and Prevention. NIOSH Publication Number 2004-101. http://www.cdc.gov/niosh/docs/2004-101/

Federal Education Security Regulations

As state education policy has been impacted by the use of federal funding, so have public schools as a function of state governments. Funding, which represented approximately 10% of public school finance nationally in 2004-05, came from a variety of federal sources including the Department of Education, the Department of Health and Human Services, and the Department of Agriculture (U.S. Department of Education, 2005).

The Elementary and Secondary Education Act of 1965 was established as a bridge between inequities found in public schooling at the time and was originally authorized through 1970. The act was reauthorized several times through the years under various names such as the Improving America's Schools Act of 1994. The act was officially reauthorized in 2001 as the No Child Left Behind Act (ASCD, 2012).

Regulations regarding school safety and security in the 2001 authorization were contained in the No Child Left Behind Act (NCLB), Subparts 2 and 3, sections 4121-4130 and sections 4141, 4151, 4152, 4153, 4154, and 4155. Table 6 displays the sections of the NCLB and provides a brief summary of the section requirements (U.S. Department of Education, 2001).

Table 6

No Child Left Behind School Safety and Security Sections

Section	Title	Description
4121	Federal Activities	Authorized the use of federal funds to establish programs and promote work with stakeholders directed to the prevention of violence and drug use, and promote safety and discipline among and for students. Provided program and effort examples and also established the peer review process for applications
4122	Impact Evaluation	Established an independent biennial evaluation process, data collection requirements, and the requirements of a biennial report.
4123	Hate Crime Prevention	Authorized the use of federal funds to work with and provide assistance to localities most affected by hate crimes. Provided for the use of those funds, and set criteria for the awarding of grants.
4124	Safe and Drug-Free Schools and Communities Advisory Committee	Established the requirement of this committee and the requirements of its composition. It also required scientifically based programs and provided requirements for the training of impacted individuals and groups and the dissemination of information.
4125	National Coordinator Program	Authorized the use of federal funds to hire and train drug prevention and school safety program coordinators.
4126	Community Service Grant Program	Authorized the use of federal funds to create programs supporting the assignment of expelled or suspended students doing community service hours. It also established criteria for fund dispersal and re-allotment.

Section	Title	Description
4127	School Security Technology and Resource Center	Authorized the use of federal funds to establish the School Security Technology Resource Center. It also placed the center under the administration of the Attorney General and defined its functions.
4128	National Center For School and Youth Safety	Authorized the use of federal funds to establish the National Center For School and Youth Safety under the direction of the Attorney General. It also defined its duties as including Emergency Response, Anonymous Student Hotlines, Consultation, and Information and Outreach.
4129	Grants To Reduce Alcohol Abuse	Authorized the use of federal funds in the form of grants to localities to establish programs that effectively reduced the abuse of alcohol in secondary schools based on outlined criteria.
4130	Mentoring Programs	Authorized the use of federal funds to establish mentoring programs for students with the greatest need. It also established a grant program for funding distribution and required criteria.
4141	Gun-free Requirements	Gun-Free Schools Act. • Schools receiving federal funding are authorized to expel students for up to one year for possessing a firearm at school. • Other services may be provided. • Individuals with Disabilities Education Act (IDEA) considerations must be taken into account. • Full disclosure of circumstances must be provided to state and federal education authorities annually. • Federal funding may be withheld if the education agency fails reporting incidents to the juvenile justice system or criminal justice system.

Section	Title	Description
4151	Definitions	Definitions for terms • Controlled substance • Drug • Drug and violence prevention • Hate crime • Nonprofit • Protective factor, buffer, or asset • Risk factor • School-aged population • School based mental health services provider • School personnel • School resource officer
4152	Message and Materials	Required the clear and consistent message that the use of drugs illegally and violent behavior is wrong and harmful. Also prevented the federal government from prescribing specific curriculum to accomplish this message.
4153	Parental Consent	Student participation in special programs funded under this section was dependent upon parental permission. Written notification from the parent was necessary for withdrawal from the programs.
4144	Prohibited Use of Funds	Federal funds were prohibited from being used for construction projects or medical treatment. Exceptions were victims or witnesses to crime or drug use.

Section	Title	Description
4155	Transfer of School Disciplinary Records	Required a procedure from states utilizing federal funds to transfer disciplinary records from public school settings to all other education agencies when a student transferred to those agencies. The provision did not apply to students transferring from private, parochial, or nonpublic schools transferring to a public school.

Note: Adapted from *Subpart 2--National Programs section of the Elementary and Secondary Education Act*, 2012. U.S. Department of Education. ED.gov. http://www2.ed.gov/policy/elsec/leg/esea02/pg53.html

State of Florida Statutes

As previously reported, each state was relegated by omission in the United States Constitution efforts to provide for education. In order to fully examine principal expectations potentially impacting perceptions and self-efficacy in relation school security, the role of principal should be examined in the context of actual statutory requirements. Specifically, there are 14 statutes in Florida Law that have addressed student discipline and school safety. Those statutes are contained in Chapter 1003, Part Three, and Chapter 1006, Section C of Title XLVIII, K-20 Education Code of the 2009 Florida State Statutes. These statutes are identified and briefly described in Table 7. A narrative discussion follows in which each of the statutes is discussed (Florida Statutes, 2009).

Table 7

Florida Safety and Security Statutes

Statute	Description
Fla. Stat. § 1003.31	Students subject to control of school
Fla. Stat. § 1003.32	Authority of teacher; responsibility for control of students;district school board and principal duties
Fla. Stat. § 1006.07	District school board duties relating to student discipline and school safety
Fla. Stat. § 1006.08	District school superintendent duties relating to student discipline and school safety
Fla. Stat. § 1006.09	Duties of school principal relating to student discipline and school safety
Fla. Stat. § 1006.10	Authority of school bus drivers and district school boards relating to student discipline and student safety on school buses
Fla. Stat. § 1006.11	Standards for use of reasonable force
Fla. Stat. § 1006.12	School resource officers and school safety officers
Fla. Stat. § 1006.13	Policy of zero tolerance for crime and victimization
Fla. Stat. § 1006.135	Hazing at high schools with grades 9-12 prohibited
Fla. Stat. § 1006.14	Secret societies prohibited in public K-12 schools
Fla. Stat. § 1006.141	Statewide school safety hotline
Fla. Stat. § 1006.145	Disturbing school functions; penalty
Fla. Stat. § 1006.147	Bullying and harassment prohibited

Fla. Stat. § 1003.31 (2009)

State Statute 1003.31 of the 2009 Florida Statutes established the authority of the local school board and principal regarding control of students in circumstances where:

(a) students are being transported to or from school,
(b) during the school day while the student is on school property,
(c) while the student in active in a school sponsored event, and
(d) while the student is waiting for school to start or end.

The statute identified what timeframes were considered reasonable for responsible control of students by school board employees before and after school. The statute continued with expectations regarding the right to expel students or take other reasonable disciplinary action regarding students who (a) may have participated in violation of the school district or school code of conduct on school grounds, (b) has had prosecution withheld for what would have been a felony offense, or (c) committed a felony offense. Students with disabilities must receive appropriate consideration.

The statute also identified a student pledge that may be required daily. The pledge consists of the following seven statements:

(a) I will be respectful at all times and obedient unless asked to do wrong;
(b) I will not hurt another person with my words or my acts, because it is wrong to hurt others;
(c) I will tell the truth, because it is wrong to tell a lie;
(d) I will not steal, because it is wrong to take someone else's property;
(e) I will respect my body, and not take drugs;
(f) I will show strength and courage, and not do something wrong, just because others are doing it;
(g) I pledge to be nonviolent and to respect my teachers and fellow classmates.

Fla. Stat. § 1003.32 (2009)

State Statute 1003.32 of the 2009 Florida Statute established teacher control guidelines and the responsibilities of the local school board and school principal. The statute outlined the following actions as within the rights of the teacher in maintaining control of students regarding the student code of conduct: (a) establish classroom rules of conduct, (b) establish consequences designed to change behavior, (c) have disruptive or violent students removed from class, (d) have disruptive or violent students addressed by support staff, (e) participate in the enforcement of disciplinary rules while on the job, (f) have access to the results or consequences for referrals, (g) have access to support in an emergency, (h) have access to disciplinary or behavior management training, (i) be able to press charges for criminal activity, (j) be able to exercise reasonable force to protect himself or others, and (h) utilize corporal punishment if allowed by school board policy.

Guidelines for corporal punishment, if provided for in school board policy, must be enacted by the school principal. These guidelines must identify the methods and personnel to be involved in the implementation of corporal punishment. These guidelines also require a witness to the event and, if needed, a full written account of the event.

The statute also established that teachers must (a) create reasonable and equitable classroom rules, (b) participate in training if not successful with behavior management, (c) keep an orderly and regimented learning environment with few disruptions, and (d) work with stakeholders to resolve behavior management issues.

Teachers could send students to the office as a behavior consequence, suggest consequences to the administrator, and should be consulted by administration if a lesser

consequence is employed. Teachers could also have students removed from class who were disrupting the learning environment or presented violent or uncontrollable actions. Students formally removed from class may not return to class without the teacher's permission, or as a result of a formal committee decision. This committee was formed at the school and must provide resolution within five days. The review committee must consist of a teacher selected by the teacher wanting the student removed, a teacher selected by the faculty, and one staff member selected by the principal. Principals were required to make teachers aware of this process. Principals were also required to report each event where a child was formally removed to the superintendent every nine weeks, and each school district was reviewed annually regarding its compliance with this statutory requirement. Teachers removing 25% or more of their class were required to attend behavior management training.

The statute also identified all staff members as being responsible for reporting suspicion or knowledge of criminal activity. Local school boards were also required to take reasonable action to protect staff and students from harm.

Fla. Stat. § 1006.07 (2009)

State Statute 1006.07 of the 2009 Florida Statutes placed regulation on local school boards regarding the establishment of a safe and secure environment for students that accounts for students and their welfare and discipline. The statute included required provisions for the control of students. These provisions included a protocol for the suspension and expulsion of students. The rules of subsection one of the statute were

based in part on due process language found in Fla. Stat. § 120.569. Notification procedures identified in Fla. Stat § 286.011, provided guidelines for the timely and appropriate communication of administrative actions to parents and other individuals associated with the procedural action. Administrative procedures were limited by Fla. Stat. § 120.57 related to questions or disputes of material fact. These notification and administrative procedures provided guidelines for the legally mandated address of incidents involving students and actions in violation of the school code of conduct including criminal activity on a school campus.

The statute also addressed the responsibilities of individuals registering for school regarding the proper notification to be provided to the school of prior suspensions and expulsions. This section outlined the rights of the school district to recognize and impose the findings of the prior school district at the time of the student's registration. This could result in an expulsion or suspension being imposed prior to attendance in the new school district or result in the receiving school district waiving the expulsion and allowing the student to begin attendance immediately. The student's placement would be at the discretion of the superintendent and could be in an appropriate alternative educational environment.

The statute outlined the local school board's responsibility in establishing an enforceable code of student conduct. Code of student conduct notification, distribution, forums for open discussion, and language were covered as a part of subsection two. In addition, the subsection outlined the necessity of consistent implementation of the policy and provided for the disciplinary coverage of but not limited to:

(a) alcohol or controlled substance possession, distribution, or use;
(b) corporal punishment;
(c) attendance, respect for personal property, rules of conduct, right to learn, free speech, assembly, privacy, and school activity participation;
(d) possession, distribution, or use of a controlled substance at a school function;
(e) the use of wireless communication devices;
(f) the possession of a firearm or weapon;
(g) violence against a school board employee;
(h) transportation as a privilege;
(i) sexual harassment;
(j) the assignment of alternative educational programs for violent or disruptive students;
(k) expulsion for no less than one year for possession of a firearm or weapon at a school function unless otherwise determined by the school board;
(l) and expulsion for no less than one year for false reporting or threats involving school related functions unless otherwise determined by the school board.

In addition it established a required student crime watch program that was designed to promote student responsibility and with the monitoring of criminal behavior. Subsection four of Fla. Stat. § 1006.07 established required emergency drills and emergency procedures. Emergency drills included but were not limited to (a) fires, (b) natural disasters, and (c) bomb threats. Model emergency management and emergency procedures were identified as necessary for (a) weapon-use and hostage situations, (b) hazardous materials or toxic chemical spills, (d) weather emergencies, and (e) exposure as a result of a manmade emergency. Weather emergencies as defined by the state included hurricanes, tornadoes, and severe storms.

There were additional provisions requiring the establishment of educational services in detention facilities that adequately met the needs of students under the age of 22 who had not received a standard diploma. This subsection defined the notification relationship between law enforcement and the school board.

Subsection six required the school board to seek and utilize best practices in safety and security as defined and developed by the Office of Program Policy Analysis and Government Accountability. This subsection required the school board to develop and implement a self-assessment of the school district's safety and security practices. These practices were required to be reported annually to the public and generate recommendations from the school board regarding the improvement of safety and security district-wide. The superintendent was required to report results of these efforts within 30 days of the board meeting where the results were to be presented to the public.

Fla. Stat. § 1006.08 (2009)

State Statute 1006.08 of The Florida State Statutes established the roles and responsibilities placed on the chief executive officer or superintendent of each school district. Subsection one of Fla. Stat. § 1006.08 required that the superintendent plan and implement a program that accounted for students in relation to attendance, discipline, health, safety, and general welfare. The superintendent was responsible for supporting school district and school-based staff in their efforts to provide a safe and secure environment. The superintendent was required to take necessary action to remove violent or disruptive students from the educational setting and provide appropriate due process when addressing charges. The superintendent's intervention was particularly important as a part of hearings related to expulsion. Due process action taken by the superintendent and all designees of the superintendent were guided by Fla. Stat. § 120.569 and Fla. Stat. § 120.57 regarding notification and administrative processes as in Fla. Stat. § 1006.07.

The statute also addressed the state's responsibility to notify each school district superintendent of students who committed delinquent acts that would have been recognized as a felony if committed by an adult. Also mandated was the confidential treatment of all materials, records, and other pertinent information. All materials of a confidential nature could only be released to individuals identified in statute.

Fla. Stat. § 1006.09 (2009)

State Statute 1006.09 of the 2009 Florida Statutes placed regulations on principals to adhere to laws and administrative rules set forth by local and state boards of education. These rules were to be established regarding the development of policies and procedures designed to ensure a safe and secure environment and to support the staff, including bus drivers, in the discipline and removal of students from the educational environment if necessary. This statute included regulations regarding the suspension of students including due process procedures and offenses for which suspension could not be provided as a consequence. Due process procedures included the timely notification of parents or guardians and provisions protecting school district personnel against prosecution for suspensions made in good faith.

Fla. Stat. § 1006.09 also provided direction regarding the expulsion of students and the use of expulsion for students making false accusations against employees that could jeopardize the employment of teachers or school staff. Principals or their designees were required by the statute to analyze the suspensions and expulsions in the school in an annual report.

Fla. Stat. § 1006.09 also addressed students who may have been suspended from school for felony offenses occurring off campus if it was determined that the act was so egregious as to disrupt the school environment. Students would also be suspended beyond 10 days in this event but must have educational services provided in an alternative setting. These actions could also include expulsion. Students facing suspension or expulsion for the use or possession of a controlled substance could be excluded from disciplinary action if they shared information leading to the arrest of the person responsible for distribution, or the student entered a drug rehabilitation program. A third violation of the code of conduct regarding the use or possession of a controlled substance could lead to expulsion under the provisions of chapter 893 of the Florida State Statutes of 2009. Chapter 893 statutes addressed drug abuse and prevention. The statutes included applied in general terms to student use and possession throughout the entirety of the chapter.

Subsection 4 of Fla. Stat. § 1006.09 established the role of principal as it applied to the violent actions of one student perpetrated against another student at the same school location. The principal was responsible to enact the suspension or expulsion rules or utilize the zero tolerance rules discussed in Fla. Stat. § 1006.13. Principals found to have failed to enact appropriate action in response to violent acts could be eliminated from receiving performance or differentiated pay.

Students with disabilities who were considered for expulsion or suspension must be afforded appropriate state adopted considerations. Fla. Stat. § 1006.09 also outlined

the use of appropriate state and locally established forms for the reporting of data associated with school discipline.

The principal was charged with establishing processes that employees could utilize to report the use, possession, or sale of controlled substances. The principal or a designee was given the responsibility for contacting a parent or guardian regarding this type of violation. Notification of the parent or guardian was required to be made in a timely manner and notification of local support agencies was required.

Subsection 9 of Fla. Stat. § 1006.09 covered the reasonable suspicion rule regarding the search of a student's locker or storage area for controlled substances or objects. The use of metal detectors and search animals was also covered by this statute. Notice of the possible search of areas where individuals could store illegal substance or objects was to be posted in an obvious location on the school campus.

Fla. Stat. § 1006.10 (2009)

State Statute 1006.10 of the 2009 Florida Statutes covered the rules governing bus drivers regarding student safety and discipline. The statute required that drivers establish good behavior as the norm for all students riding buses. The statute also required the local school board to establish rules included in the code of conduct that outlined consequences for misbehavior on the bus. The principal or a designee could enforce these rules or allow drivers to enforce these rules with the exception of suspension from the bus.

The driver of the school bus was responsible for student behavior while students were on the bus but was not responsible for the time students were waiting on the bus. Drivers were not responsible for students on their way to the stop or leaving the stop; however, they were responsible for students when the bus was parked at the stop. Drivers were charged with making whatever timely and reasonable decision necessary to keep students safe in the event of an emergency.

Drivers, under this statute, were not to be forced to drive under conditions that placed students or the driver in imminent danger. Students who presented the potential for dangerous actions or activities were required to be dealt with appropriately. The driver was also to be provided with reasonable protection from physical injury. State or local funds could be used to improve bus safety. Students who exhibited clearly volatile actions or actions that were clearly unsafe were to be addressed by the school board before the student was allowed to ride the bus again.

Fla. Stat. § 1006.11 (2009)

State Statute1006.11 of the 2009 Florida Statutes addressed the use of reasonable force as a part of disciplinary action in a school setting. The statute required local school boards to establish rules for the use of reasonable force in creating a safe and secure environment for students and staff. These rules were to be delivered to all schools and school personnel.

Subsection two of Fla. Stat. § 1006.11 protected school board employees from prosecution for action taken to meet the requirements of Fla. Stat. § 1003.32, Fla. Stat. § 1006.09, and Fla. Stat. § 1006.11.

Fla. Stat. § 1006.12 (2009)

State Statute 1006.12 of the 2009 Florida Statutes established guidelines for the use of school resource officers on school campuses as a part of joint agreements between school and law enforcement agencies. Subsection one outlined certification requirements for school resource officers and granted a school resource officer the full force of law enforcement requirements and privileges in the role of school resource officer. The subsection also required the school resource officer to coordinate activities at the school with the school principal. The school principal could direct specific activities and responsibilities to the school resource officer, but all matters of employment were to be addressed through the officer's law enforcement agency.

Subsection two granted school districts the right to establish and employ school safety officers. School safety officers would be law enforcement officers. These officers could be sanctioned or certified by a law enforcement agency or the school board, but the officer was required to comply with requirements established in Fla. Stat. § 943.10. Fla. Stat. § 943.10 defined the requirements and role of a law enforcement officer in the State of Florida and provided authority for governing agencies to establish law enforcement officers. The school district as a government agency could commission school safety officers. These officers had the full authority of law enforcement to make arrests and

maintain order as defined in Fla. Stat. § 943.10, including the right to carry a weapon on the job on a school campus. The statute also outlined the method by which officers were to be paid and the right of school districts to enter into multiple contracts with multiple law enforcement agencies in order to meet school district needs.

Fla. Stat. § 1006.13 (2009)

State Statute 1006.13 of the 2009 Florida Statutes established policy related to zero tolerance for criminal activity and the victimizing of individuals. The legislature provided guidelines that distinguished between the use of expulsion and stringent consequences for appropriately high level offenses and the use of lesser consequences for what were defined as petty offenses such as small fights and disruptions. Alternatives to expulsion were encouraged when appropriate.

School districts were required to establish a zero tolerance policy. Zero tolerance policies were to address (a) reporting events to law enforcement, (b) the definitions of serious offenses, (c) the definitions of petty offenses, (d) the intervention and protection of stakeholders in the event of victimization, and (e) due process for students.

Subsection three of Fla. Stat. § 1006.13 required expulsion for students who were found to have brought a gun or weapon to school, as identified in chapter 790 of the Florida State Statutes, or for threatening or false reporting of school employees or regarding school property as identified in Fla. Stat. § 790.162 and Fla. Stat. § 790.163. School districts could place students in alternative educational sites or programs for the

duration of an expulsion or could utilize a full year expulsion based upon a review and a determination of what was in the best interest of the student.

Subsection four of Fla. Stat. § 1006.13 addressed the appropriate guidelines for contacting law enforcement. These guidelines defined the role of the school resource officer. Further, the statute provided examples of petty offenses that should not be reported as a part of zero tolerance policies to law enforcement such as theft of items worth less than $300 or vandalism to the school worth less than $1,000. The statute also required the appropriate reporting of crimes by school employees and the proper documentation and intervention regarding those same acts.

Subsection five provided selected assurances regarding students prior to disciplinary action. Students charged with committing crimes in Fla. Stat. § 784.081 would be expelled or placed in an alternative setting until adjudicated.

Subsection six of Fla. Stat. § 1006.13 defined the offenses that required expulsion if a student was found guilty, pled nolo contendere, or adjudication was withheld. This subsection included rules as they applied to the notification of school district staff by the Department of Juvenile Justice of the specific charges and the expectations regarding school attendance and the impact on other individuals at the school. The school board was charged with taking appropriate action based on Department of Juvenile Justice communications. Also specified were the responsibilities of the school board to take action to protect the victim and individuals related to the crimes that had been committed. The specific offenses related to this statute were found in the following 2009 Florida State Statutes chapters: Chapter 782, homicide; Chapter 784, assault, battery, or

negligence; Chapter 787, kidnapping, enticing a child, and custody violations; Chapter 794 sexual battery; Chapter 800, lewd or indecent behavior; Chapter 827, child abuse; Chapter 812.13, robbery; Chapter 812.131, other robbery; Chapter 812.133, carjacking; and Chapter 812.135, home invasion.

Subsection seven of Fla. Stat. § 1006.13 required that disciplinary action be related to the student's actual actions that violated the student code of conduct. Subsection eight encouraged the use of alternatives to expulsion or referral to law enforcement unless doing so would endanger others.

Fla. Stat. § 1006.135 (2009)

State Statute 1006.135 of the 2009 Florida Statutes established guidelines regarding the prevention and response to hazing in high schools. The statute defined hazing but excluded sporting events and competition. Hazing that was illegal included physical brutality, forcing solid or liquid items to be consumed, or forced activity. It also included activities that could cause mental distress. Hazing also was defined as involving an individual who was a member or was attempting to become a member of a group or organization.

The statute identified hazing as a third degree felony when it was intentional and reckless and resulted in death as discussed in Fla. Stat. § 775.082 and Fla. Stat. § 775.083. Hazing was defined as a first degree misdemeanor when it was intentional and reckless and posed the risk of injury or death. The statute continued that the consent of the individual to be hazed was not allowed as a defense. Other items excluded as defense

included actions that were not sanctioned by a particular organization or group, or the action was not a condition of membership. Subsection six of the statute identified hazing as a charge that could be subsequent to a similar charge under a different statute.

Fla. Stat. § 1006.14 (2009)

State Statute 1006.14 of the 2009 Florida Statutes addressed membership or the establishment of secret societies at public schools. These types of organizations included groups that were primarily composed of students in the school setting. It further defined these groups as recruiting members in order to maintain the organization and determined membership qualifications based upon criteria other than those that were rights of students as individuals in the school setting.

The statute distinguished between organizations that were legitimately established by the school as school sponsored functions and secret societies. School sanctioned organizations were required to be transparent in their membership qualifications and to be open to all students. Also allowed were legitimately recognized community organizations as determined by the local school board.

It was established that to join or be a member of a secret society that was developed by students on a school campus was illegal. The statute gave discretion to the school board in enforcing the rules regarding secret societies.

Fla. Stat. § 1006.141 (2009)

State Statute 1006.14 of the 2009 Florida Statutes provided guidelines for the establishment of a crime hotline by local school districts for individuals to report events or potential events that could adversely impact schools. This hotline was to be operated in cooperation with the Florida Sheriffs Association. The statute also outlined rules for the hotline's operation if it were to be established. No money could be offered for anonymous reporting; schools were to be notified if a report involving the school was made to the hotline, and a quarterly report was to be generated to review the types of incidents and possible prevention programs.

Fla. Stat. § 1006.145 (2009)

State Statute 1006.145 of the 2009 Florida Statutes established disruption of a school function as a misdemeanor. A disruption by a person who did not have a legitimate reason to be on campus or at an event was guilty of a second degree misdemeanor as identified in Fla. Stat. § 775.082 and Fla. Stat. § 775.083.

Fla. Stat. § 1006.147 (2009)

State Statute 1006.145 of the 2009 Florida Statutes was also known as *the Jeffrey Johnston Stand Up for All Students Act*. Jeffrey Johnston was a seventh-grade student who was relentlessly bullied by classmates, ending with his tragic suicide. Jeffrey's mother crusaded for the creation of this statute. This statute prohibited bullying or harassment of any individual associated with public schools. Events and locations

covered by this prohibition included any activity that was sponsored by public education on a school site, bus, or computer or technological outlet.

Subsection three of the statute identified 10 specific bullying actions that could involve individuals or groups. These actions were (a) teasing, (b) social exclusion, (c) threat, (d) intimidation, (e) stalking, (f) physical violence, (g) theft, (h) sexual, religious, or racial harassment, (i) public humiliation, or (j) destruction of property. Harassment was defined by the statute as any activity that threatened or insulted, whether written, spoken, or on a computer. In order to meet the criteria of being harassed, victims must have a reasonable fear that they or their property could be damaged, be influenced by fear to the point where educational performance is impacted, or the harassment disrupts the school. Retaliation for reporting bullying was included in the definition of bullying or harassment, as well as coercion. Also included was the inappropriate accessing of school computer records.

Subsection four of the statute required that the school district put a policy in place that prohibited bullying or harassment that met the requirements of the statute. Subsection five outlined that stakeholders be included in the development of the bullying and harassment prohibition policy. Stakeholders included parents, students, community members, law enforcement, teachers, custodians, and others. The program was required to be implemented over the course of the entire school year. The content of the policy was required to include:

(a) a clear declaration of the prohibition of bullying and harassment,
(b) definitions of bullying and harassment,

(c) descriptions of appropriate student and adult actions,
(d) consequences for inappropriate behavior,
(e) consequences for false reporting,
(f) procedures for reporting both in person and anonymously,
(g) methods designed to address inappropriate activity in a timely manner,
(h) methods to determine the level of activity and if necessary to direct the investigation to other agencies,
(i) methods for parental notification,
(j) methods for counseling referrals if necessary,
(k) data reporting methods for the school and district,
(l) an education program designed to provide guidance on responding to bullying or harassment,
(m) methods for appropriate contact with victim guardians regarding actions,
(n) and methods to publicize the policy.

Subsections seven of this statute identified time of access as not being a defense for computer-related bullying behavior. Also, this policy did not impact individuals accessing computer related material as a part of their normal job function. Subsection eight outlined the distribution of safe schools funds to school districts for the purpose of implementation of this policy. Subsections nine and ten outlined a required yearly report from the Commissioner of Education to the Governor and provided assurance that this statute did not remove or impair any individual's rights as prescribed in the First Amendment of the Constitution of the United States regarding freedom of speech.

Florida Department of Education Rules

In October of 2003 the Florida Department of Education instituted the *Statewide Policy for Strengthening Domestic Security in Florida's Public Schools*. This policy was subsequently modified through a final report in February of 2006 (Florida Department of Education, 2006). The policy identified public schools as potential terrorist targets and

initiated a plan for the adequate preparation and protection of public schools in the event of an actual crisis. This policy defined the role of each agency and how agencies were to interact with one another.

The policy provided specific direction to school boards regarding actions in eight areas of concern. The eight areas were as follows:

1. Access control defines control mechanisms designed to prevent inappropriate access to school campuses or transportation services as a protective measure. Included are strategies such as single point of entry, control of ventilation systems, visitor control systems, high visibility of school staff, and daily bus inspections.
2. Emergency equipment defines the type and availability of emergency equipment at each educational facility. Included in this area are items such as providing back-up communication systems for first responders and rotating emergency equipment that may need batteries or otherwise have a shelf-life.
3. Training defines what type of training to provide regarding security and procedures and who is to receive the training. This area includes items such as weapons of mass destruction training for first responders, table top exercises, and safe mail handling procedures.
4. Communication and notification procedures define the requirements regarding contacting parents, community members and methods of effective contact.
5. Coordination with partners encourages close interaction between governmental agencies.

6. Vulnerability assessment identifies standards for school audits and examination for potential threat areas.
7. National Incident Management System (NIMS) compliance directs local compliance with NIMS standards and training in NIMS requirements for appropriate school board employees including principals,
8. NIMS certification requires counties and school boards to work cooperatively to achieve NIMS certification (pp. 2-5).

Self-Efficacy

As a tenet of social cognitive theory (SCT), perceived self-efficacy was defined by Bandura (1997) as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3).

Bandura (1994) identified four primary ways that efficacy is developed and strengthened. The four are (a) mastery experiences, (b) social modeling, (c) social persuasion, and (d) physical and emotional state. Mastery experiences were considered the most effective means of developing efficacy which was increased through repeated task-specific success. Repeated failure tended to undermine perceived efficacy. Resilience was considered developed through successes that were the result of sustained effort in difficult circumstances. Seeing others in similar circumstances meet with success through perseverance provided the context for social modeling, and provided motivation for an individual to work to accomplish even difficult tasks. This also had an adverse effect if the individual witnessed failure. Social persuasion, or persuading

individuals that they have the necessary ability to accomplish a task, was determined to be an effective way to relieve self-doubt and increase perceived efficacy. Anxiety and stress, and physical and emotional state were identified as indicators that impacted the level of efficacy.

The level of an individual's self-efficacy impacted performance through four processes; (a) cognitive, (b) motivational, (c) emotional, and (d) choice (Bandura, 1997). Positive impacts of high levels of self-efficacy included setting goals and visualizing successful completion of tasks. Negative impacts of low levels of self-efficacy included avoidance behavior and visualizing the unsuccessful completion of tasks. Low levels of self-efficacy tend to destabilize performance and task accomplishment (Bandura, 1994).

Cognitive functions of goal setting and commitment were discussed as being impacted by belief in personal efficacy. Personal sense of efficacy could have a "self-aiding or self-hindering" (Bandura, 1994, p. 1175) impact on mental processes. Cognitive functions were identified as key to decision making, motivation level and choice of action and were influencing factors in envisioning outcomes (Bandura, 1997). "The self-assurance with which people approach and manage difficult tasks determines whether they make good or poor use of their capabilities" (p. 35).

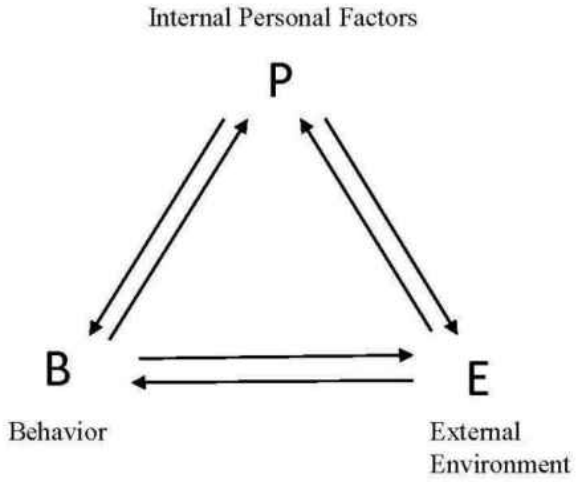
Triadic Reciprocity

Bandura (1978) reported that people (cognitively), environment, and behavior are in a constant state of interaction with each other. This was an alternate theory to traditional behavior theory that was identified as unidirectional such as that advanced by

Skinner (1971). Unidirectional determinism posed, for example, that individual behavior was influenced by environment and/or personal attributes as the initiating influence with causal impact on the individual. A person's behavior was therefore dependent on the one way impact of the environment and/or personal attributes. Bandura (1989) reported that "social cognitive theory subscribes to a model of emergent interactive agency" (p. 1). Bandura (1989) continued

> they (persons) make causal contribution to their own motivation and action within a system of triadic reciprocal causation. In this model of reciprocal causation, action, cognitive, affective, and other personal factors, and environmental events all operate as interacting determinants (p. 1).

Triadic reciprocity was represented as interaction between "internal personal factors in the form of cognitive, affective, and biological events; behavior; and environmental events" (Bandura, 1997, p. 6). Triadic reciprocity is represented visually in Figure 1. Each interdependent influence was believed to have impact on the other in a manner that was difficult to determine based on the number and timing of causal combinations between the three at any one moment.



Note. Adapted from Self-efficacy: The Exercise of Control, by A. Bandura, 1997, p. 6.

Figure 1. Model of Triadic Reciprocity (triadic reciprocal causation).

Collective Efficacy

Collective efficacy was reported to be a core element of group agency (Bandura, 2000). Both individual and collective efficacy can impact the choices and actions of individuals and groups as they determine effort, remain motivated in difficult circumstances, and accomplish goals. Collective efficacy was not simply the combined level of individuals' efficacy in the group, however, "…it is an emergent group-level attribute that is the product of coordinative and interactive dynamics" (Bandura, 1997 p. 35). The interaction of individuals' efficacy beliefs, motivations, outcome expectancies, cognitive influences, behaviors, and environmental factors within and among the group members produce a group or collective efficacy level.

Bandura (1997) connected self-doubt to an individual's sense of efficacy and its relationship with collective efficacy in the following way.

> People who are wracked with self-doubt do not become social reformers or inspiring mentors, leaders, and social innovators. Because social reformers encounter considerable resistance and retaliatory threats, they must have a tenacious belief in their ability to produce social change through collective effort. If they do not believe in themselves, they are unlikely to empower others with the belief that they can successfully confront and change conditions that affect their lives adversely (p. 33).

Principal Self-efficacy

In the context of principal efficacy, "It is not enough to hire and retain the most capable principals--they must also believe that they can successfully meet the challenges of the task at hand" (Tschannen-Moran & Gareis, 2004, p. 582). "When faced with obstacles, setbacks, and failures, those who doubt their capabilities slacken their efforts, give up, or settle for mediocre solutions. Those who have a strong belief in their capabilities redouble their effort to master the challenges" (Bandura, 2000, p. 120). Ciminillo (1980) discussed the pressures associated with the principal role and maintaining security on a school campus. The author concluded that:

> The principal must be part sociologist, part security technologist, part human relations expert, and part curriculum innovator. At the same time, the rapid development of crime as a school problem has put many principals into a state of uncertainty regarding the priority of measures to be taken to safeguard the educational process. (p. 89)

Studies of principal self-efficacy have been limited in comparison to studies of teacher self-efficacy (Ketelle, 2005). Principal efficacy scales were developed in part from existing study of teacher efficacy.

Teacher self-efficacy studies were grounded in a range of theoretical constructs. Rotter's (1966) social learning theory (SLT) was the basis for what is considered the earliest study of teacher beliefs regarding efficacy. It consisted of two questions within a larger Rand study of teacher characteristics and student learning (Armor et al., 1976). Later studies include (a) Guskey's (1981) study of Responsibility for Student Achievement (RSA) (1981), (b) Rose and Medway's Teacher Locus of Control (TLC) (1981), and (c) Webb's (1982) efficacy scale (Tschannen-Moran & Hoy, 2001).

Studies by Ashton, Buhr and Crocker (1984) involved vignettes used to examine teachers' efficacy based on responses to a variety of situations using a Likert-type scale ranging from *extremely ineffective* to *extremely effective*. A second version used a scale range of *much less effective than most teachers* to *much more effective than most teachers*. Gibson and Dembo (1984) developed the teacher efficacy scale (TES) which combined aspects of both Rotter's (1966) and Bandura's (1977) conceptual constructs. Modifications of the Gibson and Dembo scale permitted the exploration of subject matter and concepts as variants in measuring levels of efficacy among teachers. Bandura's social cognitive theory and self-efficacy were the bases for an alternative view of measuring efficacy. Bandura (1997) developed an unpublished version of a teacher efficacy scale comprised of 30 items designed around seven subcategories. The Likert-type scale in the instrument utilized a modified nine-point range of responses including (a) nothing, (b) very little, (c) some influence, (d) quite a bit, and (e) a great deal (Tschannen-Moran & Hoy, 2001, p.791).

Hillman (1986) developed the earliest measure of principal efficacy in his study of student, teacher, and principal efficacy. Hillman's instrument consisted of 16 questions seeking causation related responses. Tschannen-Moran and Gareis (2004) observed that Weiner's 1979 and 1992 instruments relied on attribution theory and examined both causation and locus of control to determine leader efficacy levels. Weiner's instrumentation was similar to other teacher efficacy instruments (Guskey, 1981; Rose & Medway, 1981) in terms of questions and responses (Tschannen-Moran & Gareis, 2004). The use of yes or no, or definitive forced choice items, may have contributed to the diminished use of this type of instrument. Bandura (2006) supported the use of a range or continuum of responses as opposed to a forced response format when examining efficacy.

The Principal Sense of Efficacy Scale (PSES) was an effort to develop an instrument designed to measure the efficacy of school leaders and was adapted from the Teacher Sense of Efficacy Scale (TSES) (Tschannen-Moran & Gareis, 2004). The original PSES was comprised of 50 items and was reduced to 18 by Tschannen-Moran and Gareis (2004) in one of three studies of principal efficacy instruments. The first study used vignettes in the fashion of instruments developed by Dimmock and Hattie (1996), and utilized a 10-point Likert-type scale ranging from *totally not confident* to *totally confident.* The second study utilized a modified version of the instrument created by Goddard, Hoy, and Hoy (2000) utilizing affirmation statements. Responses were along a six-point Likert-type scale ranging from *strongly disagree* to *strongly agree*. The modified PSES utilized in the third study was reported by the researchers to be the most

promising of the three. This instrument's questions were rooted in clear directions asking the respondent to "Please respond to each of the questions by considering your current ability, resources, and opportunity to do each of the following in your present position" (Tschannen-Moran & Gareis, 2004, p. 578). Questions were statements beginning with the phrase "In your current role as principal, to what extent can you. . . ." (p. 579). The response choices included (a) none at all, (b) very little, (c) some degree, (d) quite a bit, and (e) a great deal (p. 579). Questions related to principal efficacy in three areas.

Tschannen-Moran and Gareis (2004), as part of their review of principal efficacy, made a direct conceptual connection of principal efficacy to social cognitive theory.

> At the heart of the theoretical rationale explaining the relationship observed between principals' sense of efficacy and their performance, use of power, and coping strategies, is Bandura's (1997) theory of triadic reciprocal causation. Triadic reciprocal causation focuses attention of the interaction between internal and external factors at work in a leadership context. Principals' behavior is influenced by their internal thoughts and beliefs, but these beliefs are shaped by elements--including other individuals--in the environment. (p. 582)

Studies of Principals' Perceptions Related to School Security

Oregon School Safety Survey

In 2000, Sprague et al. (2002) conducted a study comparing principal perceptions of school safety in Oregon in 1995 (Sprague et al., 1995) to responses on the same survey redistributed in 2000. The researchers found, among other things, that principals rated school security second only to improvement of the academic program in their identification of highest priorities. The survey instrument consisted of 15 risk factors, 15 protective factors, and five open ended questions (Sprague et al., 2002).

Risk and protective factors were the same in both surveys, and participants identified the extent the factors impacted school violence and discipline issues negatively for risk factors and positively for protective factors. Responses in the 1995 risk and protective factor portion of the survey were along a continuum on a four-point Likert-type scale ranging from *not at all* to *extensive*. The 2000 survey utilized a four-point Likert-type scale ranging from *low* to *high* for both risk and protective factors (Sprague et al., 2002). Risk and protective factors included in the survey are displayed in Table 8.

The five open ended questions were

1. What is the most pressing safety need in your school?
2. What school safety activities does your school do best?
3. What topics are most important for training and staff development?
4. What are the biggest barriers to improved school safety measures?
5. What other factors not included in this survey do you believe affect school safety? (Sprague et al., 2002, pp. 54-55)

Table 8

Oregon Safe Schools Survey Risk and Protective Factors

Risk Factors	Response Plans (Protective Factors
Illegal weapons.	Opportunity for extracurricular programs and sports activities.
Vandalism.	Professional development and staff training.
Student transiency (i.e., changes in school enrollment.	Crisis and emergency response plans.
Graffiti.	Consistently implemented school-wide discipline plans.
Gang activity.	Student support services in school (e.g., counseling, monitoring, support team systems).
Truancy.	Parent involvement in our school (e.g., efforts to enhance school safety, student support).
Student suspensions and expulsions.	Student preparation for crises and emergencies.
Students adjudicated by the court.	Indicate the extent to which these factors exist in your school and neighborhood.
Child abuse in the home.	Supervision of students across all settings.
Poverty.	Suicide prevention/response plans.
Crimes in school (e.g., theft, extortion, hazing).	Student participation and involvement in academic activities.
Illegal drug and alcohol use.	Positive school climate for learning.
Fights, conflict, and assault.	Response to conflict and problem solving.
Incidence of bullying, intimidation, and harassment.	Collaboration with community resources.
Deteriorating condition of the physical facilities.	Effective student-teacher relationships.

Note. Adapted from *Principal Perceptions of School Safety,* by J. Sprague, S. Smith, and S. Steiber, (2002), *Journal of School Violence,* 1(4), p. 55.

Both surveys were mailed to all principals in the state of Oregon in both distributions with similar return rates.

U. S. Department of Education Surveys

At the close of the 1990-1991 school year, the U.S. Department of Education surveyed 755 public elementary and secondary school principals as to their perceptions of the effectiveness of specific programs on their campuses (NCES, 1992). Following the 1996-97 school year, 1,200 principals in the United States were surveyed about the seriousness of specific discipline issues (NCES, 1998). In subsequent years, the *School Survey on Crime and Safety* (SSCS) principal questionnaire was periodically distributed to approximately 3,500 principals in school years 1999-2000, 2003-2004, 2005-2006, 2007-2008, and 2009-2010 (NCES, 2000, 2004, 2006, 2008, 2009, 2011).

The data collected in all of these surveys was primarily acquired through forced response questions regarding frequency of crime and violence, the existence of school safety measures, the existence of law enforcement presence in schools, disciplinary actions utilized, and characteristics of school climate (NCES, 2012). No questions in the 1992 through 2010 surveys regarding frequency or verification of existence were considered as perception oriented. Beginning with the 1992 survey, some Likert-type responses were sought in regard to the seriousness of specific student offenses on a four-point scale ranging from *serious* to *not a problem*. Other perception-oriented questions included (a) the extent specific events or restrictions limited principals' ability to maintain order and discipline in school with a four-point scale ranging from *great extent* to *not at all*, (b) questions about the effectiveness of specific programs with a five-point Likert-type scale ranging from *highly effective* to *has not been a problem,* and (c) questions about the extent organizations in the community provided support for

discipline, safety, and drug issues with a four point scale ranging from *great extent* to *not at all* (NCES, 1992, 1998). Those questions returned in subsequent surveys in similar form. The *School Survey on Crime and Safety* added two questions to (a) determine principal perceptions regarding the extent that specific factors limited efforts to reduce or prevent crime with a three-point Likert-type scale ranging *from limit in a major way* to *does not limit*, and (b) how often specific types of incidents occurred at their school with a five-point scale ranging from *happens daily* to *never happens* (NCES, 2000). These questions returned in subsequent surveys in similar form.

There were two questions added to the 2004 SSOCS that continued through the 2010 SSOCS seeking principals' perceptions of (a) the area where students lived that attended their school with four-point scale responses ranging from *high level of crime* to *students come from areas with very different levels of crime*, (b) the crime level in the area where their school was located with three-point scale responses ranging from *high level* of crime to *low level of crime* (NCES, 2004, 2006, 2008, 2010).

Summary

Principal involvement in school security related matters progressively increased from monitoring the school house and its furnishings in the early 19th century to being responsible for all areas and functions of school operation in the early 20th century (Pierce, 1935; Commission, 1918). Rising city populations expanded the visible role of principal in school security (Pierce, 1935). Stephens (2003) noted that the individual

most responsible regarding the effort to provide a safe academic and workplace was the principal.

Little changed in terms of the responsibility of principals in relation to school security through the early 1970s. The HEW *Safe School Study* (U.S. Department of Health, 1977) published in 1978 provided information about the frequency and seriousness of school crime nationally and became an initiating factor in closer examination of school security. Ciminillo (1980) discussed the pressures associated with the principal role and maintaining security on a school campus. The author concluded that

> The principal must be part sociologist, part security technologist, part human relations expert, and part curriculum innovator. At the same time, the rapid development of crime as a school problem has put many principals into a state of uncertainty regarding the priority of measures to be taken to safeguard the educational process. (p. 89)

Additional surveys of crime and violence in schools published by the National Center for Educational Statistics (1992, 1998, 2000, 2004, 2006, 2008, 2010), continued to provide statistical analyses of principal, teacher, student reports of incident frequency and some indications of perceptions.

In 1999, the crisis at Columbine High School in Littleton, Colorado marked an unprecedented increase in legislative activity related to school security preparation and expectations (Addington, 2009; Lawrence & Birkland, 2004). It was noted that Columbine was the precursor to many of the changes in school security at the time of the present study.

Crime statistics in schools in the late 1990s showed an actual decrease in reports of crime and violence in schools, but media driven public perception called for change in public policy related to the school environment (Cornell, 2006; Mayer & Furlong, 2010). Additional highly publicized events driving public perception included the terrorist attacks of September 11, 2001 and the shootings at Virginia Tech in 2007 (Ervin, 2006; Davies, 2008).

Types and frequency of crisis incidents were discussed revealing the following:

- School shootings are a rare event, and that school shooters are typically male students at the school. Fascination with weapons, access to guns, and leakage of information from other students were factors in most shootings (Wike & Frazier, 2009).
- Non-fatal victimization was much more likely to occur in schools, and included rape, aggravated assault, sexual assault, robbery, simple assault, and theft (Centers for Disease Control and Prevention, 2008; NCES, 2009). Report rates for non-fatal victimization were 51 per 1,000 students.
- Bomb threats were difficult to track due to inconsistencies in reporting, but 1055 actual bombs were reported in school settings between 1990 and 2002. Bomb threats in a school setting were generally regarded as eliciting the same response during the event from school and law enforcement as an actual bomb (Newman, 2005).
- School fires normally began in school lavatories, and 32% of those were suspicious. Most school fires occur at the beginning or end of the school day,

and fatalities are rare. An annual average of 14,700 fires occur on school campuses (School Fires, 2007).

- Chemical spills or accidents were also difficult to track due to inconsistency in reporting. In 2010 it was estimated that 74,000,000 students and staff are exposed to the potential for chemically related events on school campuses yearly (Vossekuil et al., 2002). A report of school laboratories in Texas categorized lab accidents as heat burns, foreign materials in the eye, explosions, chemical burns, faulty equipment injury, electrical shock, and accidents requiring classroom evacuation.
- Custody related abduction statistics reported by the United States Department of Justice in 2002 estimated that 203,900 cases of family abductions occurred in 1999. Of those abductions, 7% were from a daycare or school setting.
- Gang related activity at school numbers varied between adults on campus and students. A total of 16% of adults reported that gang activity of any kind occurred on their campuses in the 2009-10 school year, down from 20% in 2007-08. A higher percentage (20%) of students reported gang presence on their campuses in 2009, down from 23% in 2007.
- Suicide-related deaths numbered less than 10 between 2003 and 2011. However, a CDC survey of students found that16 % had considered suicide, 13% created a plan, and 8% reported attempting to take their own life.

Law enforcement collaboration in schools shifted focus in the 1980s from traditional call and response interaction to community based policing involving a law enforcement officer (school resource officer) working in the school environment (Atkinson, 2002). In a study of 19 school resource officer (SRO) programs, principals were found to have three questions regarding law enforcement involvement in the school. These questions pertained to (a) who is in charge, (b) who makes the decision to arrest, and (c) why isn't "my" SRO available all the time (Finn et al. 2005, p. 63). In 1999, at least 12,000 law enforcement officers were serving as full-time SROs (p. 11).

Governance of schools and education including security has been identified as a function of the states. However, federal response to crisis events has included crisis planning guides developed by the U. S. Department of Education's Office of Safe and Drug-free Schools in 2003 and 2007. In 2004, the Department of Homeland Security established the National Incident Management System as a subsidiary function of the Federal Emergency Management Agency to coordinate agencies' (including schools) interaction, preparation, and response to crisis events (FEMA, 2010). The Occupational Safety and Health Administration (OSHA) division of the U.S. Department of Labor in cooperation with the Environmental Protection Agency (EPA) developed safety regulations related to environmental crisis events. These regulations were codified in the U. S. Code of Federal Regulations (CFR) (Electronic Code, 2012). These regulations were also supported by the CDC. The U. S. Department of Health and Human Services and the National Institute for Occupational Safety and Health (HIOSH) endorsed a *Safety Checklist Program for Schools* that outlined CFR regulation checklists applicable to

school settings (Centers for Disease Control and Prevention, 2004). The U. S. Department of Education reauthorized the Elementary and Secondary Education Act of 1965 in 1974, 1978, 1988, 1994, and 2001. The 2001 reauthorization (No Child Left Behind Act) (NCLB) provided specific sections and subsections relevant to school security efforts. Compliance with these measures were tied to federal funding.

Principals in the State of Florida were subject to 14 individual statutes related to school security housed in Chapter 1003, Part Three, and Chapter 1006, Section C of Title XLVIII, K-20 Education Code of the 2009 Florida State Statutes. These statutes guided the daily actions and decisions related to the operation of a safe and orderly academic environment in public school settings.

Perceived self-efficacy was defined by Bandura (1997) as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). These beliefs in personal efficacy were developed through (a) mastery experiences, (b) social modeling, (c) social persuasion, and (d) physical and emotional state (Bandura, 1994). The individual's developed level of self-efficacy impacted his or her performance through four processes; (a) cognitive, (b) motivational, (c) emotional, and (d) choice (Bandura, 1997 pp. 116-160). These processed directly impacted the envisioning of outcomes (Bandura, 1997), and could hinder or help cognitive approaches to task engagement and completion.

Triadic reciprocity, or reciprocal determinism causation, was represented as interaction between "internal personal factors in the form of cognitive, affective, and biological events; behavior; and environmental events" (Bandura, 1997, p. 6). The

reciprocal interaction between these three factors influenced self-efficacy. The existence of multiple influences interacting with each other in differing levels and timing make determining the impact of each on self-efficacy difficult to determine.

According to Bandura (1997), collective efficacy is not the combined level of efficacy of individuals in a group: ". . . it is an emergent group-level attribute that is the product of coordinative and interactive dynamics" (p. 35). The interaction of individuals' efficacy beliefs, motivations, outcome expectancies, cognitive influences, behaviors, and environmental factors within and among the group members produce a group or collective efficacy level.

Limited studies of principal efficacy (Ketelle, 2005) have been built upon a base of previous studies of teacher efficacy (Tschannen-Moran & Gareis, 2004). Early studies of teacher efficacy were based in constructs of Rotter's social learning theory (SLT) (1966), Guskey's study of responsibility for student achievement (RSA) (1981), Rose and Medway's teacher locus of control (TLC) (1981), and Webb's efficacy scale (1982) (Tschannen-Moran & Hoy, 2001). Ashton et al. (1984) utilized a Likert-type scale to measure teacher efficacy through responses to a series of vignettes. Gibson and Dembo (1984) developed the teacher efficacy scale (TES) which combined aspects of both Rotter's (SLT) and Bandura's (SCT) conceptual constructs. Studies of teacher efficacy yielded a variance in approach away from forced choice responses in favor of a continuum of responses such as those suggested by Bandura ranging across nine points including (a) nothing, (b) very little, (c) some influence, (d) quite a bit, and (e) a great deal (Tschannen-Moran & Hoy, 2001).

A study of three differing approaches to identifying principal self-efficacy was conducted by Tschannen-Moran and Gareis and reported in 2004. The method showing the most promise was a modified version of the TSES, the PSES which was modified to an 18-question survey utilizing a Likert-type scale of responses including (a) nothing, (b) very little, (c) somewhat, (d) quite a bit, and (e) a great deal.

Studies of principal perceptions related to school security included a study conducted by Sprague et al. (2002) that compared results of the 2000 Oregon School Safety Survey to those of the same survey administered five years earlier (Sprague et al., 1995). The survey sought perceptions of principals through the examination of differences related to school risk and protective factors and answers to open ended questions.

U. S. Department of Education surveys compiled by the National Center for Education Statistics provided large amounts of data associated with frequency of crime and violence, the existence of school safety measures, the existence of law enforcement presence in schools, disciplinary actions utilized, and characteristics of school climate (NCES, 2012). Perceptions of principals in these surveys conducted between 1998 and 2010 were limited to responses regarding the seriousness of specific student offenses, the extent specific events or restrictions limited principals' ability to maintain order and discipline in school, the effectiveness of specific programs, the extent organizations in the community provided support for security functions, the extent that specific factors limited efforts to reduce or prevent crime, how often specific types of incidents occurred at their

school, the area where students lived that attended their school, and the crime level in the area where their school was located.

CHAPTER 3
METHODOLOGY

Introduction

This chapter contains a detailed discussion of the methods and procedures used to conduct the study. The purpose of the study, the research questions, and the conceptual framework are presented followed by a description of the population and the instrumentation used to gather data for the study. Data collection procedures are explained, and the methods used to analyze the data are described and linked to each of the research questions.

Purpose of the Study

Principal self-efficacy, actions, skill level, environment, and personal attributes are contributors to performance in security preparation and implementation in the context of social cognitive theory. The purposes of this study were to determine the differences, if any existed, in principals' perceptions regarding school security, their perceived confidence to address critical crisis incidents on their campuses, their perceptions of the likelihood critical incidents would occur, their perceptions of interaction with law enforcement, the critical incidents they most feared, and their perceptions of factors impacting the incidents they most feared.

Research Questions

Following are the research questions that were used to guide this study:

1. To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a normal academic school day overall and based upon principal demographics and school characteristics?
2. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?
3. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their training to manage critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?
4. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?
5. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their

campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

6. To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course of a normal academic school day based upon principal demographics and school characteristics?

Conceptual Framework

As noted by Stephens (2003), the individual most responsible regarding the effort to provide a safe academic environment and workplace is the school principal. Principals find themselves in the position of leadership for all areas and functions of school operation, including security.

Glanz and Schwartz (2008) reported that people, environment, and behavior are in a constant state of interaction. As a tenet of social cognitive theory (SCT), the interaction of these factors produces varied results. Bandura (1977) introduced the conceptual connection of self-efficacy with SCT in which results manifest themselves based on an individual's belief that results can be created. Bandura's (1986) expansion on his original theory introduced the concept of reciprocal determinism in which performance can be altered by belief in one's ability to accomplish a task and actual success in completing the task (Pajares, 2002). This triadic reciprocity, as subsequently discussed by Bandura (1986, 1997), was represented as interaction between "internal personal factors in the form of cognitive, affective, and biological events; behavior; and environmental events

(Bandura, 1997, p. 6). Certainty and uncertainty fall within the construct of efficacy as determining factors in ultimate task success. A closer examination of differences in principals' perceptions in relation to school security and "state of uncertainty regarding the priority of measures to be taken to safeguard the educational process" (Ciminillo, 1980, p. 89) provided the conceptual framework for this study. It was this conceptual framework which guided the development of the instrumentation used in the study.

Instrumentation

For the purposes of this study, the researcher developed an instrument, *Principal Safety and Security Perception Survey*, based, in part, on the *Oregon Safe Schools Survey* (Sprague et al., 2002). In 2000, Sprague et al. (2002), replicated a safe school survey initially conducted in 1995 of all principals in the state of Oregon. The survey was conducted electronically and quantified the existence of risk factors and protective elements that existed in the same schools through the use of Likert-type scale rated items. A comparison was made in the study between results of the 2000 survey and those of the earlier 1995 survey.

The list of risk factors and protective elements from the Oregon survey (previously displayed in Table 8) were examined by the researcher in conjunction with a list of crisis events derived from the *School Survey on Crime and Safety Principal Questionnaire* (2007-2008) by the National Center for Education Statistics (2008) to develop the crisis event list for this study. The 2007-2008 principal survey was intended to quantify various crisis incidents on school campuses in schools across the country. In

the current study, these items were utilized for questions related to the perceived likelihood of specific crisis events and the perceived preparedness for specific crisis events. Table 9 displays the risk factors and protective elements from the 2000 Oregon study and the crisis events identified in the 2007 NCES survey that were used by the researcher in the development of the *Principal Safety and Security Perception Survey* which was used to gather data for the present study.

The Oregon survey (Sprague et al., 2002) also asked five open-ended questions that related to school-based safety needs. The open-ended questions in the Oregon study asked principals to (a) indicate their schools most pressing safety needs, (b) those safety activities their school did best, (c) topics most important for staff development, (d) the biggest barriers to improving school safety, and (e)other factors not included in the survey that they believed affected school safety. The open ended question utilized in the current study was fashioned after examining those designed by Sprague et al. (1995).

Table 9

Survey Risk Factors, Protective Elements, and Crisis Events

Risk Factors[a]	Protective Factors[a]	Crisis Events[b]
Illegal weapons	Extracurricular programs	Shootings
Vandalism	Faculty and Staff Training	Natural disasters
Student transiency	Crisis/emergency response plan	Hostages
Graffiti	Consistent school-wide discipline plan	Bomb Threats
Gang activity	School support services in school	Chemical, biological, or radiological threats
Truancy	Parent involvement in school	Pandemic flu
Suspensions and expulsions	Student crisis training	Rape
Student court adjudication	Supervision of students in all settings	Sexual battery
Child abuse in home	Suicide prevention and response plans	Robbery with or without weapon
Poverty	Participation in academic activities	Physical attack with or without weapon
Crimes in school	Positive school climate	Theft
Illegal drug/alcohol use	Problem solving, response to conflict	Firearm or explosive device possession
Fights, conflict, assault	Community resource collaboration	Knife or sharp object possession
Bullying/intimidation/harassment	Effective student/teacher relationships	Hate crime
Facility Deterioration		Gang related crime
		Bullying
		Widespread disorder

Note. [a]*Oregon Safe Schools Survey* by J. Sprague, S. Smith, & S. Stieber (2002);
[b]National Center for Education Statistics, *School Survey On Crime and Safety Principal Questionnaire* 2007-2008 school year.

The beliefs of principals regarding confidence or self-efficacy in managing specific critical crisis events were examined through participant perceptions in three ways. Each of the three aspects of self-efficacy as reported in Bandura's (1997) triad of reciprocity were addressed: (a) personal attributes of principals were examined through review of demographic information and school characteristics including gender, years of service, level and size and level of school, free and reduced lunch rate of the school, presence of a law enforcement officer, and presence of a security plan; (b) environmental factors including, likelihood of crisis events, interaction with law enforcement, and perception of neighborhood safety were examined; and (c) behavioral factors were examined through perceptions of training, preparedness for and in response to critical crisis events, and what critical crisis event individuals feared the most. The impact of varying levels of influence in each of the areas of reciprocity as identified by Bandura (1986) were not examined. Only the overall perceptions of principals and differences in perceptions of principal demographic and school characteristic subpopulations were considered.

The 23-item survey instrument was comprised of six sections. Section 1 consisted of an introduction to the survey and simple instructions for its completion. Section 2 contained seven questions related to demographically identifiable information and school characteristics. Answers to these questions were multiple choice in format, and response items varied based upon the nature of the questions.

Section 3 of the survey elicited current beliefs of respondents. This portion of the survey utilized a variation of the Likert-type responses discussed by Bandura (2001) and

by Tschannen-Moran and Gareis (2004) in the modified Principal Sense of Efficacy Scale. Response choices were: (a) not at all, (b) a little, (c) some, (d) quite a bit, and (d) a great deal. Items in this section sought perceptions regarding principal self-efficacy in the areas of impact, preparation, preparatory and response training, and law enforcement preparedness.

Section 4 of the survey elicited current levels of agreement using a five-point Likert-type scale. Response choices were: (a) strongly disagree, (b) disagree, (c) unsure, (d) agree, and (e) strongly agree. Items in this section sought perceptions regarding principal level of agreement with statements regarding procedures, decision making, funding, and interaction with law enforcement.

Section 5 of the survey elicited responses regarding perceptions of (a) likelihood of occurrence and (b) level of preparedness to two identical lists of 12 crisis events. Response choices to the perceptions of likelihood of occurrence list were: (a) very unlikely, (b) unlikely, (c) unsure, (d) likely, and (e) very likely. Response choices to the level of preparedness list were: (a) very unprepared, (b) unprepared, (c) unsure, (d) prepared, and (e) very prepared. Crisis events on both lists were identical and ranged from simple battery on a student to gang related violence on campus.

Section 6 of the survey elicited responses to one open-ended item, an environmental influence item, and a single item about the perceived safety of the environment surrounding the school. The open-ended item required a typed response to the crisis incident the principal most feared. The second item asked for a yes or no response to each choice in a list of possible outside influences impacting the crisis event

the respondent most feared. The third item asked respondents to identify the neighborhood surrounding their schools as (a) very safe, (b) safe, (c) unsure, (d) unsafe, or (e) very unsafe.

The survey was pilot-tested with two groups of current principals for ease of completion, estimated time for completion, clarity of questions or statements and answer choices. Adjustments were made to several statements as a result of the first test group. The second test group found the survey to be clear, consistent, and comfortable in length. The estimated time for completion was determined to be less than 10 minutes.

Population and Sample

The population identified for this study was comprised of Florida public school principals. The sample invited to participate was comprised of principals from approximately 1,000 public elementary, middle, and high schools in 15 central Florida school districts. Principals of alternative schools, charter schools, virtual schools, and private schools were excluded from the population.

Principals were identified for participation in the study based upon their current positions as school-based principals in one of the school districts identified for inclusion in the study. Each of the 67 Florida school districts was examined for potential inclusion in the study. Principal perceptions or self-reports were the focus of this study. Extenuating school district factors were not considered as a part of the comparison beyond the number of principals employed in the school districts surveyed.

Consideration was not given to other school district factors that might have had bearing in other studies.

School districts were chosen for study participation in part for their (a) location within a short distance of Florida's I-4 corridor which runs from Daytona Beach on the east central Florida coast to St. Petersburg on the west central Florida coast, and (b) variability in size. Five of the 15 school districts were considered to be large due to the existence of 76 or more principals within the school district. Five school districts were categorized as medium due to their having between 35 and 75 principals, and five school districts were considered small due to their having 34 or fewer principals. The researcher recognized that school district classification and size vary from state to state based upon state practices and statute. Florida school districts have been organized by county and vary considerably in general population, geographical features, and per capita income levels. The sample did not include principals in the largest or the smallest school districts in Florida. Table 10 provides basic information regarding school district size and principal populations of school districts invited to participate in the study.

Table 10

Classification of Principals by School District Size and Grade Configuration

School District Size	Principals				
	K-5	K-8	Grade 6-8	Grade 9-12	Total
Large (76+)					
1	58	0	16	16	92
2	145	0	50	28	223
3	119	0	36	18	173
4	48	0	16	18	82
5	88	0	39	35	162
Medium (35-75)					
6	24	0	9	7	40
7	35	0	10	7	52
8	24	4	8	8	44
9	37	0	12	9	58
10	44	1	12	10	68
Small (1-34)					
11	11	0	4	3	18
12	6	0	2	2	10
13	9	3	4	5	21
14	11	0	4	3	18
15	4	0	2	2	8

After securing approval (Appendix B) from the University of Central Florida's Institutional Review Board (IRB), the survey process was initiated. The 15 school districts included in the original proposal were contacted using applications and phone calls. Formal requests were made to conduct research utilizing materials that were obtained through school district websites or through contact with school district personnel who were responsible for research approval. Of the 15 school districts, 10 agreed to participate in the study (Appendix C). Two school districts, one medium and one small, provided formal notification that they did not wish to participate in the study. After multiple mailings and contact with school district personnel, three school districts,

two small and one medium, did not formally respond to the request to conduct research and were not included. School districts responded with permission to participate in different time intervals. Principals included in the study were contacted following school district approval to conduct research.

Data Collection

Benbenishty et al. (2008) identified clear guidelines for utilizing surveys to guide the gathering of data for use in the establishment of school based interventions. Key components were (a) anonymity, (b) clear administration procedures, and (c) the use of internet-based surveys.

In all, 798 principals were contacted by email and provided with an invitation to participate in the study. Initial contact included a full disclosure of study procedures, assurances of confidentiality, an explanation of the purpose of the study, assurances that participation was voluntary, and a request for completion within an approximate one month time frame. Principals were notified that: (a) school district approval had been received to include them in the study, (b) within a week they would receive an email with a link to the survey, and that (c) their participation would be appreciated. A copy of a generic initial contact letter and related materials can be found in Appendix D.

Surveys were distributed to principals through the Surveymonkey (2012) online survey service. After two weeks, individuals who had not responded received a follow-up email reminding them of the study and encouraging their participation. With one exception, this process continued every two weeks for a total of four follow-up contacts.

For one of the 10 school districts, this procedure was not followed due to enforced restrictions allowing only one contact with potential participants. Principals in this school district received the initial contact email and only one email containing the link and a request to participate. A total of 287 principals, or 36% of the sample of 798 principals participated in the study.

Research Design

The presence of triadic reciprocity, the belief that environment, personal attributes, and behavior are interrelated, has an impact on confidence levels and influences motivation and action (Bandura, 1986, 1997). The purpose of this study was to identify differences in the perceptions of principals related to confidence in preparation and interaction with security related factors including law enforcement. For the purposes of this study, the beliefs of principals regarding confidence or self-efficacy in managing security related factors including specific critical crisis events and interaction with law enforcement were examined through participant perceptions in relation to the research questions identified for this study.

Independent Variables

Personal attributes of principals were established as independent variables through descriptive demographic and school characteristic information including gender, years of service, grade configuration, student enrollment, percentage of free and reduced

lunch students, the presence of a law enforcement officer, and the presence of a school security plan.

Dependent Variables

Dependent variables included responses to survey items regarding environmental influences. Examined for differences were geographic location of the school, likelihood of specific crisis incidents, funding, law enforcement interaction, and perception of neighborhood safety. Behavioral dependent variables were examined through survey responses to confidence in training, perceived confidence with specific crisis incidents, and what critical crisis event individuals most feared. The impact of varying levels of influence in each of the areas of reciprocity, as identified by Bandura (1986), were not examined. In this study, only overall differences in principal perceptions and differences in principals' perceptions by demographic and school characteristic subgroups were investigated.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) was used to analyze the data collected for this study. Descriptive statistics were utilized to establish the demographic and school characteristic makeup of the sample. All responses were cross-tabulated to determine potential results that warranted further analysis. The Kruskal Wallace one-way analysis of variance non-parametric test was utilized to examine differences in perceptions and beliefs among the different demographic and school

characteristic subgroups. The Kruskal Wallace test does not assume all populations exist in a normal distribution or have equal variances (Lomax, 2007).

As a part of this study, responses to individual questions were initially ranked with no connection to group, after which rank sums were computed for each group, as discussed by Howell (2007). The Kruskal Wallace is an expansion of the one way analysis of variance for use with three or more independent groups. The Kruskal Wallis test used the mean of the ranked responses of more than two groups without depending upon the groups' having a normal distribution. Differences in ranked mean responses were examined for significance at the $\rho < .05$ level.

The Mann-Whitney test was used to analyze the ranked mean results of those group responses that showed significance. The Mann-Whitney test was used to determine which pairs of independent groups' responses were different, and if those differences were statistically significant. Spearman correlations were also performed to determine dependent relationships between group ranked responses. All test results were examined independently and together in order for the researcher to provide an overall analysis of the responses in the study.

Research Question 1

> To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a normal school day overall and based upon principal demographics and school characteristics?

Research Question 1 was developed to determine the extent to which there were differences in principals' perceptions of their level of confidence to manage crisis incidents overall. Research question 1 was addressed through survey items 8 and 9. Responses to survey items were examined through use of the Kruskal Wallace test of variance. Principal confidence levels were analyzed in the context of extent of belief that the principal role impacts safety and security and belief in preparedness to lead the school through a crisis. Ranked responses to these questions were (a) not at all, (b) a little, (c) some, (d) quite a bit, and (e) a great deal. Significant differences were identified based on the conventional social science level of $\rho < .05$. The test determined whether there was a significant difference in the expressed confidence level of principals to manage crisis incidents on their campuses during the course of a normal academic school day. Differences in principal demographic and school characteristic subgroup response levels were also examined through the use of the Mann-Whitney test, and dependent relationships were examined through the use of the Spearman correlation test.

Research Question 2

> To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?

Research Question 2 was developed to determine the extent to which there were differences in principals' perceptions of their readiness to manage specific crisis incidents. Research Question 2 was addressed through survey item 20. Survey responses were examined through use of the Kruskal Wallace test of variance. Principal perceptions of preparedness levels were analyzed in the context of perceived preparedness to address specific crisis events on campus. Ranked responses to preparedness for specific crisis events were (a) very unprepared, (b) unprepared, (c) unsure, (d) prepared, and (e) very prepared. Significant differences were identified based on the conventional social science level of $\rho < .05$. The test determined whether there was a significant difference in the expressed preparedness level of principals to manage crisis incidents on their campuses during the course of a normal academic school day. Differences in principal demographic and school characteristic subgroup levels were also examined through the use of the Mann-Whitney test, and dependent relationships were examined through the use of the Spearman correlation test.

Research Question 3

> To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their preparation to manage critical crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?

Research Question 3 was developed to determine the extent to which there were differences in principals' perceptions regarding crisis incident preparation and response training they have received. Resarch Question 3 was addressed through survey items 10, 11, and 15. Survey responses were examined through use of the Kruskal Wallace test of variance. Principal perceptions of training levels were analyzed in the context of belief regarding prevention and response training and agreement regarding the adequacy of funding for training to prepare and respond to crisis incidents. Ranked responses to perceptions of training levels were (a) not at all, (b) a little, (c) some, (d) quite a bit, and (e) a great deal. Ranked responses to adequacy of funding for training to prepare and respond to crisis incidents were (a) strongly disagree, (b) disagree, (c) unsure, (d) agree, and (e) strongly agree. Significant differences were identified based on the conventional social science level of $\rho < .05$. The test determined whether there was a significant difference in the expressed perceptions of principals in their training to manage crisis incidents on their campuses during the course of a normal academic school day. Differences in principal demographic and school characteristic subgroup levels were also examined through the use of the Mann-Whitney test, and dependent relationships were examined through the use of the Spearman correlation test.

Research Question 4

> To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal school day based upon principal demographics and school characteristics?

Research Question 4 was developed to determine the extent to which there were differences in principals' perceptions of the likelihood specific crisis incidents would occur. Research Question 4 was examined through survey item 19. Survey responses were examined through use of the Kruskal Wallace test of variance. Principal perceptions of incident likelihood were analyzed in the context of belief regarding the likelihood of specific crisis events occurring on campus. Ranked responses to perceptions of incident likelihood were (a) very unlikely, (b) unlikely, (c) unsure, (d) likely, and (e) very likely. Significant differences were identified based on the conventional social science level of $\rho < .05$. The test determined whether there was a significant difference in the expressed perceptions of principals regarding the likelihood of specific crisis incidents on their campuses during the course of a normal academic school day. Differences in principal demographic and school characteristic subgroup levels were also examined through the use of the Mann-Whitney test, and dependent relationships were examined through the use of the Spearman correlation test.

Research Question 5

> To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?

Research Question 5 was developed to determine the extent to which there were differences in principals' perceptions of their interactions with law enforcement. Research Question 5 was addressed through survey items 12, 13, 14, 16, 17, and 18. Survey responses were examined through use of the Kruskal Wallace test of variance. Principal perceptions of law enforcement interaction with school based personnel were analyzed in the context of belief regarding law enforcement preparation. This was also examined in the context of agreement regarding clarity of methods and procedures between law enforcement and school based personnel, agreement regarding decision making clarity between law enforcement and school based personnel, agreement regarding clarity of expectations between first responders and school based personnel, agreement regarding school based leadership input by law enforcement, and agreement regarding collaboration with law enforcement. Ranked responses to perceptions of law enforcement preparation were (a) not at all, (b) a little, (c) some, (d) quite a bit, and (e) a great deal. Ranked responses to the remaining questions were (a) strongly disagree, (b) disagree, (c) unsure, (d) agree, and (e) strongly agree. Significant differences were identified based on the conventional social science level of $\rho < .05$. The test determined whether there was a significant difference in the expressed perceptions of principals in law enforcement interaction with school based personnel in preparation for and during

crisis incidents on their campuses during the course of a normal academic school day. Differences in principal demographic and school characteristic subgroup levels were also examined through the use of the Mann-Whitney test, and dependent relationships were examined through the use of the Spearman correlation test.

Research Question 6

> To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course of a normal school day based upon principal demographics and school characteristics?

Research Question 6 was developed to determine the extent to which there were differences in principals' reports of the crisis incident they feared the most and the influences related to those responses. Research Question 6 was addressed through survey items 21, 22, and 23. Survey responses were examined through use of the Kruskal Wallace test of variance. Three questions were identified to test for significant differences in principal perceptions of the crisis incident feared the most. The first question was an open ended question with a short typed response. The open ended question data were examined for overall trends and combined in the context of commonly associated synonyms and related phrases in the responses. Differences in combined responses for each of the independent variable groups were examined through the use of the Kruskal Wallace test of variance. The first of two follow-up questions examined environmental influences through yes or no responses and the second question asked the perception of the safety of the neighborhood surrounding the school. Ranked responses to neighborhood safety were (a) very safe, (b) safe, (c) unsure, (d) unsafe, and (e) very

unsafe. Significant differences were identified based on the conventional social science level of $\rho < .05$. The test determined whether there was a significant difference in the expressed perceptions of principals in the crisis incidents they most feared occurring on their campuses during the course of a normal academic school day. Differences in principal demographic and school characteristic subgroup levels were also examined through the use of the Mann-Whitney test, and dependent relationships were examined through the use of the Spearman correlation test. Table 11 displays the relationship between the research questions, the survey items, independent variables, dependent variables, and the statistical tests used in the data analyses to answer each of the questions.

Table 11

Relationship Between Research Questions, Dependent Variable Survey Items, Independent Variables, and Data Analysis

Research Questions	Dependent Variable Survey Items	Independent Variables	Data Analysis
1. To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a normal academic school day overall and based upon principal demographics and school characteristics?	8. Impact on safety and security 9. Prepared to lead through crisis	Gender Years of Experience Grade Configuration Student Enrollment Free & Reduced Lunch Law Enforcement Security Plan	Kruskal Wallace Mann-Whitney Spearman correlation
2. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	20. Crisis incidents preparedness a. battery on a student b. battery on a school board employee c. dangerous intruder d. firearm use e. firearm possession f. weapon use g. weapon possession h. fire i. explosive device j. weather event k. chemical spill l. crowd control incident m. custody abduction n. rape o. suicide p. gang violence	Gender Years of Experience Grade Configuration Student Enrollment Free & Reduced Lunch Law Enforcement Security Plan	Kruskal Wallace Mann-Whitney Spearman correlation

Research Questions	Dependent Variable Survey Items	Independent Variables	Data Analysis
3. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their training to manage critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	10. Training in prevention 11. Training in response 15. Adequate funding for training	Gender Years of Experience Grade Configuration Student Enrollment Free & Reduced Lunch Law Enforcement Security Plan	Kruskal Wallace Mann-Whitney Spearman correlation
4. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	19. Crisis incident likelihood a. battery on a student b. battery on a school board employee c. dangerous intruder d. firearm use e. firearm possession f. weapon use g. weapon possession h. fire i. explosive device j. weather event k. chemical spill l. crowd control incident m. custody abduction n. rape o. suicide p. gang violence	Gender Years of Experience Grade Configuration Student Enrollment Free & Reduced Lunch Law Enforcement Security Plan	Kruskal Wallace Mann-Whitney Spearman correlation

Research Questions	Dependent Variable Survey Items	Independent Variables	Data Analysis
5. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?	12. Law enforcement preparedness 13. Methods and procedures clarity 14. Leadership/ decision making clarity 16. Expectations clarity 17. Value of input 18. Collaboration adequacy	Gender Years of Experience Grade Configuration Student Enrollment Free & Reduced Lunch Law Enforcement Security Plan	Kruskal Wallace Mann-Whitney Spearman correlation
6. To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course of a normal academic school day based upon principal demographics and school characteristics?	21. Crisis incident feared most 22. Influences on incident feared most 23. Neighborhood safety	Gender Years of Experience Grade Configuration Student Enrollment Free & Reduced Lunch Law Enforcement Security Plan	Common Synonyms Kruskal Wallace Mann-Whitney Spearman correlation

Summary

Chapter 3 provided a description of the research design of the study and the methods and procedures used to conduct research in the study. The purposes of this study were to determine the differences, if any, in principals' perceptions regarding school security, their perceived confidence to address critical crisis incidents on their campuses, their perceptions of the likelihood critical incidents would occur, their perceptions of interaction with law enforcement, the critical incidents they most feared and their perceptions of factors impacting the incidents they most feared. Demographic variables and school characteristics identified as personal attributes were used as a means of determining groups for a study of differences in perceptions. The sample consisted of public school principals in school districts in close proximity to the interstate I-4 corridor in Central Florida in school districts of varying size. School district size was determined by the number of principals serving in the school district.

The survey instrument used was developed by the researcher through an examination of survey items used in two other survey instruments. The list of crisis events in the *Principal's Questionnaire of the School Survey on Crime and Safety* distributed in 2007 by NCES and the risk and protective factors in the *Oregon School Survey on Crime and Safety* reported by Sprague et al. (1995, 2002) were examined to develop a crisis event list for this study. With the exception of questions related to the development of demographic and school characteristic subgroups, the item principals feared most, and factors impacting the choice of incident feared most, the new instrument utilized Likert-type scale responses that were similar to those discussed by Bandura

(2001) and Tschannen-Moran and Gareis (2004) in the modified Principal Sense of Efficacy Scale.

Research questions were addressed through survey items related to variables identified for study concerning principal perceptions of efficacy, preparedness, incident likelihood, interaction with law enforcement, and one open-ended item related to the crisis event principals feared the most and related factors.

The survey included six sections. The five sections of questions in the survey sought (a) demographic and school characteristic information, (b) beliefs or perceptions of principals regarding school security, preparation, and interaction with law enforcement, (c) perceptions of crisis incident likelihood, (d) perceptions of level of preparedness to address crisis incidents, and (e) what crisis incident principals most feared along with related factors. Questions were related to personal, behavioral, and environmental variables identified by Bandura (1986, 1997) as impacting decision making and self-efficacy. The study sought to determine if statistically significant differences in principal perceptions existed and to identify those perceptions that were different. The study did not seek to determine the levels of impact differences in perceptions had in the environment.

Analysis of the data gathered in the survey was conducted by utilizing SPSS to determine descriptive data of the group. A Kruskal Wallis test was utilized to determine differences in ranked mean responses to questions. This test was followed by a Mann-Whitney test to verify the statistical significance of identified differences. Finally, a

Spearman correlation test was conducted to determine dependent relationships, if any existed, between group ranked responses.

After securing permission from the University of Central Florida Institutional Review Board, school districts were contacted to seek participation. Of the 15 school districts contacted, 10 chose to participate in the study. Email contact with principals in each of the 10 school districts commenced upon receipt of school district permission to conduct research. On May 1, 2012, the survey was officially closed. Data related to the study was then downloaded from the Surveymonkey website for analysis. Chapter 4 describes the analysis of gathered data and results of that analysis.

CHAPTER 4
DATA ANALYSIS

Introduction

This study was conducted to examine principals' perceptions and self-efficacy in relation to school security. The purposes of this study were to (a) determine the differences, if any, that existed in principals' perceptions regarding school security; (b) their perceived confidence to address critical crisis incidents on their campuses; (c) their perceptions of the likelihood crisis incidents would occur and their preparedness for those crisis incidents; (d) their perceptions of interaction with law enforcement; (e) the crisis incidents they fear the most, and (f) their perceptions of influences impacting the incidents they fear the most. The purposes of this study were accomplished through the use of an online survey instrument, the *Principal Safety and Security Perception Survey* (PSSPS), which was used to ask a sample of public school principals in Central Florida a series of questions regarding (a) beliefs in relation to school security, (b) agreement regarding interaction with law enforcement, (c) perceptions of specific crisis incident likelihood and perceptions of personal preparedness for those specific crisis incidents, and (d) the crises incident respondents feared the most with possible associated influences. Six research questions guided the analysis of principal responses. This chapter provides results of the analysis of data to respond to the six research questions.

The following section of this chapter provides univariate descriptive statistics related to the sample studied. Those statistics include the frequencies, cross-tabulations, and reports of the missing independent demographic and school characteristics utilized

for bivariate analysis of PSSPS dependent variable responses. Subsequent sections present results of the analysis related to each of the six research questions. For each research question, independent variables of (a) gender, (b) length of time as a principal, (c) grade configuration, (d) student enrollment, (e) free and reduced lunch rate, (f) presence of a law enforcement officer, and (g) presence of a crisis management or security plan were individually paired against responses to each PSSPS item.

Analysis was conducted through the use of the nonparametric Kruskal Wallace test of variance to determine if statistically significant ($\rho < .05$) differences between group responses existed. Those independent variables showing statistically significant differences were further examined for pairwise statistically significant ($\rho < .05$) differences in mean rank between group responses within each independent variable through the use of a post hoc Mann Whitney test. A follow-up Spearman Correlation test was also conducted to determine if statistically significant relationships existed at the $\rho < .05$ level between the identified independent variables and PSSPS item responses. Statistical power of a Spearman correlation increases as the r_s statistic approaches 1, where 1 or -1 would be perfectly correlated positive or negative relationships respectively, and 0 would indicate no relationship. A positive correlation would indicate a trend where an increase in the independent variable response along the X axis would find a corresponding increase in the dependent variable response along the Y axis forming a monotonic relationship. A r_s statistic of .896 would be considered a stronger positive relationship than a r_s of .201. Though determining the power of correlation was

not the purpose of this study, statistically significant positive or negative relationships at the $\rho<.05$, $\rho<,01$, or $\rho<.001$ level were identified for discussion purposes.

Descriptive Statistics

The study sample was comprised of public school principals from 10 central Florida school districts of varying sizes (Appendix C). The PSSPS was provided electronically to 798 potential participants in schools of varying grade configurations with varying sizes of student enrollment. Of those, 287 or 36% of the sample responded.

Of the sample, 94 (32.8%) respondents were male and 192 (66.9%) were female. A total of 37 (12.9%) principals reported they had been principals for 0 to 1 years, 89 (31%) for 2 to 5 years, 85 (29.6%) for 6 to 10 years, 43 (15%) 11 to 15 years, and 32 (11.1) for 16 or more years. Of the 287 principals responding, 189 (65.9%) served kindergarten through Grade 5 schools, 4 (1.4%) served kindergarten through Grade 8 schools, 56 (19.5%) served Grade 6-8 schools, 37 (12.9%) served Grade 9-12 schools, and 1 (.3%) served schools identified as other.

Principals reported the sizes of their student enrollments as 38 (13.2%) at 0 to 500 students, 169 (58.9%) at 501 to 1,000 students, 48 (16.7%) at 1,001 to 1,500 students, 18 (6.3%) at 1,501 to 2,000 students, 7 (2.4%) at 2,001 to 2,500 students, 6 (2.1%) at 2,501 to 3,000 students, and 1 (.3) at more than 3,000 students. A total of 29 (10.1% of the principals reported their free and reduced lunch rate (FRL) of their student population as less than 34%; 121 (42.2%) indicated a FRL rate ranging between 34% and 67%; 135

(47%) reported that between 68% and 100% of their student population qualified for free or reduced lunch.

Principals reported schools with a full time law enforcement officer at 84 (29.3%) of the schools, a part-time law enforcement officer at 65 (22.6%) of the schools, and no law enforcement officer at 136 (47.4%) of the schools. A total of 283 (98.6% of the principals reported having a security plan at their schools. Only two (.7%) reported having no security plan.

Missing independent variable responses included one (.3%) response to the question of gender, one (.3%) response to the question of length of time as a principal, one (.3%) response to the question of grade configuration, one response to the question of student enrollment, two (.7%) responses to the free and reduced lunch rate of the student population served, two (.7%) responses to the question of presence of a law enforcement officer, and two (.7%) responses to the question of presence of a crisis management or security plan. Valid percentages of responses were utilized in reporting statistics which accounted for missing responses to independent and dependent variable survey items.

Four subgroups within the independent variable groups contained very low response frequencies. Consideration was given to combining these groups with adjacent groups for the purposes of analysis. However, characteristics of each of the subgroups were such that they were utilized as reported. For example, kindergarten through 8th grade could not be logically combined with K-5 or Grade 6-8 schools given the combination of grade levels within the category. Comparative analysis was performed, and commentary regarding analysis included recognition of the low frequency in these

subgroups. Table 12 displays descriptive frequencies and percentages of the independent variable subgroups in the study.

Table 12

Descriptive Frequencies and Percentages of Independent Variable Subgroups (N = 287)

Descriptor (N)	Frequency	Percentage
Gender (286)		
Male	94	32.9
Female	192	67.1
Length of time as principal(286)		
0-1 years	37	12.9
2-5 years	89	31.0
6-10 years	85	29.6
11-15 years	43	15.0
16+ years	32	11.1
Grade configuration (287)		
K-5	189	65.9
K-8	4	1.4*
6-8	56	19.5
9-12	37	12.9
Other	1	.3*
Student enrollment (287)		
0-500	38	13.2
501-1,000	169	58.9
1,001-1,500	48	16.7
1,501-2,000	18	6.3
2,001-2,500	7	2.4
2,501-3,000	6	2.1
More than 3,000	1	.3*
Free/ Reduced Lunch Rate (285)		
Less than 34%	29	10.1
34-67%	121	42.2
68-100%	135	47.0
Law enforcement officer (285)		
Full time	84	29.3
Part time	65	22.6
None	136	47.4
Security plan (285)		
Yes	283	98.6
No	2	.7*

* frequency/percentage is low

Note. Percentages may not total 100% due to rounding.

A cross-tabulation revealed percentages of male and female principals' responses were relatively proportional to the sample (male = 32.9%, female = 67.1%) in all categories except principals with 16 or more years' experience, three subgroups in grade configuration, four in student enrollment, and two in presence of a law enforcement officer. The data are displayed in Table 13.

Table 13

School Demographic Variables by Principal Gender (N = 286)

Descriptor (N)	Male *f* (%)	Female *f* (%)
Grade configuration (287)		
K-5	43 (22.9)	145 (77.1)*
K-8	1 (25.0)	3 (75.0)
6-8	29 (51.8)	27 (48.2)*
9-12	20 (54.1)	17 (45.9)*
Other	1 (100.0)	0 (0.0)
Student enrollment (287)		
0-500	6 (16.2)	31 (83.8)*
501-1,000	51 (30.2)	118 (69.8)
1,001-1,500	22 (45.8)	26 (54.2)*
1,501-2,000	7 (38.9)	11 (61.1)
2,001-2,500	3 (42.9)	4 (57.1)*
2,501-3,000	5 (83.3)	1 (16.7)*
More than 3,000	0 (0.0)	1 (100.0)
Free/reduced lunch rate (285)		
Less than 34%	10 (34.5)	19 (65.5)
34-67%	40 (33.3)	80 (66.7)
68-100%	44 (32.6)	91 (67.4)
Law enforcement officer (285)		
Full time	44 (52.4)	40 (47.6)*
Part time	23 (35.4)	42 (64.6)
None	27 (20.0)	108 (80.0)*
Security plan (285)		
Yes	93 (33.0)	189 (67.0)
No	1 (50.0)	1 (50.0)*

Note. * = Percentages +/- 10% of the sample

A cross-tabulation revealed high concentrations (60%+) of principals with 2 to 10 years' experience in several independent variable groups: two in grade configuration, two in student enrollment, two in free and reduced lunch rate, and three in presence of a law enforcement officer. All principals at schools with more than 2,000 students had 6 or

more years' experience, and all but one of those had 11 or more. Table 14 shows the frequency and percentage of principal responses for years as a principal by independent variable.

Table 14

School Demographic Variables by Years as a Principal (N = 286)

	Years as a Principal				
	0-1	2-5	6-10	11-15	16 +
Descriptor (N)	*f* (%)	*f* (%)	*f* (%)	*f* (%)	*f* (%)
Grade configuration (287)					
K-5	23 (12.2)	61 (32.4)	56 (29.8)	25 (13.3)	23 (12.2)*
K-8	0 (0.0)	1 (25.0)	2 (50)	0 (0.0)	1 (25.0)
6-8	10 (17.9)	20 (35.7)	14 (25.0)	8 (14.3)	4 (7.1)*
9-12	4 (10.8)	7 (18.9)	13 (35.1)	10 (27.0)	3 (8.1)
Other	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
Student enrollment (287)					
0-500	10 (26.3)	11 (28.9)	8 (21.1)	7 (18.4)	2 (5.3)
501-1,000	16 (9.5)	54 (32.0)	51 (30.2)	23 (13.6)	25 (14.8)*
1,001-1,500	7 (14.9)	16 (34.0)	18 (38.3)	3 (6.4)	3 (6.4)*
1,501-2,000	4 (22.2)	6 (33.3)	4 (22.2)	4 (22.2)	0 (0.0)
2,001-2,500	0 (0.0)	0 (0.0)	1 (14.3)	4 (57.1)	2 (28.6)*
2,501-3,000	0 (0.0)	1 (16.7)	3 (50.0)	2 (33.3)	0 (0.0)
More than 3,000	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Free/reduced lunch (285)					
Less than 34%	1 (3.4)	8 (27.6)	7 (24.1)	5 (17.2)	8 (27.6)
34-67%	17 (14.2)	34 (28.3)	37 (30.8)	19 (15.8)	13 (10.8)*
68-100%	19 (14.1)	46 (34.1)	40 (29.6)	19 (14.1)	11 (8.1)*
Law enforcement (285)					
Full time	10 (11.9)	26 (31.0)	24 (28.6)	17 (20.2)	7 (8.3)*
Part time	8 (12.5)	25 (39.1)	16 (25.0)	8 (12.5)	7 (10.9)*
None	19 (14.0)	37 (27.2)	45 (33.1)	17 (12.5)	18 (13.2)*
Security plan (285)					
Yes	37 (13.1)	87 (30.9)	84 (29.8)	42 (14.9)	32 (11.3)*
No	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)

Note. * = Highest percentages congregating in specific years' experience

A cross-tabulation revealed high concentrations (75%+) of independent variable responses by grade configuration: seven in student enrollment, one in free and reduced lunch rate, and three in presence of a law enforcement officer. It was noted that the one school reporting more than 3000 students was an elementary school. Table 15 shows the frequency and percentage of principal responses for grade configuration by independent variable.

Table 15

School Demographic Variables by Grade Configuration (N = 287)

	Grade Configuration				
	K-5	K-8	6-8	9-12	Other
Descriptor (N)	*f* (%)	*f* (%)	*f* (%)	*f* (%)	*f* (%)
Student enrollment (287)					
0-500	36 (94.7)	0 (0.0)	1 (2.6)	1 (2.6)	0 (0.0)*
501-1000	144 (85.2)	3 (1.8)	20 (11.8)	1 (0.6)	1 (0.6)*
1,001-1,500	7 (14.6)	1 (2.1)	32 (66.7)	8 (16.7)	0 (0.0)**
1,501-2,000	1 (5.6)	0 (0.0)	3 (16.7)	14 (77.8)	0 (0.0)**
2,001-2,500	0 (0.0)	0 (0.0)	0 (0.0)	7 (100.0)	0 (0.0)*
2,501-3,000	0 (0.0)	0 (0.0)	0 (0.0)	6 (100.0)	0 (0.0)*
More than 3,000	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)*
Free/reduced lunch (285)					
Less than 34%	19 (65.5)	1 (3.4)	0 (0.0)	9 (31.0)	0 (0.0)
34-67%	67 (55.4)	1 (0.8)	28 (23.1)	24 (19.8)	1 (0.8)
68-100%	102 (75.6)	2 (1.5)	27 (20.0)	4 (3.0)	0 (0.0)*
Law enforcement (285)					
Full time	6 (7.1)	1 (1.2)	43 (51.2)	33 (39.3)	1 (1.2)**
Part time	49 (75.4)	3 (4.6)	10 (15.4)	3 (4.6)	0 (0.0)*
None	132 (97.1)	0 (0.0)	3 (2.2)	1 (0.7)	0 (0.0)*
Security plan (285)					
Yes	186 (65.7)	4 (1.4)	55 (19.4)	37 (13.1)	1 (0.4)
No	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)*

Note. * = Highest percentages congregating in specific levels of school. ** = High percentage in secondary schools combined

A cross-tabulation revealed high concentrations (60%+) of independent variable responses by student enrollment: three in free and reduced lunch rate, and three in presence of a law enforcement officer. It was noted that the highest percentage of schools (96.3%) with no law enforcement officer were schools with 1,000 or less students. Table 16 shows the frequency and percentage of principal responses for student enrollment by independent variable.

Table 16

School Demographic Variables by Student Enrollment (N = 287)

	Student Enrollment						
Descriptor (N)	0-500 *f* (%)	501-1,000 *f* (%)	1,001-1,500 *f* (%)	1,501-2,000 *f* (%)	2,001-2,500 *f* (%)	2,501-3,000 *f* (%)	3,000+ *f* (%)
Free/Reduced Lunch (285)							
Less than 34%	2 (6.9)	16 (55.2)	3 (10.3)	3 (10.3)	2 (6.9)	2 (6.9)	1 (3.4)*
34-67%	12 (9.9)	64 (52.9)	23 (19.0)	13 (10.7)	5 (4.1)	4 (3.3)	0 (0.0)*
68-100%	24 (17.8)	88 (65.2)	21 (15.6)	2 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)*
Law enforcement officer (285)							
Full time	1 (1.2)	24 (28.6)	33 (39.3)	14 (16.7)	7 (8.3)	5 (6.0)	0 (0.0)*
Part time	11 (16.9)	38 (58.5)	12 (18.5)	3 (4.6)	0 (0.0)	1 (1.5)	0 (0.0)*
None	25 (18.4)	106 (77.9)	3 (2.2)	1 (0.7)	0 (0.0)	0 (0.0)	1 (0.7)*
Security plan (285)							
Yes	38 (13.4)	165 (58.3)	48 (17.0)	18 (6.4)	7 (2.5)	6 (2.1)	1 (0.4)
No	0 (0.0)	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Note. * = Highest percentages congregating in specific sizes of student population

A cross-tabulation revealed that the highest concentration (89%+) of schools with a full time, part time, or no law enforcement officer were in schools with free and

reduced lunch rates of 34% or more. Table 17 shows the frequency and percentage of principal responses for free and reduced lunch rate by independent variable.

Table 17

School Demographic Variables by Free and Reduced Lunch Rate (N = 285)

Descriptor (N)	Free and Reduced Lunch Rate 0-33% *f* (%)	34-67% *f* (%)	68-100% *f* (%)
Law enforcement officer (285)			
Full time	8 (9.6)	40 (48.2)	35 (42.2)*
Part time	5 (7.7)	28 (43.1)	32 (49.2)*
None	15 (11.1)	53 (39.3)	67 (49.6)*
Security plan (285)			
Yes	29 (10.3)	121 (42.9)	132 (46.8)
No	0 (0.0)	0 (0.0)	2 (100.0)

Note. * = Highest percentages congregating in specific free and reduced lunch rates

Testing of the Research Questions

Research Question 1

To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a normal school day overall and based upon principal demographics and school characteristics?

Responses to items 8 and 9 of the PSSPS survey instrument were utilized in the analysis of data to respond to Research Question 1. Item 8 of the survey elicited responses on perceived level of principal impact on school security, and item 9 elicited responses on perceived preparedness to lead through a crisis. Simple response percentages of the sample (N=286) overall were initially examined followed by statistical

analysis of survey responses for differences in group responses by the seven principal demographic and school characteristic identifiers using SPSS statistical software.

In regard to item 8, 287 (81.9%) principals responding to the survey reported that their role as principal impacted the safety and security of students, staff, and visitors on their campus during the course of a normal school day a great deal. For item 9, principals (N=286) reported that they were prepared to lead their schools through a crisis incident that threatens the safety and security of their students, staff, and visitors on their campus during the course of a normal school day as follows: A great deal (125, 43.7%), Quite a bit (135, 47.2%), and Some (25, 8.7%). It was noted that there was a considerable downward shift (38.2%) in percentage of responses (A great deal) in regard to principals' preparedness to lead their schools through a crisis in contrast to the same response category describing their perceived level of impact on school security. These data are presented in Table 18.

Table 18

Overall Principal Responses to Beliefs in Relation to School Security (N = 287)

Beliefs (N)	Not at all *f* (%)	A little *f* (%)	Some *f* (%)	Quite a bit *f* (%)	A great deal *f* (%)
Item 8. You impact the safety and security of your campus as principal. (287)	0 (0)	1 (.3)	7 (2.4)	44 (15.3)	235 (81.9)
Item 9. You are prepared to lead during security and safety crisis events on your campus. (286)	0 (0)	1 (.3)	25 (8.7)	135 (47.2)	125 (43.7)

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 8 regarding perceived principal impact on school security among groups within the seven principal demographic and school characteristics. As displayed in Table 19, there were no significant differences ($\rho < .05$) for group responses within the seven independent variables.

Table 19

Kruskal Wallace Results: Perceived Principal Impact on School Security (N = 287)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	286	.005	1	.946
Length of service as principal	286	7.153	4	.128
Grade configuration	287	2.889	4	.577
Student enrollment	287	7.472	6	.279
Free and reduced lunch rate	285	3.935	2	.140
Presence of a law enforcement officer	285	.060	2	.970
Presence of a crisis management or security plan	285	1.233	1	.267

[a] *statistically significant at ρ<.05*

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 9 regarding perceived preparedness to lead through a crisis among groups within the seven principal demographic and school characteristic independent variable groups. Results of the analysis showed significant $\rho <$ .05 findings for differences by grade configuration and by presence of a law enforcement officer. As shown in Table 20, no statistically significant findings were noted for the other five demographic and school characteristic identifiers.

Table 20

Kruskal Wallace Results: Perceived Preparedness to Lead Through a Crisis (N = 286)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	285	3.558	1	.059
Length of service as principal	285	5.819	4	.213
Grade configuration	286	11.064	4	.026[a]
Student enrollment	286	5.064	6	.536
Free and reduced lunch rate	284	.166	2	.920
Presence of a law enforcement officer	284	6.526	2	.038[a]
Presence of a crisis management or security plan	284	.923	1	.337

[a] *statistically significant at ρ<.05*

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 9, preparedness to lead through a crisis, between the five groups of respondents in the grade configurations of their schools (K-5, K-8, 6-8, 9-12, and other). The distributions of preparedness to lead through a crisis responses were statistically significantly different between groups χ^2 (4) = 11.064, ρ =.026. A post hoc Mann Whitney test was conducted for item 9 responses to evaluate pairwise differences among the five groups in grade configuration. Statistically significant differences were found in group responses for grade configuration between K-5 (mean rank = 117.99) and 6-8 (mean rank = 137.63) (ρ =.042) at the ρ<.05 level and between K-5 (mean rank = 95.26) and K-8 (mean rank = 155) (ρ =.018) at the ρ<.05 level. The result of a Spearman rank order correlation conducted to determine the relationship between grade configuration and preparedness to lead through a crisis was a

statistically significant positive correlation between the two ($r_s = .145$, $\rho = .014$) at the $\rho<.05$ level.

A Kruskal Wallace test was conducted to determine if there were differences in responses to item 9 of the survey, preparedness to lead through a crisis, between the three groups of respondents with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of preparedness to lead through a crisis responses were statistically significantly different between groups $\chi^2(2) = 6.526$, $\rho = .038$. A post hoc Mann Whitney test was conducted for item 9 responses to evaluate pairwise differences among the three groups in presence of a law enforcement officer. Statistically significant differences were found in group responses between full time (mean rank = 158.94) and never (mean rank = 132.70) ($p=.009$) at the $\rho<.01$ level. The result of a Spearman rank order correlation, run to determine the relationship between presence of a law enforcement officer and preparedness to lead through a crisis, indicated a statistically significant negative correlation between the two ($r_s = -.770$, $\rho = .000$) at the $\rho<.001$ level. For this variable, survey response analysis indicated that as presence of a law enforcement officer decreased, there was a statistically significant moderate to strong corresponding decrease in the perception of readiness in the sample of principals.

Research Question 2

To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

Responses to item 20 of the PSSPS survey, which elicited responses on principals' perceived preparedness regarding their readiness to manage 16 specific critical crisis incidents during the course of a normal school day, were utilized in analysis of the data to respond to Research Question 2. Overall, principals' responses indicated a higher rate of preparedness for the majority of crisis incidents. Noticeable rates of responses indicating unsure, unprepared, and very unprepared were reported for the following crisis incidents: firearm use (68, 25.1%), weapon use (46, 16.9%), explosive device (49, 18.1%), toxic/chemical spill (77, 28.2%), crowd control/riot (71, 26.3%), rape (91, 33.6%), and gang related crime (71, 26.3%). These data are displayed in Table 21.

Table 21

Overall Principal Responses to Current Perceptions of Level of Preparedness in Relation to Specific Crisis Incidents (N = 274)

Crisis Incidents (N)	Very Unprepared *f* (%)	Unprepared *f* (%)	Unsure *f* (%)	Prepared *f* (%)	Very Prepared *f* (%)
Item 20a. Battery on a student (274)	2 (.7)	0 (0.0)	0 (0.0)	113 (41.5)	157 (57.7)
Item 20b. Battery on a school board employee (273)	2 (.7)	0 (0.0)	3 (1.1)	114 (42.1)	152 (56.1)
Item 20c. Dangerous intruder on campus (273)	1 (.4)	4 (1.5)	15 (5.6)	151 (55.9)	99 (36.7)
Item 20d. Firearm use on campus (272)	4 (1.5)	20 (7.4)	44 (16.2)	154 (56.8)	49 (18.1)*
Item 20e. Firearm possession on campus (273)	2 (.7)	4 (1.5)	20 (7.4)	153 (56.3)	93 (34.2)
Item 20f. Weapon use on campus other than firearm (274)	3 (1.1)	11 (4.0)	32 (11.8)	157 (57.7)	69 (25.4)*
Item 20g. Weapon possession on campus other than firearm (274)	1 (.4)	5 (1.9)	14 (5.2)	137 (50.7)	113 (41.9)
Item 20h. Fire on campus (272)	2 (.7)	1 (.4)	2 (.7)	113 (41.5)	154 (56.6)
Item 20i. Explosive device or bomb on campus (273)	4 (1.5)	20 (7.4)	25 (9.2)	151 (55.5)	72 (26.5)*
Item 20j. Weather event on or near campus (273)	2 (.7)	2 (.7)	3 (1.1)	107 (39.5)	157 (57.9)
Item 20k. Chemical/toxic spill on or near campus (271)	2 (.7)	30 (11.0)	45 (16.5)	134 (49.3)	61 (22.4)*
Item 20l. Crowd control incident / riot on campus (274)	0 (0.0)	29 (10.7)	42 (15.6)	126 (46.7)	73 (27.0)*
Item 20m. Custody related abduction (271)	0 (0.0)	10 (3.7)	15 (5.6)	153 (57.1)	90 (33.6)
Item 20n. Rape on campus (271)	11 (4.1)	35 (12.9)	45 (16.6)	117 (43.2)	63 (23.2)*
Item 20o. Suicide attempt/baker act on campus (272)	4 (1.5)	11 (4.1)	7 (2.6)	132 (48.7)	117 (43.2)
Item 20p. Gang/secret society related crime or violence (272)	5 (1.9)	26 (9.6)	40 (14.8)	128 (47.4)	71 (26.3)*

Note. * = Higher reports of unsure, unprepared, and very unprepared.

A Kruskal Wallace test was conducted to determine to what extent there were differences in survey responses based on principal demographic and school characteristic independent variables. The first test was run on responses to item 20 of the survey regarding principals' perceived preparedness by gender for each of the 16 specific crisis incidents that might occur during the course of a normal school day. Analysis revealed no significant $\rho<.05$ differences in group responses for 11 of the 16 specific crisis incidents and statistically significant differences at the $\rho<.05$ level for five specific crisis incidents based on gender. Table 22 shows results of the analysis of principals' perceived preparedness for crisis incidents by gender.

Table 22

Principals' Perceived Preparedness for Crisis Incidents: Gender (N = 272)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	272	.929	1	.335
Battery on a school board employee	271	2.479	1	.115
Dangerous intruder on campus	270	.643	1	.423
Firearm use on campus	271	1.126	1	.289
Firearm possession on campus	272	.192	1	.661
Weapon use on campus other than firearm	272	.480	1	.488
Weapon possession on campus other than firearm	270	.162	1	.687
Fire on campus	272	5.368	1	.021[a]
Explosive device or bomb on campus	272	4.579	1	.032[a]
Weather event on or near campus	271	1.858	1	.173
Chemical/toxic spill on or near campus	272	2.515	1	.113
Crowd control/riot on campus	270	6.557	1	.010[a]
Custody related abduction	268	.550	1	.458
Rape on campus	271	11.750	1	.001[b]
Suicide attempt/Baker Act on campus	271	2.041	1	.153
Gang/secret society related crime or violence	270	13.423	1	.000[c]

[a] *statistically significant at $\rho<.05$*
[b] *statistically significant at $\rho<.01$*
[c] *statistically significant at $\rho<.001$*

A Mann Whitney test was conducted and a statistically significant difference at the $\rho<.05$ level was noted between male (mean rank = 149.86) and female (mean rank = 129.67) in regard to perceived preparedness for fire on campus χ^2 (1) = 5.368, $\rho=.021$. The result of a Spearman rank order correlation, conducted to determine the relationship between fire on campus and gender, was a statistically significant negative correlation between the two (r_s = -.141, ρ = .020) at the $\rho<.05$ level.

A Mann Whitney test was conducted and a statistically significant difference at the $\rho<.05$ level was noted between male (mean rank = 149.34) and female (mean rank = 129.94) perceived preparedness for explosive device or bomb on campus χ^2 (1) = 4.579, $\rho=.032$. The result of a Spearman rank order correlation conducted to determine the relationship between explosive device or bomb on campus and gender was a statistically significant negative correlation between the two (r_s = -.130, ρ = .032) at the $\rho<.05$ level.

A Mann Whitney test was conducted and a statistically significant difference at the $\rho<.05$ level was noted between male (mean rank = 151.32) and female (mean rank = 127.32) perceived preparedness for crowd control incident/riot on campus χ^2 (1) = 6.557, $\rho=.010$. The result of a Spearman rank order correlation, conducted to determine the relationship between crowd control incident/riot on campus and gender, was a statistically significant negative correlation between the two (r_s = -.156, ρ = .010) at the $\rho<.01$ level.

A Mann Whitney test was conducted and a statistically significant difference at the $\rho<.01$ level was noted between male (mean rank = 157.60) and female (mean rank = 124.90) perceived preparedness for rape on campus χ^2 (1) = 11.750, $\rho=.001$. The result

of a Spearman rank order correlation, conducted to determine the relationship between perceived preparedness for rape on campus and gender, was a statistically significant negative correlation between the two (r_s = -.209, ρ = .001) at the ρ<.001 level.

A Mann Whitney test was conducted and a statistically significant difference at the ρ<.01 level was noted between male (mean rank = 158.10) and female (mean rank = 123.82) perceived preparedness for gang/secret society related crime or violence χ^2 (1) = 13.423, ρ=.000. The result of a Spearman rank order correlation, run to determine the relationship between gang/secret society related crime or violence and gender, indicated a statistically significant negative correlation between the two (r_s = -.223, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted on responses to survey item 20 regarding groups' length of time as a principal and principals' perceived preparedness for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant ρ<.05 differences in group responses for 13 of the 16 specific crisis incidents and statistically significant differences at a ρ<.05 level in three group responses by length of time as a principal. Table 23 shows results of the analysis of principals' perceived preparedness for crisis incidents by length of time as a principal.

Table 23

Principals' Perceived Preparedness for Crisis Incidents: Length of Time as a Principal (N = 272)

Crisis Incident	N	Chi-Square	df	Asymp. Sig.
Battery on a student	272	6.343	4	.175
Battery on a school board employee	271	3.343	4	.502
Dangerous intruder on campus	270	.954	4	.917
Firearm use on campus	271	4.081	4	.395
Firearm possession on campus	272	7.121	4	.130
Weapon use on campus other than firearm	272	7.697	4	.103
Weapon possession on campus other than firearm	270	.697	4	.952
Fire on campus	272	10.346	4	.035[a]
Explosive device or bomb on campus	272	5.192	4	.268
Weather event on or near campus	271	9.853	4	.043[a]
Chemical/toxic spill on or near campus	272	6.763	4	.149
Crowd control/riot on campus	270	1.242	4	.871
Custody related abduction	268	10.340	4	.035[a]
Rape on campus	271	3.851	4	.427
Suicide attempt/Baker Act on campus	271	5.688	4	.224
Gang/secret society related crime or violence	270	3.215	4	.522

[a] *statistically significant at $\rho<.05$*

A Kruskal Wallace test was conducted and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for fire on campus between the five groups of respondents working for different lengths of time as principal: (0-1, 2-5, 6-10, 11-15, and 16+ years). The distributions of level of preparedness for fire on campus were statistically significantly different between groups χ^2 (4) = 10.346, ρ =.035. A post hoc Mann Whitney test was conducted for the crisis incident, fire on campus, to evaluate pairwise differences among the five groups. Statistically significant differences in group

responses were found between 0-1 years of experience (mean rank = 113.72) and 6 to 10 years of experience (mean rank = 150.32) ($\rho = .007$) at the $\rho<.01$ level, and between 6-10 years of experience (mean rank = 150.32) and 11-15 years of experience (mean rank = 118.42) ($\rho = .016$) as a principal at a $\rho<.05$ level. The result of a Spearman rank order correlation conducted to determine the relationship between perceived level of preparedness for fire on campus and length of time as a principal indicated no correlation between the two ($r_s = .053$, $\rho = .387$) at the $\rho<.05$ level.

A Kruskal Wallace test was conducted and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for weather event on or near campus between the five groups of respondents working for different lengths of time as principal (0-1, 2-5, 6-10, 11-15, and 16+ years). The distributions of level of preparedness for weather event on or near campus were statistically significantly different between groups χ^2 (4) = 9.853, $\rho = .043$. A post hoc Mann Whitney test was conducted for weather event on or near campus to evaluate pairwise differences among the five groups in length of time as a principal. Statistically significant differences in group responses were found between 0-1years of experience (mean rank = 48.89) and 2-5 years of experience (mean rank = 64.63) ($\rho = .009$) at the $\rho<.01$ level, between 0-1 years of experience (mean rank = 47.04) and 6-10 years of experience (mean rank = 62.79) ($\rho = .007$) at the $\rho<.01$ level, and between 0-1 years of experience (mean rank = 29.31) and 16 or more years of experience (mean rank = 39.13) ($\rho = .018$) as a principal at a $\rho<.05$ level. The result of a Spearman rank order correlation conducted to determine the relationship between perceived preparedness for weather event on or near campus and

length of time as a principal indicated that there was no correlation between the two (r_s = .079, ρ = .196) at the ρ<.05 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for custody related abduction between the five groups of respondents working for different lengths of time as principal: (0-1, 2-5, 6-10, 11-15, and 16+ years). The distributions of preparedness for weather event on or near campus were statistically significantly different between groups χ^2 (4) = 10.340, ρ =.035. A post hoc Mann Whitney test was conducted for custody related abduction to evaluate pairwise differences among the five groups in length of time as a principal. Statistically significant differences in group responses were found between 2-5 years of experience (mean rank = 66.85) and 11 to 15 years of experience (mean rank = 49.67) (ρ = .006) at the ρ<.01 level, between 6-10 years of experience (mean rank = 63.54) and 11-15 years of experience (mean rank = 48.14) (ρ = .010) at the ρ<.05 level, and between 11-15 years of experience (mean rank = 31.00) and 16 or more years of experience (mean rank = 39.90) (ρ = .033) as a principal at a ρ<.05 level. The result of a Spearman rank order correlation, conducted to determine the relationship between perceived preparedness for custody related abduction and length of time as a principal, indicated that there was no correlation between the two (r_s = - .047, ρ = .443) at the ρ<.05 level.

A Kruskal Wallace test was conducted on differences in response to survey item 20 by grade configuration as to principals' perceived preparedness for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no

significant ρ<.05 differences in group responses for 10 of 16 specific crisis incidents and statistically significant differences at a ρ<.05 level in six group responses by grade configuration. Table 24 shows the results of the analysis for principals' perceived preparedness for crisis incidents by grade configuration.

Table 24

Principals' Perceived Preparedness for Crisis Incidents: Grade Configuration (N = 272)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	272	15.384	4	.004[b]
Battery on a school board employee	271	16.384	4	.003[b]
Dangerous intruder on campus	270	1.376	4	.848
Firearm use on campus	271	4.317	4	.365
Firearm possession on campus	272	9.463	4	.051
Weapon use on campus other than firearm	272	4.601	4	.331
Weapon possession on campus (other than firearm	270	8.316	4	.081
Fire on campus	272	2.369	4	.668
Explosive device or bomb on campus	272	4.872	4	.301
Weather event on or near campus	271	.949	4	.917
Chemical/toxic spill on or near campus	272	9.209	4	.056
Crowd control/riot on campus	270	27.918	4	.000[c]
Custody related abduction	268	3.469	4	.483
Rape on campus	271	47.175	4	.000[c]
Suicide attempt/Baker Act on campus	271	30.995	4	.000[c]
Gang/secret society related crime or violence	270	35.347	4	.000[c]

[a]*statistically significant at ρ<.05*
[b]*statistically significant at ρ<.01*
[c]*statistically significant at ρ<.001*

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for battery on a student between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of preparedness for battery on a student were

statistically significantly different between groups χ^2 (4) = 15.384, ρ =.004. A post hoc Mann Whitney test was conducted for battery on a student to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 108.07) and 6-8 (mean rank = 139.73) (ρ = .000) at the ρ<.001 level, and between K-5 (mean rank = 103.61) and Grade 9-12 (mean rank = 123.12) (ρ = .043) at the ρ<.05 level. The result of a Spearman rank order correlation, conducted to determine the relationship between perceived preparedness for battery on a student and grade configuration, was a statistically significant positive correlation between the two (r_s = .213, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for battery on a school board employee between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of preparedness for battery on a school board employee were statistically significantly different between groups χ^2 (4) = 16.384, ρ =.003. A post hoc Mann Whitney test was conducted for the crisis incident battery on a student to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 107.43) and 6-8 (mean rank = 139.54) (ρ = .000) at the ρ<.001 level and between K-5 (mean rank = 102.64) and 9-12 (mean rank = 124.77) (ρ = .022) at the ρ<.05 level. The result of a Spearman rank order correlation, conducted to determine the relationship between perceived preparedness for battery on a

school board employee and grade configuration, was a statistically significant positive correlation between the two (r_s = .227, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for crowd control incident/riot on campus between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of preparedness for crowd control incident/riot on campus were statistically significantly different between groups χ^2 (4) = 27.918, ρ =.000. A post hoc Mann Whitney test was conducted for the crisis incident crowd control incident/riot on campus to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 104.72) and 6-8 (mean rank = 146.10) (ρ = .000) at the ρ<.001 level, and between K-5 (mean rank = 99.70) and 9-12 (mean rank = 135.62) (ρ = .000) at the ρ<.001 level. The result of a Spearman rank order correlation, conducted to determine the relationship between perceived preparedness for crowd control incident/riot on campus and grade configuration, was a statistically significant positive correlation between the two (r_s = .309, ρ = .000) at the ρ<.001 level. For this variable, survey response analysis indicated that as a higher grade configuration was reported there was a statistically significant weak to moderate corresponding increase in the perception of preparedness in the sample of principals for crowd control crisis incidents.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for rape on campus between the

five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of preparedness for rape on campus were statistically significantly different between groups χ^2 (4) = 47.175, ρ =.000. A post hoc Mann Whitney test was conducted for rape on campus to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 88,78) and K-8 (mean rank = 143.50) (ρ = .028) at the ρ<.05 level, K-5 (mean rank = 102.73) and 6-8 (mean rank = 154.76) (ρ = .000) at the ρ<.001 level, and between K-5 (mean rank = 97.70) and 9-12 (mean rank = 148.14) (ρ = .000) at the ρ<.001 level. The result of a Spearman rank order correlation, conducted to determine the relationship between perceived preparedness for rape on campus and grade configuration, was a statistically significant positive correlation between the two (r_s = .405, ρ = .000) at the ρ<.001 level. For this variable, survey response analysis indicated that as a higher grade configuration was reported there was a statistically significant moderate corresponding increase in the perception of preparedness in the sample of principals for rape crisis incidents.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for suicide attempt/baker act on campus between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of preparedness for suicide attempt/baker act on campus were statistically significantly different between groups χ^2 (4) = 30.995, ρ =.000. A post hoc Mann Whitney test was conducted for the crisis incident suicide attempt/baker act on campus to evaluate pairwise differences among the

five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 104.27) and 6-8 (mean rank = 149.79) ($\rho = .000$) at the $\rho<.001$ level, and between K-5 (mean rank = 100.90) and 9-12 (mean rank = 132.99) ($\rho = .001$) at the $\rho<.01$ level. The result of a Spearman rank order correlation, conducted to determine the relationship between grade configuration and perceived preparedness for suicide attempt/baker act on campus, was a statistically significant positive correlation between the two ($r_s = .315$, $\rho = .000$) at the $\rho<.001$ level. For this variable, survey response analysis indicated that as a higher grade configuration was reported, there was a statistically significant weak to moderate corresponding increase in the perception of preparedness in the sample principals for suicide attempt/baker act crisis incidents.

A Kruskal Wallace test was conducted and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for gang/secret society related crime or violence between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of preparedness for gang/secret society related crime or violence were statistically significantly different between groups χ^2 (4) = 35.347, $\rho = .000$. A post hoc Mann Whitney test was conducted for the crisis incident gang/secret society related crime or violence to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 102.96) and 6-8 (mean rank = 151.69) ($\rho = .000$) at the $\rho<.001$ level, and between K-5 (mean rank = 99.43) and 9-12 (mean rank = 136.91) ($\rho = .000$) at the $\rho<.001$ level. The result of a

Spearman rank order correlation, conducted to determine the relationship between grade configuration and perceived preparedness for gang/secret society related crime or violence, was a statistically significant positive correlation between the two (r_s = .343, ρ = .000) at the ρ<.001 level. For this variable, survey response analysis indicated that as a higher grade configuration was reported, there was a statistically significant weak to moderate corresponding increase in the perception of preparedness in the sample of principals for gang related crisis incidents.

A Kruskal Wallace test was conducted on responses to survey item 20 regarding groups within student enrollment and principals' perceived preparedness for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant ρ<.05 differences in group responses for 10 of the 16 specific crisis incidents, and statistically significant differences at a ρ<.05 level in six group responses by size of student enrollment. Table 25 shows results of the analysis for perceived preparedness of principals for crisis incidents by student enrollment.

Table 25

Principals' Perceived Preparedness for Crisis Incidents: Student Enrollment (N = 272)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	272	22.758	6	.001[b]
Battery on a school board employee	271	21.658	6	.001[b]
Dangerous intruder on campus	270	1.590	6	.953
Firearm use on campus	271	1.229	6	.975
Firearm possession on campus	272	5.807	6	.445
Weapon use on campus other than firearm	272	2.065	6	.914
Weapon possession on campus other than firearm	270	6.450	6	.375
Fire on campus	272	5.413	6	.492
Explosive device or bomb on campus	272	.918	6	.989
Weather event on or near campus	271	5.875	6	.437
Chemical/toxic spill on or near campus	272	3.826	6	.700
Crowd control/riot on campus	270	14.993	6	.020[a]
Custody related abduction	268	2.081	6	.912
Rape on campus	271	28.009	6	.000[c]
Suicide attempt/Baker Act on campus	271	14.828	6	.022[a]
Gang/secret society related crime or violence	270	19.774	6	.003[b]

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*
[c] *statistically significant at ρ<.001*

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for battery on a student between the seven groups of respondents working with different student enrollment groups (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, and 2,501-3,000, and more than 3,000). The distributions of preparedness for battery on a student were statistically significantly different between groups χ^2 (6) = 22.758, ρ =.001. A post hoc Mann Whitney test was conducted for the crisis incident battery on a student to evaluate

pairwise differences among the seven student enrollment groups. Statistically significant differences in group responses were found between 0 - 500 (mean rank = 35.14) and 1,001 – 1,500 (mean rank = 47.26) ($\rho = .004$) at the $\rho<.01$ level, between 501-1,000 (mean rank = 94.75) and 1,001–1,500 (mean rank = 128.37) ($\rho = .000$) at the $\rho<.001$ level, between 501–1,000 (mean rank = 80.47) and 2,501–3,000 (mean rank = 122.00) ($\rho = .015$) at the $\rho<.05$ level, and between 1,001–1500 (mean rank = 24.90) and more than 3,000 (mean rank 5.50) ($\rho = .043$) at the $\rho<.05$ level. The result of a Spearman rank order correlation conducted to determine the relationship between student enrollment and perceived preparedness for battery on a student was a statistically significant positive correlation between the two ($r_s = .197$, $\rho = .001$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for battery on a school board employee between the seven groups of respondents working in schools with differing student enrollment (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, and 2,501-3,000, and more than 3,000). The distributions of preparedness for battery on a school board employee were statistically significantly different between groups χ^2 (6) = 21.658, $\rho = .001$. A post hoc Mann Whitney test was conducted for the crisis incident battery on a school board employee to evaluate pairwise differences among the seven groups. Statistically significant differences in group responses were found between 0 - 500 (mean rank = 34.51) and 1,001–1,500 (mean rank = 47.73) ($\rho = .003$) at the $\rho<.01$ level, between 0–500 (mean rank = 19.92) and 2,501-3000 (mean rank = 31.00) ($\rho = .019$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 80.47) and 2,501–3,000 (mean rank =

122.00) ($\rho = .015$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 94.76) and 1,001–1,500 (mean rank 126.03) ($\rho = .000$) at the $\rho<.001$ level, between 501–1,000 (mean rank = 79.94) and 2,501–3,000) ($\rho = .013$) at the $\rho<.05$ level, and between 2,501–3,000 (mean rank = 4.50) and more than 3,000 (mean rank = 1.00) ($\rho = .014$) at the $\rho<.05$ level. The result of a Spearman rank order correlation, conducted to determine the relationship between student enrollment and perceived preparedness for battery on a school board employee, was a statistically significant positive correlation between the two ($r_s = .215$, $\rho = .001$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for crowd control incident/riot on campus between the seven groups of respondents working in schools with different student enrollments (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, and 2,501-3,000, and more than 3,000). The distributions of preparedness for crowd control incident/riot on campus were statistically significantly different between groups χ^2 (6) = 14.993, $\rho = .020$. A post hoc Mann Whitney test was conducted for crowd control incident/riot on campus to evaluate pairwise differences among the seven groups. Statistically significant differences in group responses were found between 0-500 (mean rank = 34.93) and 1,001–1,500 (mean rank = 47.41) ($\rho = .010$) at the $\rho<.05$ level, between 0–500 (mean rank = 19.72) and 2,501-3,000 (mean rank = 32.17) ($\rho = .015$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 80.47) and 2,501–3,000 (mean rank = 122.00) ($\rho = .015$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 96.15) and 1,001–1,500 (mean rank 119.16) ($\rho = .011$) at the $\rho<.05$ level, and between 501–1,000

(mean rank = 79.40) and 2,501–3,000 (mean rank = 122.33) ($\rho = .019$) at the $\rho<.05$ level. The result of a Spearman rank order correlation, conducted to determine the relationship between student enrollment and perceived preparedness for crowd control incident/riot on campus, was a statistically significant positive correlation between the two ($r_s = .213$, $\rho = .000$) at the $\rho<.001$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for rape on campus between the seven groups of respondents working in schools with different student enrollments (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, and 2,501-3,000, and more than 3,000). The distributions of preparedness for rape on campus were statistically significantly different between groups χ^2 (6) = 28.009, $\rho = .000$. A post hoc Mann Whitney test was conducted for rape on campus to evaluate pairwise differences among the seven groups. Statistically significant differences in group responses were found between 0-500 (mean rank = 33.21) and 1,001–1,500 (mean rank = 48.73) ($\rho = .002$) at the $\rho<.01$ level, between 0–500 (mean rank = 23.15) and 1,501–2,000 (mean rank = 36.19) ($\rho = .002$) at the $\rho<.01$ level, between 0–500 (mean rank = 19.39) and 2,501–3,000 (mean rank = 34.17) ($\rho = .004$) at the $\rho<.01$ level, between 501–1,000 (mean rank = 94.78) and 1,001–1,500 (mean rank 125.96) ($\rho = .001$) at the $\rho<.01$ level, between 501–1,000 (mean rank = 83.79) and 1,501–2,000 (mean rank = 119.67) ($\rho = .003$) at the $\rho<.01$ level, and between 501–1,000 (mean rank = 79.60) and 2,501–3,000 (mean rank = 131.00) ($\rho = .006$) at the $\rho<.01$ level. The result of a Spearman rank order correlation, conducted to determine the relationship between student enrollment and perceived

preparedness for rape on campus, was a statistically significant positive correlation between the two (r_s = .296, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for suicide/baker act on campus between the seven groups of respondents working in schools with different student enrollments (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, and 2,501-3,000, and more than 3,000). The distributions of preparedness for suicide/baker act on campus were statistically significantly different between groups χ^2 (6) = 14.828, ρ =.022. A post hoc Mann Whitney test was conducted for the crisis incident suicide/baker act on campus to evaluate pairwise differences among the seven groups. Statistically significant differences in group responses were found between 0-500 (mean rank = 35.31) and 1,001-1,500" (mean rank = 47.13) (ρ = .013) at the ρ<.05 level, and between 501-1,000 (mean rank = 95.94) and 1,001-1,500 (mean rank = 122.12) (ρ = .003) at the ρ<.01 level. The result of a Spearman rank order correlation, conducted to determine the relationship between student enrollment and perceived preparedness for suicide/baker act on campus, was a statistically significant positive correlation between the two (r_s = .201, ρ = .001) at the ρ<.01 level.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for gang/secret society related crime or violence between the seven groups of respondents working in schools with different sizes of student enrollment (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, and 2,501-3,000, and more than 3,000). The distributions of preparedness for

gang/secret society related crime or violence were statistically significantly different between groups χ^2 (6) = 19.774, ρ =.003. A post hoc Mann Whitney test was conducted for the crisis incident gang/secret society related crime or violence to evaluate pairwise differences among the seven groups. Statistically significant differences in group responses were found between 0-500 (mean rank = 33.47) and 1,001-1,500 (mean rank = 48.53) (ρ = .002) at the ρ<.01 level, between 0-500 (mean rank = 23.47) and 1,501-2,000 (mean rank = 35.56) (ρ = .005) at the ρ<.01 level, between 501-1000 (mean rank = 95.54) and 1,001-1,500 (mean rank = 121,16) (ρ = .005) at the ρ<.01 level, between 501-1,000 (mean rank = 83,90) and 1,501-2,000 (mean rank 113,67) (ρ = .011) at the ρ<.05 level. The result of a Spearman rank order correlation, conducted to determine the relationship between size of student enrollment and perceived preparedness for gang/secret society related crime or violence, was a statistically significant positive correlation between the two (r_s = .243, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 20 regarding groups within free and reduced lunch rate and principals' perceived preparedness for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant ρ<.05 differences in group responses for 15 of the 16 specific incidents and statistically significant differences at a ρ<.05 level for only one group. Table 26 shows results of the analysis of principals' perceived preparedness for crisis incidents by school free and reduced lunch rate.

Table 26

Principals' Perceived Preparedness for Crisis Incidents: School Free and Reduced Lunch Rate (N = 270)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	270	.515	2	.773
Battery on a school board employee	269	.161	2	.923
Dangerous intruder on campus	268	1.573	2	.456
Firearm use on campus	269	.102	2	.950
Firearm possession on campus	270	.783	2	.676
Weapon use on campus other than firearm	270	1.887	2	.389
Weapon possession on campus other than firearm	268	.298	2	.862
Fire on campus	270	1.488	2	.475
Explosive device or bomb on campus	270	.356	2	.837
Weather event on or near campus	269	6.486	2	.039[a]
Chemical/toxic spill on or near campus	270	4.619	2	.099
Crowd control/riot on campus	268	1.829	2	.401
Custody related abduction	266	1.532	2	.465
Rape on campus	269	.108	2	.947
Suicide attempt/Baker Act on campus	269	2.531	2	.282
Gang/secret society related crime or violence	268	.223	2	.894

[a] *statistically significant at $\rho<.05$*

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for weather event on or near campus between the three groups of respondents working in schools with different percentages of free and reduced lunch rate student populations (0-33%, 34-67%, and 68-100%). The distributions of preparedness for weather event on or near campus were statistically significantly different between groups χ^2 (2) = 6.486, ρ =.039. A post hoc Mann Whitney test was conducted for weather event on or near campus to evaluate

pairwise differences among the three groups. Statistically significant differences in group responses were found between 34–67% (mean rank = 131.89) and 68–100% (mean rank = 112.96), ($\rho = .015$) at the $\rho<.05$ level. The result of a Spearman rank order correlation, conducted to determine the relationship between free and reduced lunch rate and perceived preparedness for weather event on or near campus, indicated no correlation between the two ($r_s = -.098$, $\rho = .109$) at the $\rho<.05$ level.

A Kruskal Wallace test was conducted on responses to item 20 of the survey regarding groups within presence of a law enforcement officer and principals' perceived level of preparedness for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant $\rho<.05$ differences in group responses for eight of the 16 specific crisis incidents and statistically significant differences at a $\rho<.05$ level in eight group responses by school presence of a law enforcement officer. Table 27 shows results of the analysis of principals' perceived preparedness for crisis incidents by presence of a law enforcement officer.

Table 27

Principals' Perceived Preparedness for Crisis Incidents: Presence of a Law Enforcement Officer (N = 270)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	270	13.410	2	.001[b]
Battery on a school board employee	269	15.325	2	.000[c]
Dangerous intruder on campus	268	.847	2	.655
Firearm use on campus	269	1.213	2	.545
Firearm possession on campus	270	14.573	2	.001[b]
Weapon use on campus other than firearm	270	4.887	2	.087
Weapon possession on campus other than firearm	268	10.100	2	.006[b]
Fire on campus	270	2.355	2	.308
Explosive device or bomb on campus	270	5.836	2	.054
Weather event on or near campus	269	.331	2	.848
Chemical/toxic spill on or near campus	270	1.082	2	.582
Crowd control/riot on campus	268	21.325	2	.000[c]
Custody related abduction	266	.894	2	.639
Rape on campus	269	36.461	2	.000[c]
Suicide attempt/Baker Act on campus	269	22.637	2	.000[c]
Gang/secret society related crime or violence	268	40.085	2	.000[c]

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*
[c] *statistically significant at ρ<.001*

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for battery on a student between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of preparedness for battery on a student were statistically significantly different between groups χ^2 (2) = 13.410, ρ =.001. A post hoc Mann Whitney test was conducted for the crisis incident battery on a

student to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 121.40) and never (mean rank = 95.52) ($\rho = .000$) at the $\rho<.001$ level, and between part time (mean rank = 106.03) and never (mean rank = 89.87) ($\rho = .029$) at the $\rho<.05$ level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived preparedness for battery on a student, was a statistically significant negative correlation between the two ($r_s = -.222$, $\rho = .000$) at the $\rho<.001$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perceived preparedness for battery on a school board employee between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of preparedness for battery on a school board employee were statistically significantly different between groups $\chi^2 (2) = 15.325$, $\rho =.000$. A post hoc Mann Whitney test was conducted for the crisis incident battery on a school board employee to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 121.64) and never (mean rank = 94.68) ($\rho = .000$) at the $\rho<.001$ level, and between part time (mean rank = 108.36) and never (mean rank = 88.79) ($\rho = .009$) at the $\rho<.01$ level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived preparedness for battery on a school board employee,

was a statistically significant negative correlation between the two (r_s = -.234, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for firearm possession on campus between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of preparedness for firearm possession on campus were statistically significantly different between groups χ^2 (2) = 14.573, ρ =.001. A post hoc Mann Whitney test was conducted for the crisis incident firearm possession on campus to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 77.10) and part time (mean rank = 62.77) (ρ = .022) at the ρ<.05 level, and between full time (mean rank = 123.36) and never (mean rank = 94.28) (ρ = .000) at the ρ<.001 level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived preparedness for firearm possession on campus, was a statistically significant negative correlation between the two (r_s = -.221, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for weapon possession on campus between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of preparedness for weapon possession on campus were statistically significantly different

between groups χ^2 (2) = 10.100, ρ =.006. A post hoc Mann Whitney test was conducted for the crisis incident weapon possession on campus to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 119.51) and never (mean rank = 94.93) (ρ = .001) at the ρ<.01 level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived preparedness for weapon possession on campus, was a statistically significant negative correlation between the two (r_s = -.190, ρ = .002) at the ρ<.01 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for crowd control incident/riot on campus between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of preparedness for crowd control incident/riot on campus were statistically significantly different between groups χ^2 (2) = 21.325, ρ =.000. A post hoc Mann Whitney test was conducted for the crisis incident crowd control incident/riot on campus to evaluate pairwise differences among the three groups in presence of a law enforcement officer. Statistically significant differences in group responses were found between full time (mean rank = 77.31) and part time (mean rank = 62.48) (ρ = .020) at the ρ<.05 level, and between full time (mean rank = 126.86) and never (mean rank = 90.24) (ρ = .000) at the ρ<.001 level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived

preparedness for crowd control incident/riot on campus, was a statistically significant negative correlation between the two (r_s = -.280, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for rape on campus between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of preparedness for rape on campus were statistically significantly different between groups χ^2 (2) = 36.461, ρ =.000. A post hoc Mann Whitney test was conducted for rape on campus to evaluate pairwise differences among the three groups in presence of a law enforcement officer. Statistically significant differences in group responses were found between full time (mean rank = 79.93) and part time (mean rank = 57.93) (ρ = .001) at the ρ<.01 level, and between full time (mean rank = 135.35) and never (mean rank = 86.18) (ρ = .000) at the ρ<.001 level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived preparedness for rape on campus, was a statistically significant negative correlation between the two (r_s = -.359, ρ = .000) at the ρ<.001 level. For this variable, survey response analysis indicated that as the presence of a law enforcement officer decreased, there was a statistically significant weak to moderate corresponding increase in the perception of preparedness in the sample of principals for rape crisis incidents.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for suicide attempt/baker act on campus between the three groups of respondents working with different levels (full time,

part time, and never) of presence of a law enforcement officer. The distributions of preparedness for suicide attempt/baker act on campus were statistically significantly different between groups χ^2 (2) = 22.637, ρ =.000. A post hoc Mann Whitney test was conducted for the crisis incident suicide attempt/baker act on campus to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 78.27) and part time (mean rank = 61.19) (ρ = .005) at the ρ<.01 level, and between full time (mean rank = 127.62) and never (mean rank = 90.68) (ρ = .000) at the ρ<.001 level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived preparedness for suicide attempt/baker act on campus, was a statistically significant negative correlation between the two (r_s = -.279, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perceived preparedness for gang/secret society related crime or violence between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of preparedness for gang/secret society related crime or violence were statistically significantly different between groups χ^2 (2) = 40.085, ρ =.000. A post hoc Mann Whitney test was conducted for gang/secret society related crime or violence to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 76.68) and part time (mean rank = 63.33) (ρ = .005) at the ρ<.01 level, between full time (mean rank =

134.39) and never (mean rank = 85.44) (ρ = .000) at the ρ<.001 level, and between part time (mean rank = 112.94) and never (mean rank = 85.05) (ρ = 000) at the ρ<.001 level. The result of a Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perceived preparedness for gang/secret society related crime or violence, indicated a statistically significant negative correlation between the two (r_s = -.387, ρ = .000) at the ρ<.001 level. For this variable, survey response analysis indicated that as the presence of a law enforcement officer decreased, there was a statistically significant weak to moderate corresponding increase in the perception of preparedness in the sample of principals for gang related crisis incidents.

A Kruskal Wallace test was conducted on responses to item 20 of the survey regarding groups within presence of a crisis management or security plan and principals' perceived preparedness for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant ρ<.05 differences in group responses for all of the 16 specific crisis incidents. It was noteworthy, however, that of the respondents (N=285) to survey item 7, "Your school has a crisis management or security plan," only two respondents answered that they did not have a crisis management or security plan. No further analysis was conducted beyond the examination of statistics for the extent to which there were statistically significant differences. Table 28 shows results of the analysis by principals' perceived preparedness for crisis incidents by presence of a crisis management or security plan.

Table 28

Principals' Perceived Preparedness for Crisis Incidents: Presence of a Crisis Management or Security Plan (N = 271)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	271	2.681	1	.102
Battery on a school board employee	270	2.386	1	.122
Dangerous intruder on campus	269	.669	1	.413
Firearm use on campus	270	.037	1	.848
Firearm possession on campus	271	.470	1	.493
Weapon use on campus other than firearm	271	.055	1	.815
Weapon possession on campus other than firearm	269	.904	1	.342
Fire on campus	271	2.480	1	.115
Explosive device or bomb on campus	271	1.263	1	.261
Weather event on or near campus	270	2.502	1	.114
Chemical/toxic spill on or near campus	271	.021	1	.884
Crowd control/riot on campus	269	.714	1	.398
Custody related abduction	267	.459	1	.498
Rape on campus	270	.067	1	.796
Suicide attempt/Baker Act on campus	270	.927	1	.336
Gang/secret society related crime or violence	269	.000	1	.992

[a] *statistically significant at $\rho<.05$*

Research Question 3

To what extent, if any, are there differences in central Florida public school principals' perceptions regarding their training to manage critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

A Kruskal Wallace test was conducted to evaluate differences in principals' perceptions of training based on demographics and school characteristics. A Kruskal Wallace test was conducted to determine the extent to which there were differences in principal responses for items 10, 11, and 15 of the PSSPS survey. Survey item 10 elicited responses on principal perceptions about effectiveness of training in crisis prevention; survey item 11 elicited responses about principal perceptions of effectiveness

of training in crisis response; and survey item 15 elicited responses about principal perceptions of adequacy of funding for crisis prevention and response training. Overall, principals reported "quite a bit" and "a great deal" that training in both prevention (205, 72%) and response (208, 72.8%) respectively were sufficient to prepare them to do an effective job. Descriptive statistics displaying principals' responses to items 10 and 11 are displayed in Table 29.

Table 29

Overall Principal Beliefs: Training Effectiveness in Crisis Prevention and Response (N = 286)

Beliefs (N)	Not at all *f* (%)	A little *f* (%)	Some *f* (%)	Quite a bit *f* (%)	A great deal *f* (%)
10. To what extent do you believe training you have received in the "prevention" of a crisis incident on your campus has prepared you to do an effective job? (285)	5 (1.8)	7 (2.5)	68 (23.9)	129 (45.3)	76 (26.7)
11. To what extent do you believe training you have received in "responding" to crisis incidents on your school campus has prepared you to do an effective job? (286)	2 (.7)	11 (3.8)	65 (22.7)	128 (44.8)	80 (28.0)

The results of the Kruskal Wallace test that was conducted on responses to survey item 10 regarding principals' perceptions of effectiveness of training in crisis prevention are displayed in Table 30. The table indicates that no significant difference were found in

the effectiveness of training in crisis prevention based on any of the demographic or school characteristic variables. Analysis revealed no significant $\rho<.05$ differences in group responses. Thus, there was no difference in principals' perceived effectiveness of crisis prevention training based on gender, years of principal experience, grade configuration, student enrollment, free and reduced lunch rate, presence of law enforcement, or the presence of a crisis management/security plan.

Table 30

Principals' Perceived Effectiveness: Training in Crisis Prevention (N = 285)

Preparedness in Crisis Prevention	N	χ^2	df	Asymp. Sig.
Gender	284	.356	1	.551
Years of principal experience	284	4.695	4	.320
Grade configuration	285	.729	4	.948
Student enrollment	285	3.353	6	.763
Free and reduced lunch rate	283	1.078	2	.583
Presence of law enforcement	283	.939	2	.625
Crisis management/security plan	283	.948	1	.330

[a] *statistically significant at $\rho<.05$*

The results of the Kruskal Wallace test that was conducted on responses to survey item 11 regarding principals' perceptions of effectiveness of training in crisis response are displayed in Table 31. The table indicates that no significant difference was found in the effectiveness of training in crisis response based on any of the demographic or school characteristic variables. Analysis revealed no significant $\rho<.05$ differences in group responses. Thus, there was no difference in principals' perceived effectiveness of training in crisis response based on gender, years of principal experience, grade

configuration, student enrollment, free and reduced lunch rate, presence of law enforcement, or the presence of a crisis management/security plan.

Table 31

Principals' Perceived Effectiveness: Training in Crisis Response (N = 286)

Preparedness in Crisis Response	N	χ^2	df	Asymp. Sig.
Gender	285	.215	1	.643
Years of principal experience	285	4.096	4	.393
Grade configuration	286	3.680	4	.451
Student enrollment	286	7.689	6	.262
Free and reduced lunch rate	284	2.293	2	.318
Presence of law enforcement	284	5.303	2	.071
Crisis management/security plan	284	.001	1	.978

[a] *statistically significant at $\rho<.05$*

Overall, principal responses to item 15 of the PSSPS survey indicated that a noticeable percentage (134, 47.4%) were unsure, disagreed, or strongly disagreed that adequate funding had been spent on training in prevention and response to crisis incidents. Table 32 displays the frequency and percentages associated with this item.

Table 32

Overall Principal Responses: Adequacy of Funding to Prepare and Respond to Crisis Incidents (N = 283)

Interaction with Law Enforcement (N)	Strongly Disagree *f* (%)	Disagree *f* (%)	Unsure *f* (%)	Agree *f* (%)	Strongly Agree *f* (%)
15. Adequate funding has been spent training you to prepare and respond to crisis incidents on your school campus. (283)	9 (3.2)	52 (18.4)	73 (25.8)	116 (41.0)	33 (11.7)

The results of the Kruskal Wallace test that was conducted on responses to survey item 15 regarding principals' perceptions of adequacy of training funding are displayed in Table 33. The table indicates that no significant differences were found in the adequacy of training funding based on any of the demographic or school characteristic variables. Analysis revealed no significant $\rho<.05$ differences in group responses. Thus, there was no difference in principals' perceived adequacy of training funding based on gender, years of principal experience, grade configuration, student enrollment, free and reduced lunch rate, presence of law enforcement, or the presence of a crisis management/security plan.

Table 33

Principals' Perceptions: Adequacy of Training Funding (N = 282)

	N	χ^2	df	Asymp. Sig.
Gender	282	.011	1	.918
Years of principal experience	282	1.633	4	.803
Grade configuration	283	7.290	4	.121
Student enrollment	283	1.179	6	.978
Free and reduced lunch rate	281	1.131	2	.568
Presence of law enforcement	281	1.669	2	.434
Crisis management/security plan	281	.254	1	.614

[a] *statistically significant at $\rho<.05$*

Research Question 4

To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

Principals' responses to item 19 of the PSSPS survey were utilized for analysis of data to answer Research Question 4. Descriptive statistics for principals' perceptions regarding the likelihood of 16 specific crisis incidents occurring on their campuses during the course of a normal school day are contained in Table 34. Overall, principals' responses to item 19 trended toward unlikely or very unlikely for most of the 16 crisis incidents. Noticeable rates of response were found in unsure, likely, and very likely for battery on a student (103, 37.6%), battery on a school board employee (56, 20.5%), dangerous intruder (90, 33.0%), firearm possession (56, 20.5%), weapon possession (96, 35.0%), fire (68, 25.0%), toxic/chemical spill (73, 26.9%), and gang related crime (60, 22.1%). Principal responses indicated unsure, likely, and very likely at rates of more than 40% for weather event (216, 79.2%), custody related abduction (143, 52.8%), and suicide (120, 44.2%).

Table 34

Overall Principal Responses: Current Perceptions of Likelihood of Specific Crisis Incidents (N = 274)

Crisis Incidents (N)	Very Unlikely *f* (%)	Unlikely *f* (%)	Unsure *f* (%)	Likely *f* (%)	Very Likely *f* (%)
Item 19a. Battery on a student (274)	46 (16.8)	125 (45.6)	14 (5.1)	75 (27.4)	14 (5.1)*
Item 19b. Battery on a school board employee (273)	97 (35.5)	120 (44.0)	9 (3.3)	39 (14.3)	8 (2.9)*
Item 19c. Dangerous intruder on campus (273)	65 (23.8)	118 (43.2)	30 (11.0)	53 (19.4)	7 (2.6)*
Item 19d. Firearm use on campus (272)	135 (49.6)	109 (40.1)	17 (6.3)	9 (3.3)	2 (.7)
Item 19e. Firearm possession on campus (273)	110 (40.3)	107 (39.2)	29 (10.6)	26 (9.5)	1 (.4)*
Item 19f. Weapon use on campus other than firearm (274)	99 (36.1)	127 (46.4)	23 (8.4)	23 (8.4)	2 (.7)
Item 19g. Weapon possession on campus other than firearm (274)	54 (19.7)	124 (45.3)	40 (14.6)	50 (18.2)	6 (2.2)*
Item 19h. Fire on campus (272)	70 (25.7)	134 (49.3)	34 (12.5)	30 (11.0)	4 (1.5)*
Item 19i. Explosive device or bomb on campus (273)	141 (51.6)	105 (38.5)	16 (5.9)	8 (2.9)	3 (1.1)
Item 19j. Weather event on or near campus (273)	8 (2.9)	49 (17.9)	34 (12.5)	146 (53.5)	36 (13.2)*
Item 19k. Chemical/toxic spill on or near campus (271)	87 (32.1)	111 (41.0)	35 (12.9)	34 (12.5)	4 (1.5)*
Item 19l. Crowd control incident / riot on campus (274)	145 (45.6)	112 (40.9)	17 (6.2)	18 (6.6)	2 (1.5)
Item 19m. Custody related abduction (271)	32 (11.8)	96 (35.4)	40 (14.8)	89 (32.8)	14 (5.2)*
Item 19n. Rape on campus (271)	163 (60.1)	88 (32.5)	11 (4.1)	8 (3.0)	1 (.4)
Item 19o. Suicide attempt / baker act on campus (272)	59 (21.7)	93 (34.2)	41 (15.1)	69 (25.4)	10 (3.7)*
Item 19p. Gang/secret society related crime or violence (272)	104 (28.2)	108 (39.7)	29 (10.7)	28 (10.3)	3 (1.1)*

Note. * = Noticeable rates of perceived likelihood

A Kruskal Wallace test was conducted on responses to survey item 19 regarding gender and principals' perception of likelihood for each of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant $\rho<.05$ differences in group responses for 10 of the 16 specific crisis incidents and statistically significant differences at a $\rho<.05$ level in six group responses by gender. Table 35 shows results of the analysis of principals' perceptions of likelihood of crisis incident occurrence by gender.

Table 35

Principals' Perceptions: Likelihood of Crisis Incident Occurrence by Gender (N = 274)

Crisis Incident	N	Chi-Square	df	Asymp. Sig.
Battery on a student	274	.176	1	.674
Battery on a school board employee	273	4.624	1	.032[a]
Dangerous intruder on campus	273	1.164	1	.281
Firearm use on campus	272	3.531	1	.060
Firearm possession on campus	273	3.953	1	.047[a]
Weapon use on campus other than firearm	274	2.099	1	.147
Weapon possession on campus other than firearm	274	.246	1	.620
Fire on campus	272	11.534	1	.001[b]
Explosive device or bomb on campus	273	6.615	1	.010[a]
Weather event on or near campus	273	3.823	1	.051
Chemical/toxic spill on or near campus	271	5.048	1	.025[a]
Crowd control/riot on campus	274	1.645	1	.200
Custody related abduction	271	8.154	1	.004[b]
Rape on campus	271	.716	1	.398
Suicide attempt/Baker Act on campus	272	.037	1	.847
Gang/secret society related crime or violence	272	.060	1	.806

[a] *statistically significant at $\rho<.05$*
[b] *statistically significant at $\rho<.01$*

A Mann Whitney test was conducted, and a statistically significant difference at the $\rho<.05$ level was noted between male (mean rank = 123.47) and female (mean rank = 143.77) in regard to likelihood of battery on a school board employee χ^2 (1) = 4.624, $\rho=.032$. The result of a Spearman rank order correlation, conducted to determine the relationship between battery on a school board employee and gender, was positive and statistically significant ($r_s = .130$, $\rho = .031$) at the $\rho<.05$ level.

A Mann Whitney test was conducted and a statistically significant difference at the $\rho<.05$ level was noted between male (mean rank = 124.55) and female (mean rank = 143.33) in regard to perception of likelihood for firearm possession on campus χ^2 (1) = 3.593, $\rho=.047$. A Spearman rank order correlation was conducted to determine the relationship between firearm possession on campus and gender. There was a positive correlation between responses to firearm possession on campus and responses to gender, which was statistically significant ($r_s = .121$, $\rho = .047$) at the $\rho<.05$ level.

A Mann Whitney test was conducted and a statistically significant difference at the $\rho<.05$ level was noted between male (mean rank = 115.31) and female (mean rank = 147.15) in regard to perception of likelihood for fire on campus χ^2 (1) = 11.534, $\rho=.001$. The result of a Spearman rank order correlation conducted to determine the relationship between fire on campus and gender was positive and statistically significant ($r_s = .206$, $\rho = .001$) at the $\rho<.01$ level.

A Mann Whitney test was conducted and a statistically significant difference at the $\rho<.05$ level was noted between male (mean rank = 121.53) and female (mean rank = 144.86) in perception of likelihood for explosive device or bomb on campus χ^2 (1) =

6.615, ρ=.010. The result of a Spearman rank order correlation conducted to determine the relationship between explosive device or bomb on campus and gender was positive and statistically significant (r_s = .156, ρ = .010) at the ρ<.05 level.

A Mann Whitney test was conducted and a statistically significant difference at the ρ<.05 level was noted between male (mean rank = 121.77) and female (mean rank = 143.19) in perception of likelihood for chemical/toxic spill on or near campus χ^2 (1) = 5.048, ρ=.025. The result of a Spearman rank order correlation, conducted to determine the relationship between chemical/toxic spill on or near campus and gender, was positive and statistically significant (r_s = .137, ρ = .024) at the ρ<.05 level.

A Mann Whitney test was conducted and a statistically significant difference at the ρ<.05 level was noted between male (mean rank = 117.71) and female (mean rank = 145.25) in perception of likelihood for custody related abduction χ^2 (1) = 8.154, ρ=.004. The result of a Spearman rank order correlation, conducted to determine the relationship between custody related abduction and gender, was positive and was statistically significant (r_s = .174, ρ = .004) at the ρ<.01 level.

A Kruskal Wallace test was conducted on responses to survey item 19 of the survey regarding principals' perceptions of likelihood of occurrence of a crisis incident based on length of time as a principal for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant ρ<.05 differences in group responses for any of the specific crisis incidents by length of time as a principal. Table 36 shows results of the analysis of principals' perceptions of likelihood of crisis incident occurrence by length of time as principal.

Table 36

Principals' Perceptions: Likelihood of Crisis Incident Occurrence by Length of Time as Principal (N = 273)

Crisis Incident	N	Chi-Square	df	Asymp. Sig.
Battery on a student	273	.976	4	.913
Battery on a school board employee	272	.857	4	.931
Dangerous intruder on campus	272	2.846	4	.584
Firearm use on campus	271	2.972	4	.563
Firearm possession on campus	272	1.587	4	.811
Weapon use on campus other than firearm	273	1.541	4	.819
Weapon possession on campus other than firearm	273	2.265	4	.687
Fire on campus	271	5.012	4	.286
Explosive device or bomb on campus	272	6.609	4	.158
Weather event on or near campus	272	1.949	4	.745
Chemical/toxic spill on or near campus	270	.915	4	.922
Crowd control/riot on campus	273	3.045	4	.550
Custody related abduction	270	5.230	4	.264
Rape on campus	270	7.586	4	.108
Suicide attempt/Baker Act on campus	271	.403	4	.982
Gang/secret society related crime or violence	271	5.182	4	.269

[a] *statistically significant at $\rho<.05$*

A Kruskal Wallace test was conducted on responses to survey item 19 of the survey regarding grade configuration and principals' perception of likelihood of crisis incident occurrence for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant $\rho<.05$ differences in group responses for nine of the 16 specific crisis incidents, and statistically significant differences at a $\rho<.05$ level in seven group responses by grade configuration. Table 37 shows results of

the analysis of principals' perceptions of likelihood of occurrence of crisis incident by grade configuration.

Table 37

Principals' Perceptions: Likelihood of Crisis Incident Occurrence by Grade Configuration (N = 274)

Crisis Incident	N	Chi-Square	df	Asymp. Sig.
Battery on a student	274	19.778	4	.001[b]
Battery on a school board employee	273	7.257	4	.123
Dangerous intruder on campus	273	9.846	4	.043[a]
Firearm use on campus	272	5.422	4	.247
Firearm possession on campus	273	3.678	4	.451
Weapon use on campus other than firearm	274	3.444	4	.486
Weapon possession on campus other than firearm	274	5.900	4	.207
Fire on campus	272	16.097	4	.005[b]
Explosive device or bomb on campus	273	6.836	4	.145
Weather event on or near campus	273	6.408	4	.171
Chemical/toxic spill on or near campus	271	6.279	4	.179
Crowd control/riot on campus	274	9.612	4	.047[a]
Custody related abduction	271	47.241	4	.000[c]
Rape on campus	271	14.848	4	.005[b]
Suicide attempt/Baker Act on campus	272	6.342	4	.175
Gang/secret society related crime or violence	272	27.107	4	.000[c]

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*
[c] *statistically significant at ρ<.001*

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.01 level were noted in perception of likelihood for battery on a student between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8,

9-12, and other). The distributions of perception of likelihood for battery on a student were statistically significantly different between groups χ^2 (4) = 19.778, ρ =.001. A post hoc Mann Whitney test was conducted for the crisis incident battery on a student to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 108.14) and 6-8 (mean rank = 144.06) (ρ = .000) at the ρ<.001 level, and between K-5 (mean rank = 89.52) and 9-12 (mean rank = 175.50) (ρ = .045) at the ρ<.05 level. Statistically significant differences in group responses were also found between K-8 (mean rank = 12.50) and 6-8 (mean rank = 30.76) (ρ = .035) at the ρ<.05 level. The result of a Spearman rank order correlation to determine the relationship between perception of likelihood for battery on a student and grade configuration was statistically significantly positive (r_s = .205, ρ = .001) at the ρ<.01 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.01 level were noted in perception of likelihood for dangerous intruder on campus between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of perception of likelihood for dangerous intruder on campus were statistically significantly different between groups χ^2 (4) = 9.846, ρ =.043. A post hoc Mann Whitney test was conducted for the crisis incident dangerous intruder on campus to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 111.27) and 9-12 (mean rank = 89.45) (ρ = .040) at the ρ<.05 level, and between K-5 (mean rank = 89.01) and other (mean rank = 176.00) (ρ = .034) at

the $\rho<.05$ level. A Spearman rank order correlation, run to determine the relationship between perception of likelihood for dangerous intruder on campus and grade configuration, revealed a statistically significant, negative correlation between the two ($r_s = -.141$, $\rho = .020$) at the $\rho<.05$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perception of likelihood for fire on campus between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of perception of likelihood for fire on campus were statistically significantly different between groups χ^2 (4) = 16.097, $\rho = .005$. A post hoc Mann Whitney test was conducted for the crisis incident fire on campus to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 120.12) and 6-8 (mean rank = 100.07) ($\rho = .039$) at the $\rho<.05$ level, and between K-5 (mean rank = 113.16) and 9-12 (mean rank = 80.45) ($\rho = .002$) at the $\rho<.01$ level. A Spearman rank order correlation was run to determine the relationship between perception of likelihood for fire on campus and grade configuration. It revealed a statistically significant negative correlation between the two ($r_s = -.191$, $\rho = .002$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perception of likelihood for crowd control/riot on campus between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of perception of likelihood for crowd control/riot on campus were statistically significantly different between groups χ^2 (4) =

9.612, ρ =.047. A post hoc Mann Whitney test was conducted for the crisis incident crowd control/riot on campus to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 111.81) and 6-8 (mean rank = 131.96) (ρ = .034) at the ρ<.05 level. A Spearman rank order correlation was run to determine the relationship between perception of likelihood for crowd control/riot on campus and grade configuration. It revealed a statistically significant positive correlation between the two (r_s = .155, ρ = .010) at the ρ<.01 level.

A Kruskal Wallace test was conducted and statistically significant differences at the ρ<.05 level were noted in perception of likelihood of custody related abduction between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of perception of likelihood of custody related abduction were statistically significantly different between groups χ^2 (4) = 47.241, ρ =.000. A post hoc Mann Whitney test was conducted for the crisis incident, custody related abduction, to evaluate pairwise differences among the five groups. Statistically significant differences in group responses were found between K-5 (mean rank = 126.91) and 6-8 (mean rank = 78.31) (ρ = .000) at the ρ<.001 level, and between K-5 (mean rank = 116.65) and 9-12 (mean rank = 56.88) (ρ = .000) at the ρ<.001 level. A Spearman rank order correlation was run to determine the relationship between perception of likelihood of custody related abduction and grade configuration. It indicated a statistically significant negative correlation between the two (r_s = -.414, ρ = .000) at the ρ<.001 level. For this variable, survey response analysis indicated that higher reported grade

configurations were accompanied by a statistically significant moderate corresponding decrease in the perception of likelihood in the sample of principals for custody related abduction crisis incidents.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perception of likelihood of rape on campus between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of perception of likelihood of rape on campus were statistically significantly different between groups χ^2 (4) = 14.848, ρ =.005. A post hoc Mann Whitney test was conducted for the crisis incident rape on campus to evaluate pairwise differences among the five groups. Statistically significant differences in group responses were found between K-5 (mean rank = 110.89) and 6-8 (mean rank = 128.65) (ρ = .043) at the $\rho<.05$ level, and between K-5 (mean rank = 102.19) and 9-12 (mean rank = 129.88) (ρ = .003) at the $\rho<.01$ level. A Spearman rank order correlation, run to determine the relationship between perception of likelihood of rape on campus and grade configuration, revealed a positive correlation between the two (r_s = .211, ρ = .000) at the $\rho<.001$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perception of likelihood for gang/secret society related crime or violence between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of perception of likelihood for gang/secret society related crime or violence were statistically significantly different between groups χ^2 (4) = 27.107, ρ =.000. A post hoc Mann Whitney test was

conducted for the crisis incident gang/secret society related crime or violence to evaluate pairwise differences among the five groups. Statistically significant differences in group responses by grade configuration were found between K-5 (mean rank = 105.34) and 6-8 (mean rank = 148.62) ($\rho = .000$) at the $\rho<.001$ level, between K-5 (mean rank = 102.04) and 9-12 (mean rank = 130.61) ($\rho = .006$) at the $\rho<.01$ level, and between K-5 (mean rank = 88.51) and other (mean rank = 176) ($\rho = .023$) at the $\rho<.05$ level. Statistically significant differences in group responses were also found between grade configuration 6-8 (mean rank = 27.50) and other (mean rank = 55.00) ($\rho = .036$) at the $\rho<.05$ level. A Spearman rank order correlation was run to determine the relationship between perception of likelihood for gang/secret society related crime or violence and grade configuration, revealing a statistically significant positive correlation between the two ($r_s = .281$, $\rho = .000$) at the $\rho<.001$ level.

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 19 regarding student enrollment and principals' perception of likelihood of the occurrence of a crisis incident for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant $\rho<.05$ differences in group responses for 14 of the 16 specific crisis incidents and statistically significant differences at a $\rho<.05$ level for two groups by student enrollment. Table 38 shows results of the analysis of principals' perceptions of likelihood of occurrence of crisis incident by student enrollment.

Table 38

Principals' Perceptions: Likelihood of Crisis Incident Occurrence by Student Enrollment (N = 274)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	274	9.801	6	.133
Battery on a school board employee	273	2.512	6	.867
Dangerous intruder on campus	273	7.397	6	.286
Firearm use on campus	272	5.024	6	.541
Firearm possession on campus	273	3.592	6	.732
Weapon use on campus other than firearm	274	1.763	6	.940
Weapon possession on campus other than firearm	274	6.455	6	.374
Fire on campus	272	15.844	6	.015[a]
Explosive device or bomb on campus	273	5.173	6	.522
Weather event on or near campus	273	6.351	6	.385
Chemical/toxic spill on or near campus	271	6.401	6	.380
Crowd control/riot on campus	274	9.959	6	.428
Custody related abduction	271	36.154	6	.000[c]
Rape on campus	271	9.065	6	.170
Suicide attempt/Baker Act on campus	272	5.701	6	.457
Gang/secret society related crime or violence	272	10.584	6	.102

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*
[c] *statistically significant at ρ<.001*

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in the perception of likelihood of occurrence for fire on campus between the seven student enrollment groups of respondents (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, 2,501-3,000, and more than 3,000). The distributions of perception of likelihood of occurrence of a fire on campus were statistically significantly different between groups χ^2 (6) = 15.844, ρ =.015. A post hoc

Mann Whitney test was conducted for the crisis incident, fire on campus, to evaluate pairwise differences among the seven groups. Statistically significant differences in group responses were found between student enrollment groups of 0-500 (mean rank = 47.78) and 1,001-1,500 (mean rank = 36.59) ($\rho = .017$) at the $\rho<.05$ level, between 0-500 (mean rank = 31.28) and 1,501–2,000 (mean rank = 19.94) ($\rho = .006$) at the $\rho<.01$ level, between 0-500 (mean rank = 23.42) and 2,501–3,000 (mean rank = 10.00) ($\rho = .011$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 90.98) and 1,501–2,000 (mean rank = 66.72) ($\rho = .042$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 84.01) and 2,501–3,000 (mean rank = 42.83) ($\rho = .028$) at the $\rho<.05$ level. Statistically significant differences in group responses were also found between student enrollment groups of 1,001–1500 (mean rank = 27.89) and 2,501-3,000 (mean rank 15.83) ($\rho = .033$) at the $\rho<.05$ level. A Spearman rank order correlation was conducted to determine the relationship between student enrollment and perception of likelihood for fire on campus. It revealed a statistically significant negative correlation between the two ($r_s = -.193$, $\rho = .001$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perception of likelihood for custody related abduction between the seven groups of respondents working in different student enrollment (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, 2,501-3,000, and more than 3,000). The distributions of perception of likelihood for custody related abduction were statistically significantly different between groups $\chi^2 (6) = 15.844$, $\rho = .015$. A post hoc Mann Whitney test was conducted for the crisis incident custody related abduction to

evaluate pairwise differences among the seven groups. Statistically significant differences in group responses by student enrollment were found between 0-500 (mean rank = 49.36) and 1,001–1,500 (mean rank = 35.65) ($\rho = .007$) at the $\rho<.01$ level, between 0-500 (mean rank = 31.71) and 1,501–2,000 (mean rank = 17.83) ($\rho = .001$) at the $\rho<.01$ level, between 0-500 (mean rank = 22.34) and 2,501–3,000 (mean rank = 7.60) ($\rho = .006$) at the $\rho<.01$ level. Statistically significant differences in group responses were found between 501–1,000 (mean rank = 111.12) and 1,001–1,500 (mean rank = 75.71) ($\rho = .000$) at the $\rho<.001$ level, between 501–1,000 (mean rank = 93.48) and 1,501–2,000 (mean rank = 44.75) ($\rho = .000$) at the $\rho<.001$ level. Statistically significant differences in group responses were also found between 501–1,000 (mean rank = 83.92) and 2,501-3,000 (mean rank 21.40) ($\rho = .002$) at the $\rho<.01$ level, between 1,001–1,500 (mean rank = 27.89) and 2,501-3,000 (mean rank 13.40) ($\rho = .028$) at the $\rho<.05$ level, between 1,501 – 2,000 (mean rank = 11.39) and 2,001-2,500 (mean rank 17.14) ($\rho = .026$) at the $\rho<.05$ level, between 1,501–2,000 (mean rank = 9.53) and more than 3,000 (mean rank 18.50) ($\rho = .044$) at the $\rho<.05$ level, and between 2,001–2,500 (mean rank = 8.43) and 2,501-3,000 (mean rank 3.80) ($\rho = .018$) at the $\rho<.05$ level. A Spearman rank order correlation was conducted to determine the relationship between student enrollment and perception of likelihood of custody related abduction. It revealed a negative correlation between the two ($r_s = -.292$, $\rho = .000$) at the $\rho<.001$ level.

A Kruskal Wallace test was conducted on responses to survey item 19 regarding free and reduced lunch rate and principals' perception of likelihood of crisis incident occurrence for each of a list of 16 specific crisis incidents during the course of a normal

school day. Analysis revealed no significant ρ<.05 differences in group responses for 14 of the 16 specific crisis incidents, and statistically significant differences at a ρ<.05 level in two group responses. Table 39 shows results of the analysis of principals' perceived likelihood of occurrence of crisis incidents by school free and reduced lunch rates.

Table 39

Principals' Perceived Likelihood of Crisis Incident Occurrence: School Free and Reduced Lunch Rates (N = 272)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	272	4.924	2	.085
Battery on a school board employee	271	10.450	2	.005[b]
Dangerous intruder on campus	271	3.781	2	.151
Firearm use on campus	270	1.398	2	.497
Firearm possession on campus	271	.985	2	.611
Weapon use on campus other than firearm	272	1.815	2	.404
Weapon possession on campus other than firearm	272	1.140	2	.566
Fire on campus	270	2.668	2	.263
Explosive device or bomb on campus	271	1.092	2	.579
Weather event on or near campus	271	.098	2	.952
Chemical/toxic spill on or near campus	270	.411	2	.814
Crowd control/riot on campus	272	1.195	2	.550
Custody related abduction	269	.723	2	.697
Rape on campus	269	.059	2	.971
Suicide attempt/Baker Act on campus	270	.020	2	.990
Gang/secret society related crime or violence	270	6.421	2	.040[a]

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in principals' perception of likelihood for battery on a school board employee between the three groups of respondents working in different sizes of school free and reduced lunch rate student populations (0-33%, 34-67%, and 68-100%). The distributions of perception of likelihood for battery on a school board employee were statistically significantly different between groups χ^2 (2) = 10.450, ρ =.005. A post hoc Mann Whitney test was conducted for the crisis incident battery on a school board employee to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between 34-67% (mean rank = 108.47) and 68-100% (mean rank = 135.42) (ρ = .001) at the $\rho<.01$ level. A Spearman rank order correlation, conducted to determine the relationship between free and reduced lunch rate and perception of likelihood for battery on a school board employee, revealed a statistically significant positive correlation between the two (r_s = .177, ρ = .003) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in principals' perceptions of likelihood for gang/secret society related crime or violence between the three groups of respondents working in different sizes of school free and reduced lunch rate student populations (0-33%, 34-67%, and 68-100%). The distributions of perception of likelihood for gang/secret society related crime or violence were statistically significantly different between groups χ^2 (2) = 6.421, ρ =.040. A post hoc Mann Whitney test was conducted for the crisis incident gang/secret society related crime or violence to evaluate pairwise differences among the three groups

in free and reduced lunch rate. Statistically significant differences in group responses were found between 0-33% (mean rank = 55.96) and 34-67% (mean rank = 75.56) (ρ = .018) at the $\rho<.05$ level, and between 0-33% (mean rank = 58.96) and 68-100% (mean rank = 80.69) (ρ = .015) at the $\rho<.05$ level. A Spearman rank order correlation, conducted to determine the relationship between free and reduced lunch rate and perception of likelihood for gang/secret society related crime or violence, indicated no correlation between the two (r_s = .107, ρ = .079) at the $\rho<.05$ level.

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 19 regarding presence of a law enforcement officer and principals' perception of likelihood crisis incident occurrence for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant $\rho<.05$ differences in group responses for 11 of the 16 specific crisis incidents and statistically significant differences at a $\rho<.05$ level in five group responses by presence of a law enforcement officer. Table 40 shows results of the analysis of principals' perceptions of the likelihood of occurrence of crisis incidents by presence of a law enforcement officer.

Table 40

Principals' Perceptions: Likelihood of Crisis Incident Occurrence: Presence of a Law Enforcement Officer (N = 272)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	272	12.692	2	.002[b]
Battery on a school board employee	271	2.943	2	.230
Dangerous intruder on campus	271	4.217	2	.121
Firearm use on campus	270	1.114	2	.573
Firearm possession on campus	271	.059	2	.971
Weapon use on campus other than firearm	272	1.121	2	.571
Weapon possession on campus other than firearm	272	2.916	2	.233
Fire on campus	270	7.309	2	.026[a]
Explosive device or bomb on campus	271	1.267	2	531
Weather event on or near campus	271	2.826	2	.243
Chemical/toxic spill on or near campus	269	2.347	2	.309
Crowd control/riot on campus	272	2.105	2	.349
Custody related abduction	269	42.019	2	.000[c]
Rape on campus	269	12.479	2	.002[b]
Suicide attempt/Baker Act on campus	270	3.660	2	.160
Gang/secret society related crime or violence	270	11.455	2	.003[b]

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*
[c] *statistically significant at ρ<.001*

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perception of likelihood for battery on a student between the three groups of respondents working with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of perception of likelihood for battery on a student were statistically significantly different between groups χ^2 (2) = 12.692, ρ =.002. A post hoc Mann Whitney test was conducted for the

crisis incident battery on a student to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 77.52) and part time (mean rank = 63.28) ($\rho = .029$) at the $\rho<.05$ level, and between full time (mean rank = 124.19) and never (mean rank = 95.34) ($\rho = .000$) at the $\rho<.001$ level. A Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perception of likelihood for battery on a student, revealed a statistically significant negative correlation between the two ($r_s = -.205$, $\rho = .001$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perception of likelihood for fire on campus between the three groups of respondents working with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of perception of likelihood for fire on campus were statistically significantly different between groups $\chi^2 (2) = 7.309$, $\rho = .026$. A post hoc Mann Whitney test was conducted for the crisis incident fire on campus to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 92.97) and never (mean rank = 114.28) ($\rho = .007$) at the $\rho<.01$ level. A Spearman rank order correlation was conducted to determine the relationship between presence of a law enforcement officer and perception of likelihood for fire on campus. It revealed a statistically significant positive correlation between the two ($r_s = .161$, $\rho = .008$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in principals' perceptions of likelihood for custody related abduction between the three groups of respondents working with different levels of presence of a law enforcement officer: (full time, part time, and never). The distributions of perception of likelihood for custody related abduction were statistically significantly different between groups χ^2 (2) = 42.019, ρ =.000. A post hoc Mann Whitney test was conducted for the crisis incident custody related abduction to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 60.76) and part time (mean rank = 83.87) (ρ = .000) at the $\rho<.001$ level, between full time (mean rank = 73.56) and never (mean rank = 125.56) (ρ = .000) at the $\rho<.001$ level, and between part time (mean rank = 79.96) and never (mean rank = 101.15) (ρ = .009) at the $\rho<.01$ level. A Spearman rank order correlation, conducted to determine the relationship between presence of a law enforcement officer and perception of likelihood for custody related abduction, revealed a statistically significant positive correlation between the two (r_s = .391, ρ = .000) at the $\rho<.001$ level. For this variable, survey response analysis indicated that as the presence of a law enforcement officer decreased, there was a statistically significant weak to moderate corresponding increase in the perception of likelihood in the sample of principals for custody related abduction crisis incidents.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in perception of likelihood for rape on campus between the three groups of respondents working with different levels of presence of a law

enforcement officer (full time, part time, and never). The distributions of perception of likelihood for rape on campus were statistically significantly different between groups χ^2 (2) = 12.479, ρ =.002. A post hoc Mann Whitney test was conducted for rape on campus to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 78.12) and part time (mean rank = 60.03) (ρ = .003) at the ρ<.01 level, and between full time (mean rank = 119.70) and never (mean rank = 96.58) (ρ = .002) at the ρ<.01 level. A Spearman rank order correlation was conducted to determine the relationship between presence of a law enforcement officer and perception of likelihood for rape on campus. It revealed a statistically significant negative correlation between the two (r_s = -.166, ρ = .006) at the ρ<.01 level.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in perception of likelihood for gang/secret society related crime or violence between the three groups of respondents working with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of perception of likelihood for gang/secret society related crime or violence were statistically significantly different between groups χ^2 (2) = 11.455, ρ =.003. A post hoc Mann Whitney test was conducted for the crisis incident gang/secret society related crime or violence to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 78.16) and part time (mean rank = 62.39) (ρ = .016) at the ρ<.05 level, and between full time (mean rank = 121.55) and never (mean rank = 95.21) (ρ = .001) at the ρ<.01 level.

A Spearman rank order correlation was conducted to determine the relationship between presence of a law enforcement officer and perception of likelihood for gang/secret society related crime or violence. It revealed a statistically significant negative correlation between the two ($r_s = -.188$, $\rho = .002$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted on responses to survey item 20 regarding presence of a crisis management or security plan and principals' perception of likelihood of crisis incident occurrence for each of a list of 16 specific crisis incidents during the course of a normal school day. Analysis revealed no significant $\rho<.05$ differences in group responses for any of the16 specific crisis incidents. It was noted that of the respondents to PSSPS survey item 7, "Your school has a crisis management or security plan" (N=285), only two respondents answered that they did not have a crisis management or security plan. No further analysis was conducted beyond the examination of statistics for the extent to which there were statistically significant differences. Table 41 shows results of the analysis of principals' perceptions of likelihood of occurrence of crisis incidents by presence of a crisis management or security plan.

Table 41

Principals' Perceptions: Likelihood of Crisis Incident Occurrence: Presence of a Crisis Management or Security Plan (N = 273)

Crisis Incident	N	χ^2	df	Asymp. Sig.
Battery on a student	273	.075	1	.785
Battery on a school board employee	272	.041	1	.839
Dangerous intruder on campus	272	.000	1	.996
Firearm use on campus	271	.447	1	.504
Firearm possession on campus	272	.267	1	.605
Weapon use on campus other than firearm	273	.354	1	.552
Weapon possession on campus other than firearm	273	.153	1	.696
Fire on campus	271	.936	1	.333
Explosive device or bomb on campus	272	1.740	1	.187
Weather event on or near campus	272	.020	1	.886
Chemical/toxic spill on or near campus	270	3.098	1	.078
Crowd control/riot on campus	273	.256	1	.613
Custody related abduction	270	.481	1	.488
Rape on campus	270	1.267	1	.260
Suicide attempt/Baker Act on campus	271	.891	1	.345
Gang/secret society related crime or violence	271	2.605	1	.107

[a] *statistically significant at $\rho<.05$*

Research Question 5

To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

Responses to survey items 12, 13, 14, 16, 17, and 18 of the PSSPS survey were utilized in the analysis of data to answer Research Question 5. A Kruskal Wallace test was conducted to determine the extent to which there were differences between group

responses in regard to interaction with law enforcement. Principals' perceptions were elicited about law enforcement preparedness (item 12), clarity of methods and procedures between law enforcement and school administration (item 13), clarity of leadership and decision making responsibility between law enforcement and school administration (item 14), clarity of expectation between first responders and school administration (item 16), law enforcement value of school administration input (item 17), adequacy of collaboration between law enforcement and school administration (item 18).

Survey item 12 asked responding principals to share their perceptions as to the preparedness of law enforcement to meet the demands of a crisis incident on the school campus that involved the safety and security of students, staff, and visitors on your campus. It was noted that 243 (85.3%) principals overall reported that law enforcement was prepared at the two highest levels (quite a bit and a great deal). Principals' perceptions of law enforcement preparedness are displayed in Table 42.

Table 42

Principals' Perceptions: Law Enforcement Preparedness (N = 285)

Law Enforcement Preparedness (N)	Not at all *f* (%)	A little *f* (%)	Some *f* (%)	Quite a bit *f* (%)	A great deal *f* (%)
12. To what extent do you believe law enforcement is prepared to meet the demands of a crisis incident on your school campus involving the safety and security of students, staff, and visitors on your campus? (285)	0 (0.0)	7 (2.5)	35 (12.3)	102 (35.8)	141 (49.5)

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 12 regarding law enforcement preparedness based on the seven principal demographic and school characteristic independent variable groups. The test revealed significant $\rho < .05$ findings for differences by grade configuration, by presence of a law enforcement officer, and by presence of a crisis management or security plan. As displayed in Table 43, no other statistically significant findings were noted for the other four demographic and school characteristic identifiers.

Table 43

Principals' Perceptions: Law Enforcement Preparedness by Independent Variables (N = 284)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	284	2.970	1	.085
Length of service as principal	284	3.102	4	.541
Grade configuration	285	13.927	4	.008[b]
Student enrollment	285	11.427	6	.076
Free and reduced lunch rate	283	3.322	2	.190
Presence of a law enforcement officer	283	13.331	2	.001[b]
Presence of a crisis management or security plan	283	4.943	1	.026[a]

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 12, law enforcement preparedness, between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of law enforcement preparedness responses were

statistically significantly different between groups $\chi^2(4) = 13.927$, $\rho = .008$. A post hoc Mann Whitney test was conducted for survey item 12 responses to evaluate pairwise differences among the five groups. Statistically significant differences were found in group responses by grade configuration between K-5 (mean rank = 115.82) and 6-8 (mean rank = 142.83) ($\rho = .006$) at the $\rho < .01$ level, and between K-5 (mean rank = 108.03) and 9-12 (mean rank = 135.11) ($\rho = .012$) at the $\rho < .05$ level. A Spearman rank order correlation, run to determine the relationship between grade configuration and law enforcement preparedness, revealed a statistically significant positive correlation between the two ($r_s = .211$, $\rho = .000$) at the $\rho < .001$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho < .05$ level were noted in law enforcement preparedness responses between the three groups of respondents working with different levels (full time, part time, and never) of presence of a law enforcement officer. The distributions of law enforcement preparedness responses were statistically significantly different between groups $\chi^2 (2) = 40.085$, $\rho = .000$. A post hoc Mann Whitney test was conducted for law enforcement preparedness responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 83.21) and part time (mean rank = 64.39) ($\rho = .003$) at the $\rho < .01$ level, and between full time (mean rank = 126.17) and never (mean rank = 99.05) ($\rho = .001$) at the $\rho < .01$ level. A Spearman rank order correlation was conducted to determine the relationship between presence of a law enforcement officer and law enforcement

preparedness. It indicated a statistically significant negative correlation between the two (r_s = -.187, ρ = .002) at the ρ<.01 level.

A Mann Whitney test was conducted, and a statistically significant difference at the ρ<.01 level was noted between yes (mean rank = 142.83) and no (mean rank = 25.00) presence of a crisis management or security plan responses regarding law enforcement preparedness $\chi^2(1) = 4.943$, ρ = .026. A Spearman rank order correlation, run to determine the relationship between law enforcement preparedness and presence of a crisis management or security plan, revealed a statistically significant negative correlation between the two (r_s = -.132, ρ = .026) at the ρ<.05 level. It was noted that only two of the principals (N = 285) responded "no" to the presence of a crisis management or security plan.

Survey items 13, 14, and 16 addressed interactions of principals with law enforcement, focusing on clarity of methods and procedures (item 13), leadership and decision making (item 14) , and expectations between first responders and school administrators (item 16). Items 17 and 18 dealt with principals' perceptions as to the value principals perceived their input had to law enforcement and the adequacy of collaboration between law enforcement and school administrators, respectively. It was noted that the majority of principals agreed or strongly agreed that there was clarity of methods and procedures (237, 83.7%), and for leadership and decision making (280, 83.6%). In regard to expectations for clarity of expectations between first responders and school administrators, a relatively small number (43, 15.4%) of the 279 principals reporting indicated that they were unsure, disagreed, or strongly disagreed that

expectations were clear. Larger numbers, 33.6% and 41.5% of principals respectively, were unsure, disagreed, or strongly disagreed that their input was valuable (item 17) or that adequate collaboration took place between law enforcement and school administration (item 18) respectively. Table 44 contains principals' perceptions regarding their interaction with law enforcement.

Table 44

Principals' Perceptions: Interaction with Law Enforcement (N = 283)

Interaction with Law Enforcement (N)	Strongly Disagree *f* (%)	Disagree *f* (%)	Unsure *f* (%)	Agree *f* (%)	Strongly Agree *f* (%)
13. Methods and procedures during a crisis incident on your school campus are clear and well-defined between school-based administration and law enforcement. (283)	2 (.7)	14 (4.9)	30 (10.6)	180 (63.6)	57 (20.1)
14. Leadership and decision making responsibilities during crisis incidents on your school campus are clear and well-defined between school administration and law enforcement.(280)	3 (1.1)	12 (4.3)	31 (11.1)	176 (62.9)	58 (20.7)
16. Expectations regarding school-based administration interaction with first responders to incidents on campus are clear and well-defined. (279)	2 (.7)	15 (5.4)	26 (9.3)	182 (65.2)	54 (19.4)
17. Law enforcement places a high value on school-based administration input regarding crisis incidents on your school campus. (280)	3 (1.1)	12 (4.3)	79 (28.2)	135 (48.2)	51 (18.2)
18. Adequate collaboration in preparation for a potential crisis incident has taken place between school-based administration and law enforcement. (282)	11 (3.9)	68 (24.1)	38 (13.5)	124 (44.0)	41 (14.5)

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 13 regarding clarity of methods and procedures between law enforcement and school administration among groups within the seven principal demographic and school characteristic independent variables. The analysis revealed significant $\rho < .05$ findings for differences by grade configuration, student enrollment, free and reduced lunch rate, and presence of a law enforcement officer. No statistically significant findings were noted for the other three demographic and school characteristic identifiers at the $\rho < .05$ level. The results of the analysis are displayed in Table 45.

Table 45

Principals' Perceived Clarity: Methods and Procedures between Law Enforcement and School Administration (N = 283)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	282	.240	1	.624
Length of service as principal	282	4.402	4	.354
Grade configuration	283	16.630	4	.002[b]
Student enrollment	283	13.898	6	.031[a]
Free and reduced lunch rate	281	8.281	2	.016[a]
Presence of a law enforcement officer	281	10.762	2	.005[b]
Presence of a crisis management or security plan	281	.010	1	.919

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 13, clarity of methods and procedures

between law enforcement and school administration, between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of clarity of methods and procedures between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(4) = 16.630$, $\rho = .002$. A post hoc Mann Whitney test was conducted for survey item 13 responses to evaluate pairwise differences among the five groups. Statistically significant differences were found in group responses by grade configuration between K-5 (mean rank = 116.42) and 6-8 (mean rank = 136.12) ($\rho = .029$) at the $\rho < .05$ level, and between K-5 (mean rank = 105.40) and 9-12 (mean rank = 142.00) ($\rho = .000$) at the $\rho < .001$ level. A Spearman rank order correlation was conducted to determine the relationship between grade configuration and clarity of methods and procedures between law enforcement and school administration. It revealed a statistically significant positive correlation between the two ($r_s = .233$, $\rho = .000$) at the $\rho < .001$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho < .05$ level were noted in responses to survey item 13, clarity of methods and procedures between law enforcement and school administration, between the seven groups of respondents working in different student enrollment groups (0-500, 501- 1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, 2,501-3,000 and more than 3,000). The distributions of clarity of methods and procedures between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(6) = 13.898$, $\rho = .031$. A post hoc Mann Whitney test was conducted for clarity of methods and procedures between law enforcement and school administration responses to evaluate

pairwise differences among the seven groups. Statistically significant differences in group responses were found between 0-500 (mean rank = 20.68) and 2,001–2,500 (mean rank = 32.14) ($\rho = .007$) at the $\rho<.01$ level, between 501–1,000 (mean rank = 85.32) and 2,001–2,500 (mean rank = 126.79) ($\rho = .013$) at the $\rho<.05$ level. A Spearman rank order correlation was conducted to determine the relationship between student enrollment and perceived clarity of methods and procedures between law enforcement and school administration. It revealed a statistically significant positive correlation between the two ($r_s = .148$, $\rho = .013$) at the $\rho<.05$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in responses to survey item 13, clarity of methods and procedures between law enforcement and school administration, between the three groups of respondents working in different sizes of school free and reduced lunch rate student populations (0-33%, 34-67%, and 68-100%). The distributions of clarity of methods and procedures between law enforcement and school administration were statistically significantly different between groups $\chi^2(2) = 8.281$, $\rho = .016$. A post hoc Mann Whitney test was conducted for clarity of methods and procedures between law enforcement and school administration responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between 34 – 67% (mean rank = 138.25) and 68-100% (mean rank = 116.85) ($\rho = .006$) at the $\rho<.01$ level. A Spearman rank order correlation was conducted to determine the relationship between free and reduced lunch rate and clarity of methods and procedures

between law enforcement and school administration. It revealed a statistically significant negative correlation between the two (r_s = -.167, ρ = .005) at the ρ<.01 level.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in responses to survey item 13, clarity of methods and procedures between law enforcement and school administration, between the three groups of respondents working with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of clarity of methods and procedures between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(2) = 10.762$, ρ = .005. A post hoc Mann Whitney test was conducted for clarity of methods and procedures between law enforcement and school administration responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 123.92) and never (mean rank = 99.58) (ρ = .001) at the ρ<.01 level. A Spearman rank order correlation was conducted to determine the relationship between presence of a law enforcement officer and clarity of methods and procedures between law enforcement and school administration. It revealed a statistically significant negative correlation in responses between the two (r_s = -.194, ρ = .001) at the ρ<.01 level.

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 14 regarding clarity of leadership and decision making responsibility between law enforcement and school administration among the groups within the seven principal demographic and school characteristic

independent variable groups. There were significant $\rho < .05$ findings for differences by grade configuration, by student enrollment, by free and reduced lunch rate, and by presence of a law enforcement officer. No statistically significant findings were noted for the other three demographic and school characteristic identifiers at the $\rho < .05$ level. These results are displayed in Table 46.

Table 46

Principals' Perceived Clarity: Leadership and Decision Making Responsibility Between Law Enforcement and School Administration (N = 280)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	279	.307	1	.580
Length of service as principal	279	5.735	4	.220
Grade configuration	280	18.413	4	.001[b]
Student enrollment	280	20.573	6	.002[b]
Free and reduced lunch rate	278	7.158	2	.028[a]
Presence of a law enforcement officer	278	18.909	2	.000[c]
Presence of a crisis management or security plan	278	1.368	1	.242

[a] *statistically significant at* $\rho<.05$
[b] *statistically significant at* $\rho<.01$
[c] *statistically significant at* $\rho<.001$

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 14, clarity of leadership and decision making responsibility between law enforcement and school administration, between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of clarity of leadership and decision making responsibility between law enforcement and school administration responses were

statistically significantly different between groups $\chi^2(4) = 16.630$, $\rho = .002$. A post hoc Mann Whitney test was conducted for clarity of leadership and decision making responsibility between law enforcement and school administration responses to evaluate pairwise differences among the five groups. Statistically significant differences were found in group responses by grade configuration between K-5 (mean rank = 114.94) and 6-8 (mean rank = 134.68) ($\rho = .030$) at the $\rho < .05$ level, and between K-5 (mean rank = 103.91) and 9-12 (mean rank = 143.08) ($\rho = .000$) at the $\rho < .001$ level. A Spearman rank order correlation was conducted to determine the relationship between grade configuration and clarity of leadership and decision making responsibility between law enforcement and school administration. It revealed a statistically significant positive correlation between the two ($r_s = .245$, $\rho = .000$) at the $\rho < .001$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho < .05$ level were noted in response to survey item 14, clarity of leadership and decision making responsibility between law enforcement and school administration, between the seven groups of respondents working in different student enrollment groups (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, 2,501-2,000, 2,500-3,000, and more than 3,000). The distributions of clarity of leadership and decision making responsibility between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(6) = 20.573$, $\rho = .002$. A post hoc Mann Whitney test was conducted for clarity of leadership and decision making responsibility between law enforcement and school administration responses to evaluate pairwise differences among the seven groups. Statistically significant differences in

group responses were found between 0-500 (mean rank = 21.22) and 2,001–2,500 (mean rank = 29.29) ($\rho = .037$) at the $\rho<.05$ level, between 0-500 (mean rank = 20.70) and 2,501–3,000 (mean rank = 30.00) ($\rho = .023$) at the $\rho<.05$ level, between 0-500 (mean rank = 20.00) and more than 3,000 (mean rank = 1.00) ($\rho = .018$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 101.02) and 1,001–1,500 (mean rank = 123.36) ($\rho = .012$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 89.05) and 1,501–2,000 (mean rank = 113.83) ($\rho = .030$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 84.64) and 2,001–2,500 (mean rank = 117.93) ($\rho = .046$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 84.16) and 2,501–3,000 (mean rank = 122.00) ($\rho = .034$) at the $\rho<.05$ level, between 501–1,000 (mean rank = 83.50) and more than 3,000 (mean rank = 1.50) ($\rho = .050$) at the $\rho\leq.05$ level. A Spearman rank order correlation was conducted to determine the relationship between student enrollment and perceived clarity of leadership and decision making responsibility between law enforcement and school administration. It revealed a statistically significant positive correlation between the two ($r_s = .175$, $\rho = .003$) at the $\rho<.01$ level.

A Kruskal Wallace test was conducted and statistically significant differences at the $\rho<.05$ level were noted in responses to survey item 14, clarity of leadership and decision making responsibility between law enforcement and school administration, between the three groups of respondents working in different sizes of school free and reduced lunch rate student population groups (0-33%, 34-67%, and 68-100%). The distributions of clarity of leadership and decision making responsibility between law enforcement and school administration were statistically significantly different between

groups $\chi^2(2) = 7.158$, $\rho = .028$. A post hoc Mann Whitney test was conducted for clarity of leadership and decision making responsibility between law enforcement and school administration responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between 34–67% (mean rank = 136.89) and 68–100% (mean rank = 116.18) ($\rho = .009$) at the $\rho<.01$ level. A Spearman rank order correlation was conducted to determine the relationship between free and reduced lunch rate and clarity of leadership and decision making responsibility between law enforcement and school administration. It revealed a statistically significant negative correlation between the two ($r_s = -.150$, $\rho = .012$) at the $\rho<.05$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho<.05$ level were noted in responses to survey item 14, clarity of leadership and decision making responsibility between law enforcement and school administration, between the three groups of respondents working with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of clarity of leadership and decision making responsibility between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(2) = 18.909$, $\rho = .000$. A post hoc Mann Whitney test was conducted for clarity of leadership and decision making responsibility between law enforcement and school administration responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 127.09) and never (mean rank = 96.00) ($\rho = .000$) at the $\rho<.001$ level, and between part time (mean rank = 111.46) and never (mean rank = 91.58) ($\rho = .008$). A Spearman rank

order correlation was conducted to determine the relationship between presence of a law enforcement officer and clarity of leadership and decision making responsibility between law enforcement and school administration. It revealed a statistically significant negative correlation between the two (r_s = -.260, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 16 regarding clarity of expectation between first responders and school administration among the groups within the seven principal demographic and school characteristic independent variable groups. As displayed in Table 47, there were no significant ρ < .05 findings for differences for the seven demographic and school characteristic identifiers.

Table 47

Principals' Perceived Clarity: Expectation between First Responders and School Administration (N = 279)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	278	.470	1	.493
Length of service as principal	278	4.567	4	.335
Grade configuration	279	5.488	4	.241
Student enrollment	279	9.296	6	.158
Free and reduced lunch rate	277	.748	2	.688
Presence of a law enforcement officer	277	4.622	2	.099
Presence of a crisis management or security plan	277	.013	1	.908

[a] *statistically significant at* ρ<*.05*

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 17 regarding law enforcement value of

school administration input among the groups within the seven principal demographic and school characteristic independent variable groups. Significant $\rho < .05$ findings for differences by grade configuration and by presence of a law enforcement officer were found. No statistically significant findings were noted for the other five demographic and school characteristic identifiers at the $\rho < .05$ level. The results of the analysis are displayed in Table 48.

Table 48

Principals' Perceptions: Law Enforcement Value of School Administration Input (N = 280)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	279	1.336	1	.248
Length of service as principal	279	4.811	4	.307
Grade configuration	280	11.965	4	.018[a]
Student enrollment	280	6.837	6	.336
Free and reduced lunch rate	279	4.848	2	.089
Presence of a law enforcement officer	278	14.398	2	.001[b]
Presence of a crisis management or security plan	279	1.061	1	.303

[a] *statistically significant at* $\rho < .05$
[b] *statistically significant at* $\rho < .01$

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 17, law enforcement value of school administration input, between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of law enforcement value of school administration input responses were statistically significantly different

between groups $\chi^2(4) = 11.965$, $\rho = .018$. A post hoc Mann Whitney test was conducted for law enforcement value of school administration input responses to evaluate pairwise differences among the five groups. Statistically significant differences were found in group responses by grade configuration between K-5 (mean rank = 114.86) and 6-8 (mean rank = 134.95) ($\rho = .042$) at the $\rho < .05$ level, and between K-5 (mean rank = 105.34) and 9-12 (mean rank = 136.03) ($\rho = .004$) at the $\rho < .01$ level. A Spearman rank order correlation was conducted to determine the relationship between grade configuration and law enforcement value of school administration input. It revealed a statistically significant positive correlation between the two ($r_s = .199$, $\rho = .001$) at the $\rho < .01$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho < .05$ level were noted in responses to survey item 17, law enforcement value of school administration input, between the three groups of respondents working with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of law enforcement value of school administration input responses were statistically significantly different between groups $\chi^2(2) = 14.398$, $\rho = .001$. A post hoc Mann Whitney test was conducted for law enforcement value of school administration input responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 79.62) and part time (mean rank = 65.44) ($\rho = .030$) at the $\rho < .05$ level, and between full time (mean rank = 127.01) and never (mean rank = 96.05) ($\rho = .000$) at the $\rho < .001$ level. A Spearman rank order correlation was conducted to determine the relationship between

presence of a law enforcement officer and law enforcement value of school administration input. It revealed a statistically significant negative correlation between the two (r_s = -.219, ρ = .000) at the ρ<.001 level.

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 18, adequacy of collaboration between law enforcement and school administration, among the groups within the seven principal demographic and school characteristic independent variables. Significant differences (ρ < .05) were found for grade configuration, student enrollment, and presence of a law enforcement officer. As displayed in Table 49, no statistically significant findings were noted for the other four demographic and school characteristic identifiers at the ρ < .05 level.

Table 49

Kruskal Wallace Results: Adequacy of Collaboration Between Law Enforcement and School Administration (N = 282)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	281	1.047	1	.306
Length of service as principal	281	5.323	4	.256
Grade configuration	282	28.726	4	.000[c]
Student enrollment	282	14.606	6	.024[a]
Free and reduced lunch rate	280	3.463	2	.177
Presence of a law enforcement officer	280	23.976	2	.000[c]
Presence of a crisis management or security plan	280	.278	1	.598

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*
[c] *statistically significant at ρ<.001*

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 17, adequacy of collaboration between law enforcement and school administration, between the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distributions of adequacy of collaboration between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(4) = 28.726$, $\rho = .000$. A post hoc Mann Whitney test was conducted for adequacy of collaboration between law enforcement and school administration responses to evaluate pairwise differences among the five groups. Statistically significant differences were found in group responses between K-5 (mean rank = 112.89) and 6-8 (mean rank = 145.51) ($\rho = .001$) at the $\rho < .001$ level, and between K-5 (mean rank = 103.12) and 9-12 (mean rank = 150.19) ($\rho = .000$) at the $\rho < .001$ level. A Spearman rank order correlation was conducted to determine the relationship between grade configuration and adequacy of collaboration between law enforcement and school administration. It revealed a statistically significant positive correlation between the two ($r_s = .291$, $\rho = .000$) at the $\rho < .001$ level.

A Kruskal Wallace test was conducted, and statistically significant differences at the $\rho < .05$ level were noted in responses to survey item 18, adequacy of collaboration between law enforcement and school administration, between the seven groups of respondents working in different student enrollment settings (0-500, 501-1,000, 1,001-1,500, 1,501-2,000, 2,001-2,500, 2,501-2,000, 2,500-3,000, and more than 3,000). The distributions of adequacy of collaboration between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(6) =$

14.606, ρ = .024. A post hoc Mann Whitney test was conducted for adequacy of collaboration between law enforcement and school administration responses to evaluate pairwise differences among the seven groups. Statistically significant differences in group responses were found between 0-500 (mean rank = 34.70) and 1,001–1,500 (mean rank = 49.40) (ρ = .004) at the ρ<.01 level, between 501-1,000 (mean rank = 101.49) and 1,001–1,500 (mean rank = 125.94) (ρ = .010) at the ρ<.05 level. A Spearman rank order correlation was conducted to determine the relationship between student enrollment and perceived adequacy of collaboration between law enforcement and school administration. It revealed a statistically significant positive correlation between the two (r_s = .179, ρ = .003) at the ρ<.01 level.

A Kruskal Wallace test was conducted, and statistically significant differences at the ρ<.05 level were noted in response to survey item 18, adequacy of collaboration between law enforcement and school administration, between the three groups of respondents working with different levels of presence of a law enforcement officer (full time, part time, and never). The distributions of adequacy of collaboration between law enforcement and school administration responses were statistically significantly different between groups $\chi^2(2) = 23.976$, ρ = .000. A post hoc Mann Whitney test was conducted for adequacy of collaboration between law enforcement and school administration responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between full time (mean rank = 81.86) and part time (mean rank = 64.84) (ρ = .011) at the ρ<.05 level, and between full time (mean rank = 132.92) and never (mean rank = 92.96) (ρ = .000) at the ρ<.001 level.

A Spearman rank order correlation was conducted to determine the relationship between presence of a law enforcement officer and adequacy of collaboration between law enforcement and school administration. It revealed a statistically significant negative correlation between the two ($r_s = -.289$, $\rho = .000$) at the $\rho<.001$ level.

Research Question 6

To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course of a normal school day based upon principal demographics and school characteristics?

Responses to survey items 21, 22, and 23 of the PSSPS survey were utilized in the analysis of data to respond to Research Question 6. Survey item 21 of the PSSPS survey was an open-ended survey item regarding the crisis incident you fear most. Responses were typed by responding principals (N = 240). Survey item 22 elicited yes or no responses to a list of possible influences on the choice of crisis incident feared most, and survey item 23 elicited responses on principals' perceptions on the safety of the neighborhood surrounding my school.

To arrive at the list of most feared crisis incidents, principals' responses to item 21 were examined for common synonyms and descriptions and combined based upon that examination. Specific crisis categories were kept separate due to the nature of the descriptions. Crisis categories such as armed intruder and shooter/gunman were not combined because there was no indication of the weapon carried by the armed intruder. Weapon use and armed intruder were not combined because the weapon use could have been by a student. All categories were analyzed for such overlapping qualities. A total

of 22 response categories were created and coded into SPSS statistical software for further analysis. It was noted that 63.3% of principals' responses were in the following four categories: intruder, shooter/gunman, armed intruder, and weapon on campus. Table 50 displays the 22 categories of combined responses and the frequency and percentage of those responses.

Table 50

Summary of Principal Responses to Most Feared Crisis Incident

Crisis Incidents	Frequency	Percentage
Weapon	107	44.5
Shooter/gunman	52	21.7
Armed intruder	22	9.2
Weapon on campus	21	8.8
Weapon use	12	5.0
Intruder	57	23.8
Abduction	22	9.2
Custody Abduction	12	5.0
General Abduction	10	4.2
Weather	10	4.2
Bomb / bomb threat	6	2.5
Angry parent / adult	5	2.1
Battery	5	2.1
None	5	2.1
Violence outside of school	4	1.7
Fire	4	1.7
Chemical spill	3	1.3
Riot	3	1.3
Disabled student behavior	2	.8
Death	2	.8
Hostage situation	2	.8
Car	1	.4
Domestic violence	1	.4
Gang activity	1	.4

Note. This list was compiled by combining common synonyms and descriptions principals used in their open-ended responses to survey item 21.

A Kruskal Wallace test was conducted to determine the extent to which there were differences between principal responses among groups within demographic and school characteristic independent variables in responses to survey items 21, 22, and 23 of the PSSPS survey. For survey item 21 regarding the crisis incident principals most feared, findings were significant ($\rho < .05$) for differences by grade configuration. As shown in Table 51, no statistically significant findings were noted for the other six demographic and school characteristic identifiers at the $\rho < .05$ level.

Table 51

Kruskal Wallace Results: Crisis Incident Most Feared by Principals (N = 240)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	240	.640	1	.424
Length of time as principal	239	4.511	4	.341
Grade configuration	240	10.013	4	.040[a]
Student enrollment	240	4.740	6	.578
Free and reduced lunch rate	238	.759	2	.684
Presence of a law enforcement officer	238	3.312	2	.191
Presence of a crisis management or security plan	239	1.858	1	.173

[a] *statistically significant at* $\rho < .05$

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to survey item 21 regarding the crisis incident feared most based on the five groups of respondents working in different grade configurations (K-5, K-8, 6-8, 9-12, and other). The distribution of crisis incident feared most responses were statistically significantly different between groups $\chi^2(4) = 10.013$, $\rho = .040$. A post hoc

Mann Whitney test was conducted on crisis incident feared most responses to evaluate pairwise differences among the five groups. Statistically significant differences were found in group responses by grade configuration between K-5 (mean rank = 95.26) and 6-8 (mean rank = 120.48) (ρ =.007) at the ρ<.01 level, and between 6-8 (mean rank = 47.59) and 9-12 (mean rank = 35.01) (ρ =.019) at the ρ<.05 level. A Spearman rank order correlation was conducted to determine the relationship between grade configuration and crisis incident feared most. It revealed no correlation between the two (r_s = .071, ρ = .274) at the ρ<.05 level.

Large percentage differences between grade configuration groups were distributed among several distinct categories of crisis incidents. K-5 school principal responses were concentrated in the categories of intruder, armed intruder, and shooter/gunman, combining for a total of 58%. Grade 6-8 school principal responses were concentrated in the categories of intruder, armed intruder, shooter/gunman, weapon on campus, and weapon use for a total of 62%. Grade 9-12 school principal responses were concentrated in the categories of intruder, armed intruder, shooter/gunman, and weapon on campus for a total of 76.4%. Total frequencies and percentages by grade configuration group responses are displayed in Table 52.

Table 52

Principals' Most Feared Crisis Incident by Grade Configuration

Crisis Incidents	K-5 *f*(%)	K-8 *f*(%)	6-8 *f*(%)	9-12 *f*(%)	Other *f*(%)
Weapon	58 (38.1)	3 (100.0)	26 (52.0)	20 (38.4)	0 (0.0)
Shooter/gunman	32 (21.1)	2 (66.7)	10 (20.0)	8 (23.5)	0 (0.0)
Armed intruder	13 (8.6)	0 (0.0)	5 (10.0)	4 (11.8)	0 (0.0)
Weapon on campus	9 (5.9)	1 (33.3)	5 (10.0)	6 (17.6)	0 (0.0)
Weapon use	4 (2.6)	0 (0.0)	6 (12.0)	2 (5.9)	0 (0.0)
Intruder	43 (28.3)	0 (0.0)	5 (10.0)	8 (23.5)	1 (100.0)
Abduction	20 (13.1)	0 (0.0)	2 (4.0)		0 (0.0)
Custody abduction	11 (72.0)	0 (0.0)	1 (2.0)	0 (0.0)	0 (0.0)
General Abduction	9 (5.9)	0 (0.0)	1 (2.0)	0 (0.0)	0 (0.0)
Weather	8 (5.3)	0 (0.0)	2 (4.0)	0 (0.0)	0 (0.0)
Bomb / bomb threat	3 (2.0)	0 (0.0)	2 (4.0)	1 (2.9)	0 (0.0)
Angry parent / adult	5 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Battery	1 (.7)	0 (0.0)	2 (4.0)	2 (5.9)	0 (0.0)
None	3 (2.0)	0 (0.0)	1 (2.0)	1 (2.9)	0 (0.0)
Violence out of school	1 (.7)	0 (0.0)	3 (6.0)	0 (0.0)	0 (0.0)
Fire	3 (2.0)	0 (0.0)	1 (2.0)	0 (0.0)	0 (0.0)
Chemical spill	3 (2.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Riot	0 (0.0)	0 (0.0)	2 (4.0)	1 (2.9)	0 (0.0)
Disabled student behavior	1 (.7)	0 (0.0)	1 (2.0)	0 (0.0)	0 (0.0)
Death	0 (0.0)	0 (0.0)	2 (4.0)	0 (0.0)	0 (0.0)
Hostage situation	1 (.7)	0 (0.0)	1 (2.0)	0 (0.0)	0 (0.0)
Car	1 (.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Domestic violence	1 (.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Gang activity	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.9)	0 (0.0)

Note. This list was compiled by combining common synonyms and descriptions principals used in their open-ended responses to survey item 21.

Item 22 (N=262) of the PSSPS consisted of six potential influences on the choice of incident feared most and required a forced choice "yes" or "no" response to each individual influence. The two influences most frequently chosen by the principals were geographic location of their school (159, 61.2%) and media coverage of this type of incident (135, 51.5%). Factors which were of least importance in influencing principals,

as evidenced by "no" responses were personal experience with the specific incident (190, 73.4%), similar incident in community (175, 66.8%), and training or simulation experience with the type of incident (173, 67.3%). The descriptive statistics for responding principals' choices of influences on most feared crisis incident are displayed in Table 53.

Table 53

Overall Principal Responses to Influences on Most Feared Crisis Incident (N = 262)

Influences	Yes *f* (%)	No *f* (%)
Geographic location	159 (61.2)	101 (38.8)
Personal experience with specific incident	69 (26.6)	190 (73.4)
Media coverage of incident	135 (51.5)	127 (48.5)
A similar incident in community	87 (33.2)	175 (66.8)
Training or simulation experience	84 (32.7)	173 (67.3)
Other	47 (26.9)	128 (73.1)

A Kruskal Wallace test was conducted to determine the extent to which there were differences in responses to item 22 of the PSSPS regarding influences on the choice of the crisis incident feared most based on gender for each of a list of six specific possible influences. Analysis revealed no significant $\rho<.05$ differences in group responses for five of the six specific influences. Statistically significant differences at the $\rho<.05$ level were found in media coverage of incident responses by gender. Table 54 shows results of the analysis of influences on choice of crisis incident feared most based on gender.

Table 54

Influences on Choice of Most Feared Crisis Incident by Gender (N = 262)

Influences	N	Chi-Square	df	Asymp. Sig.
Geographic location	260	.003	1	.956
Personal experience with specific incident	259	.891	1	.345
Media coverage of incident	262	4.206	1	.040[a]
A similar incident in community	262	1.169	1	.280
Training or simulation experience	257	.467	1	.494
Other	175	2.735	1	.098

[a] *statistically significant at ρ<.05*

A post hoc Mann Whitney test was conducted and a statistically significant difference at the ρ<.01 level was noted between male (mean rank = 143.29) and female (mean rank = 125.64) based on media coverage of incident χ^2 (1) = 4.206, ρ=.040. A Spearman rank order correlation was conducted to determine the relationship between perceived preparedness for media coverage of incident and gender. It revealed a statistically significant negative correlation between the two (r_s = -.127, ρ = .040) at the ρ<.05 level.

A Kruskal Wallace test was conducted on responses to survey item 22 regarding influences on the choice of the crisis incident feared most based on length of time as principal for each of a list of six specific possible influences. Analysis revealed no significant ρ<.05 differences in group responses for all six of the specific influences. Table 55 displays results of the analysis of influences on choice of crisis incident feared most based on length of time as principal.

Table 55

Influences on Choice of Most Feared Crisis Incident by Length of Time as Principal (N = 261)

Influence	N	χ^2	*df*	Asymp. Sig.
Geographic location	259	4.720	4	.317
Personal experience with specific incident	258	2.953	4	.566
Media coverage of incident	261	3.293	4	.510
A similar incident in community	261	1.865	4	.761
Training or simulation experience	256	5.409	4	.248
Other	174	1.664	4	.797

[a] *statistically significant at ρ<.05*

A Kruskal Wallace test was conducted on responses to item 22 of the PSSPS regarding influences on the choice of the crisis incident feared most based on grade configuration for each of a list of six specific possible influences. Analysis revealed no significant ρ<.05 differences in group responses for all six of the specific influences by grade configuration. Table 56 shows results of the analysis of influences on principals' choice of crisis incident feared most by grade configuration.

Table 56

Influences on Choice of Most Feared Crisis Incident by Grade Configuration (N = 262)

Influences	N	χ^2	*df*	Asymp. Sig.
Geographic location	260	2.076	4	.722
Personal experience with specific incident	259	1.002	4	.909
Media coverage of incident	262	1.989	4	.738
A similar incident in community	262	2.338	4	.674
Training or simulation experience	257	7.536	4	.110
Other	175	5.507	4	.239

[a] *statistically significant at ρ<.05*

A Kruskal Wallace test was conducted on responses to item 22 of the PSSPS regarding influences on the choice of the crisis incident feared most based on the student enrollment for each of a list of six specific possible influences. Analysis revealed no significant $\rho<.05$ differences in group responses for all six of the specific influences. Table 57 shows results of the analysis of influences on choice of crisis incident feared most by student enrollment.

Table 57

Influences on Choice of Most Feared Crisis Incident by Student Enrollment (N = 260)

Influences	N	χ^2	*df*	Asymp. Sig.
Geographic location	260	5.284	6	.508
Personal experience with specific incident	259	7.434	6	.283
Media coverage of incident	262	4.946	6	.551
A similar incident in community	262	6.410	6	.379
Training or simulation experience	257	12.193	6	.058
Other	175	2.681	6	.749

[a] *statistically significant at $\rho<.05$*

A Kruskal Wallace test was conducted on responses to PSSPS item 22 regarding influences on the choice of the crisis incident feared most based on free and reduced lunch rate for each of a list of six specific possible influences. Analysis revealed no statistically significant $\rho<.05$ differences in group responses for five of the six specific influences, and statistically significant differences at a $\rho<.01$ level in geographic location of school responses based on free and reduced lunch rate. Table 58 contains the results

of the analysis of influences on principals' choice of crisis incident feared most based on free and reduced lunch rate.

Table 58

Influences on Choice of Most Feared Crisis Incident by Free and Reduced Lunch Rate (N = 260)

Crisis Incident	N	χ^2	*df*	Asymp. Sig.
Geographic location	258	11.380	2	.003[b]
Personal experience with specific incident	257	1.180	2	.554
Media coverage of incident	260	3.865	2	.145
A similar incident in community	260	4.432	2	.109
Training or simulation experience	255	.558	2	.756
Other	174	.465	2	.793

[a] *statistically significant at ρ<.05*
[b] *statistically significant at ρ<.01*

A post hoc Mann Whitney test was conducted on responses to PSSPS item 22 to evaluate pairwise differences among the three groups in free and reduced lunch rate (0-33%, 34-68%, and 69-100%) based on geographic location of school χ^2 (2) = 11.380, ρ=.003. Statistically significant differences in group responses were found between 34–67% (mean rank = 130.22) and 68–100% (mean rank = 105.38) (ρ = .001) at the ρ<.01 level. A Spearman rank order correlation, conducted to determine the relationship between free and reduced lunch rate and geographic location of school, revealed a statistically significant negative correlation between the two (r_s = -.191, ρ = .002) at the ρ<.01 level.

A Kruskal Wallace test was conducted on responses to item 22 of the PSSPS regarding influences on the choice of the crisis incident feared most based on presence of a law enforcement officer for each of a list of six specific possible influences. Analysis revealed no significant ρ<.05 differences in group responses for five of the six specific influences and statistically significant differences at a ρ<.05 level for other influences. Table 59 shows results of the analysis of influences on choice of crisis incident feared most based on presence of a law enforcement officer.

Table 59

Influences on Choice of Most Feared Crisis Incident by Presence of a Law Enforcement Officer (N = 260)

Influences	N	χ^2	*df*	Asymp. Sig.
Geographic location	258	.203	2	.903
Personal experience with specific incident	257	.164	2	.921
Media coverage of incident	260	.194	2	.908
A similar incident in community	260	1.893	2	.388
Training or simulation experience	255	2.358	2	.308
Other	173	7.269	2	.026[a]

[a] *statistically significant at ρ<.05*

A post hoc Mann Whitney test was conducted on responses to survey item 22 of the PSSPS to evaluate pairwise differences between the three groups in presence of a law enforcement officer (full time, part time, and never) based on other influence χ^2 (2) = 7.269, ρ=.026. Statistically significant differences in group responses were found between full time (mean rank = 74.29) and never (mean rank = 62.32) (ρ = .025) at the ρ<.05 level and between part time (mean rank = 65.18) and never (mean rank = 54.32) (ρ

= .038) at the ρ<.05 level. A Spearman rank order correlation was conducted to determine the relationship between presence of a law enforcement officer and other influence. It revealed a statistically significant negative correlation between responses to the two (r_s = -.186, ρ = .014) at the ρ<.05 level.

A Kruskal Wallace test was conducted on responses to item 22 of the PSSPS regarding influences on the choice of the crisis incident feared most based on presence of a crisis management or security plan for each of a list of six specific possible influences. Analysis revealed no significant ρ<.05 differences in group responses for five of the six specific influences, and statistically significant differences at a ρ<.05 level for other influences responses. Table 60 shows results of the analysis by influences on choice of crisis incident feared most based on presence of a crisis management or security plan.

Table 60

Influences on Choice of Crisis Incident Feared Most by Presence of a Crisis Management or Security Plan (N = 259)

Influences	N	χ^2	*df*	Asymp. Sig.
Geographic location	259	.102	1	.749
Personal experience with specific incident	258	.554	1	.457
Media coverage of incident	261	2.118	1	.146
A similar incident in community	261	.264	1	.607
Training or simulation experience	256	.269	1	.604
Other	175	5.478	1	.019[a]

[a] *statistically significant at ρ<.05*

A post hoc Mann Whitney test was conducted, and a statistically significant difference at the ρ<.01 level was noted in presence of a crisis management or security

plan group responses of yes (mean rank = 88.74) and no (mean rank = 24) based on other influences χ^2 (1) = 5.478, ρ=.019. A Spearman rank order correlation was conducted to determine the relationship between perceived preparedness for media coverage of incident and presence of a crisis management or security plan. It revealed a statistically significant negative correlation between the two (r_s = -.127, ρ = .040) at the ρ<.05 level. It was noted that only two respondents (N=259) in the sample answered "no" to having a school crisis management or security plan.

Survey item 23 elicited responses on principals' perceptions about the safety of the neighborhood surrounding my school. Although a majority of the 264 responding principals (180, 68.2%) perceived their neighborhoods as safe or very safe, 84 (31.8%) responded that their neighborhood was unsafe at some level including 25 (9.2%) who were unsure about the safety of the neighborhood around their schools. Table 61 presents' principals' perceptions regarding the safety of the neighborhood surrounding their schools.

Table 61

Overall Principal Responses to Perception of Safety of Neighborhood Surrounding My School (N = 264)

Neighborhood Safety (Item)	Very Safe *f* (%)	Safe *f* (%)	Unsure *f* (%)	Unsafe *f* (%)	Very Unsafe *f* (%)
The neighborhood surrounding my school is (23)	32 (12.1)	148 (56.1)	24 (9.1)	55 (20.8)	5 (1.9)

A Kruskal Wallace test was conducted to determine to what extent there were differences in response to survey item 23 regarding the safety of the neighborhood surrounding my school among the groups within the seven principal demographic and school characteristic independent variable groups. There were significant ($\rho < .05$) findings for differences by years as a principal, and free and reduced lunch rate. As displayed in Table 62, no statistically significant findings were noted for the other five demographic and school characteristic identifiers at the $\rho < .05$ level.

Table 62

Principals' Perceived Safety of the Neighborhood Surrounding My School (N = 264)

Independent Variables	N	χ^2	*df*	Asymp. Sig.
Gender	264	.372	1	.542
Length of time as principal	263	9.717	4	.045[a]
Grade configuration	264	9.391	4	.052
Student enrollment	264	9.264	6	.159
Free and reduced lunch rate	262	47.323	2	.000[c]
Presence of a law enforcement officer	262	2.751	2	.253
Presence of a crisis management or security plan	263	.279	1	.597

[a] *statistically significant at* $\rho<.05$
[b] *statistically significant at* $\rho<.01$
[c] *statistically significant at* $\rho<.001$

A Kruskal Wallace test was conducted to determine the extent to which there were statistically significant $\rho<.05$ differences in responses to item 23 of the PSSPS regarding the safety of the neighborhood surrounding my school between the five groups of respondents working for different lengths of time as principal (0-1 years, 2-5 years, 6-

10 years, 11-15 years, and 16 or more years). The distributions of level of safety of the neighborhood surrounding my school responses were statistically significantly different between groups χ^2 (4) = 9.717, ρ =.045. A post hoc Mann Whitney test was conducted for safety of the neighborhood surrounding my school responses to evaluate pairwise differences among the five groups. Statistically significant differences in group responses were found between 2 to 5 years' experience (mean rank = 60.54) and 16 or more years experience (mean rank = 43.16) (ρ = .007) at the p<.01 level. A Spearman rank order correlation, conducted to determine the relationship between safety of the neighborhood surrounding my school and length of time as a principal, indicated no correlation between the two (r_s = -.099, ρ = .110) at the ρ<.05 level.

A Kruskal Wallace test was conducted to determine the extent to which there were ρ<.05 differences in responses to item 23 of the PSSPS regarding the safety of the neighborhood surrounding my school between the three groups of respondents working for schools with different free and reduced lunch rate groups (0-33%, 34-67%, and 68-100. The distributions of level of safety of the neighborhood surrounding my school responses were statistically significantly different between groups χ^2 (4) = 47.323, ρ =.000. A post hoc Mann Whitney test was conducted for safety of the neighborhood surrounding my school responses to evaluate pairwise differences among the three groups. Statistically significant differences in group responses were found between 0–33% (mean rank = 42.73) and 68–100% (mean rank = 81.82) (ρ = .000) at the p<.001 level, and between 34–67% (mean rank = 93.08) and 68–100% (mean rank = 141.85) (ρ = .000) at the ρ<.001 level. A Spearman rank order correlation, conducted to determine

the relationship between safety of the neighborhood surrounding my school and free and reduced lunch rate, revealed a positive correlation which was statistically significant between the two ($r_s = .424$, $\rho = .000$) at the $\rho < .001$ level.

Summary

This chapter has presented an analysis of the data to respond to the six research questions which guided the study. A summary of the study was provided, and the purposes of this study were restated followed by a description of the means by which data gathered using the *Principal Safety and Security Perceptions Survey* (PSSPS) were analyzed. Analyses were presented in relation to each of the six guiding research questions including descriptive and inferential statistics. Chapter 5 includes a summary of the study, discussion of the findings for each of the six research questions, conclusions, implications for practice, and recommendations for further study.

CHAPTER 5
SUMMARY, DISCUSSION AND RECOMMENDATIONS

Introduction

This chapter contains a restatement of the purpose of the study, a summary of the study, discussion of the findings, implications for practice, and recommendations for further research. Latter sections of this chapter are included to provide potential focus for policy makers as they identify strategic approaches to school security, for current school leaders as they interact and implement school-based security measures, and for potential research related to the safety and security of school settings.

Summary of the Study

The purposes of this study were to determine the differences, if any, that existed in principals' perceptions regarding school security, their perceived confidence to address critical crisis incidents on their campuses, their perceptions of the likelihood critical incidents could occur, their perceptions of interaction with law enforcement, the critical incidents they fear the most, and their perceptions of factors impacting the incidents they fear the most.

The *Principal Safety and Security Perceptions Survey* (PSSPS) was developed and provided electronically to Central Florida principals by the researcher. The survey was developed, in part, after examination of the *Oregon Safe Schools Survey* conducted by Sprague et al. (1995) and the *Principal's Questionnaire of the School Survey on Crime and Safety* (NCES, 2008). Survey items were designed to determine differences in

principals' perceptions and in their perceived self-efficacy in the three areas of triadic reciprocity identified by Bandura (1986, 1997) as personal attributes, behavior factors, and environmental factors. Determining levels of self-efficacy was not a purpose of this study which was concerned only with the identification of differences between principal groups based on principals' responses.

Descriptive statistics were examined for the sample. Likert-type scale dependent variable responses to the PSSPS were coded and tested against personal attributes and school characteristic independent variables through the use of the non-parametric Kruskal Wallace test of variance for statistical significance. Significant findings were analyzed by a post hoc Mann Whitney pairwise test and a Spearman correlation test. Responses to a single open-ended PSSPS response item were used to examine what crisis incident principals' feared most. These responses were coded by common synonyms and descriptions and analyzed in the same way.

Analysis of group responses showed trends and differences in principals' perceptions. A total of 287 principals (189 K-5, 4 K-8, 56 Grade 6-8, 37 Grade 9-12, and 1 other) agreed to participate in the study. Independent variables included gender, length of time as a principal, grade configuration, student enrollment, free and reduced lunch rate, presence of a law enforcement officer, and presence of a crisis management or security plan.

Analysis for the study was guided by the following six research questions:

1. To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a

normal school day overall and based upon principal demographics and school characteristics?

2. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
3. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their preparation to manage critical crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
4. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
5. To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their campuses during the course of a normal school day based upon principal demographics and school characteristics?
6. To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course

of a normal school day based upon principal demographics and school characteristics?

Discussion of the Findings

Previous researchers examined the frequency of crisis incidents and in some capacity the perceptions of principals in relation to crime and safety in schools (NCES, 1992, 1998, 2000, 2002, 2004, 2006, 2008, 2009, 2010, 2011; Sprague et al., 1995, 2002). The goal of the present study was to expand the limited scope of data on principals' perceptions related to school security for practical purposes of current and future school leaders, policy development, and providing foci for further research. The following discussion of the findings has been organized around each of the six research questions which guided the study.

Research Question 1

To what extent are Central Florida public school principals confident in their ability to manage crisis incidents on their campuses during the course of a normal school day overall and based upon principal demographics and school characteristics?

The findings for Research Question 1 indicated that the vast majority (90.9%) of principals were confident (quite a bit, or a great deal) in leading their schools through crisis incidents during the course of a normal school day. An even larger percentage (97.2%) believed that their role as principal impacted the safety and security of their schools. The finding that a shift in principal responses (38.2%) out of the category, a great deal, indicated principals were less confident in their ability to lead through crisis

incidents on their campuses than they were confident that their role as principal impacted the safety and security of their schools.

In particular, principals in schools without a law enforcement officer and those in a K-5 grade configuration reported less confidence in their ability to lead through crisis incidents than those with a full time law enforcement officer. These findings reinforced Atkinson's (2002 report that "Students, school personnel, parents, and community members have less fear of crime and violence" (p. 1) in conjunction with school-law enforcement partnerships being in place. Lower reports of confidence leading through crisis by K-5 school principals were found to be directly related to the presence of a law enforcement officer finding. K-5 grade configuration principals, who reported having no law enforcement officer, comprised the highest percentage (97.1%) of all principal groups and also reported being less prepared to lead their schools through a crisis incident than Grade 6-8 school principals. One might have expected to see a similar significant difference between K-5 and 9-12 grade configuration principals as well, considering rates of law enforcement presence in Grade 9-12 settings. That finding did not emerge.

Further examination did, however, reveal an additional factor to consider. National Center for Educational Statistics (NCES, 2011) survey results, when compared with survey results, i.e., grade configuration reports of confidence leading through crisis incidents in the PSSPS, indicated that middle schools' violent incident rate was 40 incidents per 1,000 versus elementary and high school rates that were both reported at 21 incidents per 1,000.

In relation to Bandura's (1986, 1997) self-efficacy theory, environmental factors such as a higher rate of interaction with crisis incidents could have impacted the increase or decrease in the sense of efficacy or confidence. In this case, environmental factors such as experience with crisis incidents may have impacted higher reports of confidence leading through crisis from 6-8 grade configuration principals overall by the PSSPS. This could also account for the lack of a statistically significant difference in reports of confidence between K-5 and 9-12 grade configuration groups.

Research Question 2

To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their readiness to manage specific critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

The findings in response to Research Question 2 indicated there were statistically significant differences between principal groups in their perceived readiness to manage specific crisis incidents on school campuses. Significant differences were found for six of the seven personal attribute and school characteristic independent variables. Male principals reported being more prepared for crisis incidents involving weapon possession, fire, crowd control, rape, and gang activity than female principals. A number of other factors could have a bearing on these results. For example, percentages of male and female principals were relatively equal in secondary schools (6-8, 9-12), but the percentages in K-5 schools were not. Female principals accounted for 77.1% of principals in K-5 settings in the sample. Of female principals, 80% reported having no

law enforcement presence at all. Regardless, the data indicated significant percentages of female principals had less confidence in their preparedness for several specific crisis incidents.

Principals in their first year as a principal reported being less prepared for a fire on campus than principals with 6 to 10 years of experience. First year principals also reported being significantly less prepared than most other principals for a weather event, and less prepared for custody related abduction than principals with 11-15 years of experience. Bandura's (1986, 1997) self-efficacy theory would suggest that successful task completion would impact confidence with the task being repeated. However, queries to principals in the PSSPS elicited years of experience as a principal, not years at their current schools. In this study, years of experience did not provide as notable a difference in principal perceptions for preparedness as one might expect.

Principal mobility, or movement from one school to another, could have had some impact on survey results. Changes in environmental factors such as school location, free and reduced lunch rate, school site past security practices, and other influences could potentially change from one year to the next for principals who are transferred to different schools at different points in their careers as principals. In keeping with this train of thought was that first year principals reported being least prepared for fire, weather events, and custody related abduction.

K-5 grade configuration principals reported being less prepared to address battery on a student, battery on a school board employee, crowd control, rape, suicide, and gang related crisis incidents on their campuses than Grade 6-8 or 9-12 school principals. This

represents a notable trend in the study. Survey data from the *Indicators of School Crime and Safety* survey (NCES, 2004) reported that elementary schools were less likely to experience a violent incident than secondary schools. Reports of violent incidents were obtained from 92% of high schools and 87% of middle schools in the secondary level but only 61% of elementary schools. Reports from the 2011 NCES survey emphasized violent incidents at middle schools in particular (NCES, 2011). This indicates that experience, as discussed by Bandura (1986, 1997), could be a contributing factor to perceived preparedness for specific crisis events. Similarly, principals with 1,000 students or less reported being less prepared than principals with 1,001 or more students to deal with battery on a student, battery on a school board employee, crowd control, rape, suicide, and gang related crisis incidents. K-5 schools represented 94.7% of all schools with enrollments of 500 or less and 85.2% of all schools 501 to 1,000 students. The connection between K-5 schools with lower student enrollments and lower levels of preparedness was an important finding.

Principals in schools with a full time law enforcement officer reported being more prepared than those with no law enforcement presence on campus for battery on a student, battery on a school board employee, firearm possession, weapon possession, crowd control, rape, suicide, and gang related crisis incidents. Part time presence of a law enforcement officer also impacted reports, with principals reporting a significantly higher perception of preparedness for battery on a student, battery on a school board employee, and crowd control than those with no law enforcement presence on campus.

Again, as in Research Question 1, presence of a law enforcement officer provided an indicator of reported confidence.

There was a connection worthy of note throughout the list of 16 crisis incidents between K-5 school principals, lower student enrollment, female principals, and principals with no law enforcement officer indicating lower levels of preparedness for crisis incidents. K-5 schools with enrollments of 1,000 students or less, which were led in a greater percentage (77.1%) by female principals, had the lowest (97.1%) presence of law enforcement assigned to their campuses. These principals consistently reported less preparedness for specific crisis events. Principals in all four categorical subgroups consistently reported being less prepared for crowd control/riot, rape, and gang activity than other groups in their respective categories.

Overall, approximately 70% of responding principals reported being prepared or very prepared for all of the crisis incidents examined with the exception of rape. This result was not unexpected as rape has been an underreported crime, and statistics related to its occurrence remain elusive. As noted in the literature review, 68% of incidents of rape are not reported to police, and 44% of rape victims are school age (RAINN, 2009; Sexual Violence, 2012).

Research Question 3

To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding their training to manage critical crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

Findings for Research Question 3 show there were no statistically significant differences in principal self-reports by gender, length of time as a principal, grade configuration, student enrollment, free and reduced lunch rate, presence of a law enforcement officer, or presence of a security plan for perceptions of training in prevention or response to crisis incidents on their campuses. No differences in responses were noted in adequacy of funding for training as well. There was actually a high level of agreement between groups in response to all three items in the survey. Almost 75% of principals reported that training in prevention and response was adequate to do an effective job. Almost 50% of principals reported that not enough revenue was expended or that they were unsure if enough revenue had been expended for training in preparation for crisis incidents on their school campuses. Similarly, Sprague et al. (2002), in their survey of Oregon principals in 2000 using the Oregon School Safety Survey (Sprague et al., 1995), found that 56% of respondents mentioned the need for additional resources as the largest barrier to school safety measures. The 2011 NCES *Survey on Crime and Safety* also reported that 21% of principals believed funding was the number one barrier to crime prevention efforts.

Research Question 4

To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding the likelihood of specific crisis incidents occurring on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

Findings for Research Question 4 revealed that there were statistically significant differences in principals' perceptions of the likelihood for specific crisis incidents on their campuses. Female principals reported that battery on a school board employee, firearm possession, fire, explosive device, chemical spill, and custody related abduction were more likely to occur than did male principals. The *2009 School Survey on Crime and Safety* (NCES, 2009) revealed that although secondary teachers reported being threatened more often, elementary teachers reported being physically attacked by students at higher rates than secondary teachers. This, combined with the percentages of female principals in K-5 environments, would provide some evidence in support of the battery finding. Similarly, custody related abduction as reported by Hammer et al. (2002), occurs with children between the ages of 6 and 14 almost 50% of the time when it occurs. Length of time as a principal revealed no differences in the perceived likelihood for any of the 16 specific crisis incidents to which the principals responded.

There was a distinguishable pattern to responses from grade configuration groups. K-5 principals reported lower likelihood of incidents such as battery on a student, crowd control, rape, and gang related crime that are generally associated with secondary schools. Dangerous intruder, fire, and custody related abduction were identified as more likely by K-5 principals than Grade 6-8 or 9-12 principals. Of the three, fire, would have

been expected to be reported as more likely in a secondary setting, but that did not emerge in the data analysis. Suspicious fires in schools were reported as causing structural damage 25% of the time to elementary schools (School Fires, 2007). Additionally, the findings in the current study tended to confirm Hammer's (2002) finding that custody related abduction is generally associated with younger children and would warrant concern from K-5 principals.

Principals at schools with more than 1,000 students reported fire and custody related abduction were less likely to occur than those in schools with 1,000 or fewer students. These schools were primarily secondary schools, and custody related abduction would be less likely (Hammer, 2002). Principals in schools with lower free and reduced lunch rates reported lower likelihood of battery on a school board employee and lower likelihood of gang related crisis incidents. These findings would support results of NCES surveys (2009, 2011) that city schools, and schools with higher rates of minority students reported greater incidents of violence as well as higher rates of gang activity. The Office of Juvenile Justice National Gang Center (Comprehensive Gang Model, 2009) also reported that free and reduced lunch enrollment, racial and gender makeup of the school, as well as student enrollment, are all factors that should be considered when addressing gang presence in a school environment.

Principals with a full time law enforcement officer on campus reported a greater likelihood that battery on a student, rape, and gang related crisis incidents would occur on campus than those with a part time law enforcement officer and those without an officer at all. This continues a trend within the study of secondary schools, identifying greater

likelihood for those incidents that are generally associated with those grade levels. It provides additional support for the NCES (2004) finding that elementary schools are less likely to experience incidents of violent crime. Principals with a full time law enforcement officer reported lower likelihood of fire on campus than those without a law enforcement officer at all and lower likelihood of custody related abduction than those with a part time law enforcement officer and those with no officer at all.

Research Question 5

To what extent, if any, are there differences in Central Florida public school principals' perceptions regarding law enforcement interaction with school-based leadership in preparation for and during crisis incidents on their campuses during the course of a normal academic school day based upon principal demographics and school characteristics?

There were statistically significant differences between principal groups regarding interaction with law enforcement. Grade configuration, student enrollment, and having a law enforcement officer on campus were shown to have an impact on responses. Grade K-5 school principals reported law enforcement as being less prepared to meet the demands of a crisis incident on their campuses compared to Grade 6-8 and 9-12 principals. As expected, principals with a full time law enforcement officer reported that law enforcement was more prepared to meet school crisis demands than schools with a part time officer and those without an officer at all. Although only two principals reported not having a security plan, both of those principals reported that law enforcement was prepared at the "some" level. In contrast, 85% of the remaining

principals with a security plan reported “quite a bit” and “a great deal” of preparedness by law enforcement.

K-5 principals with 1,000 students or less and no law enforcement presence, all of which were in large part the same group, reported significantly less clarity overall for leadership, decision making, methods, and procedures between themselves and law enforcement than secondary schools with student enrollments of 1,001 or more and full time law enforcement presence. A similar finding was revealed between principals of schools with large free and reduced lunch rate populations. Those with the highest free and reduced lunch rates (68 to 100%) reported less clarity between school administration and law enforcement than those with a slightly lower free and reduced lunch rate. Significant differences in group responses were found when clarity of role responsibilities were identified specifically as methods, procedures, leadership, and decision making. However, when the question was presented as clarity of “expectations” of first responders (law enforcement), no significant differences in clarity were found between groups.

K-5 principals with no law enforcement presence also reported that law enforcement placed less value on school administrative input regarding crisis incidents than Grade 6-8 or 9-12 principals with full and part time law enforcement presence. Grade K-5 principals with 1,000 or less students and no law enforcement presence also reported that collaboration between law enforcement and school administration was less adequate than did secondary school principals with 1,001 or more students and full or part time law enforcement presence.

This finding continues a trend which can be noted throughout the findings of the study. Lower grade level schools, with lower student enrollments, with no law enforcement presence reported lower levels of clarity in role responsibility between themselves and law enforcement. They also reported lower levels of collaboration with law enforcement. Travis and Coons (2005), in a study of law enforcement presence in schools, found that schools in general reported lower levels of collaboration on school issues, specific incidents, program development, risk assessment, and planning for increased school security than reported by law enforcement agencies. However, in the same study, it was also found that 44.2% of schools with a school resource officer reported that law enforcement was involved with collaborative efforts versus 20.9% of schools without one.

Research Question 6

To what extent, if any, are there differences in the specific crisis incidents Central Florida public school principals most fear occurring during the course of a normal school day based upon principal demographics and school characteristics?

Overall, based on crisis incident groupings in this study, principals feared an intruder on campus by the highest percentage (23.8%). However, a weapon related incident appeared to be the most feared by those in this study when incident combinations were examined. Only principal group responses by grade configuration were found to be statistically significantly different among the seven independent variables regarding the crisis incident feared most. Grade K-5 principal reports were significantly different from those of Grade 6-8 principals, and Grade 6-8 reports were significantly different from the

reports of Grade 9-12 principals. There was no correlation between group responses at a significant level. Many of the incidents feared most had low numbers of responses in large part due to the number of categories; however, large concentrations of K-5 principal reports were in the intruder, armed intruder, and shooter/gunman groupings combined for 58% of their responses. Large concentrations of Grade 6-8 principal reports were in the shooter/gunman, intruder, armed intruder, weapon use, and weapon on campus groupings combining for 62% of their responses. Large concentrations of Grade 9-12 principal reports were in the shooter/gunman, intruder, armed intruder, and weapon on campus groupings combining for 76.4% of their responses. Overall, the general indication was that a weapon related incident, was a primary concern or the most feared crisis incident for the majority of principals at all levels.

There were several important response patterns in most feared crisis incident categories that were of interest. More than 25% of K-5 and almost 25% of 9-12 principals reported intruder as the most feared crisis incident. More than 20% of K-5, 6-8, and 9-12 principals, as well as two (66.7%) of the three K-8 principals, reported shooter/gunman as the most feared crisis incident.. Also of interest was the fact that 100% of principals reporting custody abduction (12), abduction (10), weather (10), fire (4), disabled student behavior (2), and hostage situation (2) were K-5 and 6-8 principals. K-5 principals accounted for 100% of reports of angry parent or adult (5), chemical spill (3), car (1), and domestic violence (1). Grade 6-8 and 9-12 principals accounted for 100% of reports of crowd control/riot (2). Additionally, 100% of death reports were

those of Grade 6-8 principals (2), and 100% of gang related crime or violence (1) were those of 9-12 principals.

Influences on the incident feared most by principals varied. Gender was significantly associated with media coverage of that type of incident, with female principals choosing that influence in greater numbers than males. Free and reduced lunch rate was significantly associated with geographic location of the school with the highest third group (68 to 100%) choosing that influence in greater numbers than the other two thirds combined. "Other" influences was chosen by those principals with no law enforcement presence in their schools in significantly higher numbers than principals with both part time and full time law officers combined.

Principals with two to five years' experience found their neighborhoods significantly less safe than principals with 16 or more years' experience. The majority of principals believed the neighborhood surrounding their school was safe, but a noticeable percentage (31.8%) was not sure or did not believe the school's neighborhood was safe. Of those responding unsafe or very unsafe, K-5 principals accounted for 70.9% and 100% of those responses, respectively.

Bandura (1986, 1997), in his work with social cognitive theory has stated that

> . . . those who believe that potential threats are unmanageable view many aspects of their environment as fraught with danger. They dwell on their coping deficiencies, magnify the severity of possible threats, and worry about perils that rarely (if ever) happen. (Bandura, 1997, p. 140).

Public demand for safe schools remains a constant in light of continued high profile incidents involving the death or threat of violence from multiple sources (Addington,

2009; Lawrence & Birkland, 2009; Mayor & Furlong, 2010). This study, while not intended to confirm crisis incidents in schools, has marked the significant presence of differing levels of principal confidence and preparedness in leading their schools through crisis incidents and in matters related to school security. In spite of statistically low percentages of likelihood for a school related death or violence (NCES, 2008, 1998; Cornell, 2006), evidence points to continued levels of concern with specific crisis incidents from consistent groups in the principal sample.

Legislated efforts to address public concerns for school safety and provide process and procedural guidelines designed to address security have been implemented (Addington, 2009; Ervin, 2006; Florida Statutes, 2009; Lawrence & Birkland, 2004; Office of Safe and Drug-free schools, 2003,2007), but principal reports identified significant differences in the impact of those efforts. Principal confidence in law enforcement preparedness varied, and reports of adequate collaboration between schools and agencies were unevenly distributed across subgroups.

Principals reported their greatest fear in relation to school security to be a dangerous intruder, armed or shooting on their campus even though school shootings are rare events (Wike & Frazier, 2009), and the bulk of security related legislation since the 1999 Columbine event was directed toward addressing this type of event. Influences such as media reports and geographic location have been shown to significantly impact the security fears of principals in varied circumstances.

Significant differences in principals' perceptions and, therefore, self-efficacy have been identified in all three areas of Bandura's (1997) theory of triadic reciprocal

causation (a) personal factors, (b) behavior, and (c) environmental events (p. 6). These differences have the potential for impacting the collective efficacy and group attributes of those working in schools through the dynamics of leaders' interaction with the group (Bandura, 1997). Such differences in perception bring the questions of effectiveness and consistent distribution of security preparation for principals and schools in general to the table for further examination.

Conclusions

The findings of this study provide a unique picture of principals' perceptions and self-efficacy in relation to school security. Overall, principals participating in this study were confident that their roles as leaders had an impact on the security of those individuals in their schools. They were, however, less confident that they were prepared to lead their schools through a crisis incident during the course of a normal school day. There was a moderate to strong correlation ($r_s = -.770$, $\rho < .001$) indicating that the greater the presence of a law enforcement officer, the more confident the principal was to lead through a crisis.

Findings for perceived likelihood of specific crisis events overall showed a binary relationship with those reported for perceived preparedness for specific crisis events. Low grade level configuration schools, generally led by female principals, with student enrollments of 1,000 students or less and with no law enforcement officer presence reported significantly lower levels of preparedness and also reported significantly lower levels of likelihood for similar crisis incidents.

Overall, principals perceived that their training in preparation for and response to crisis incidents was adequate. However, though the difference was not significant between groups, a large percentage of principals also perceived that funding for their training was inadequate.

Grade K-5 schools with 1,000 students or less, and with no law enforcement presence, were significantly less confident in law enforcement preparedness, clarity of methods and procedures, and clarity of leadership and decision making between themselves and law enforcement. They also reported significantly lower levels of collaboration between law enforcement and themselves. Secondary schools, with law enforcement presence on campus, with student enrollments of 1,001 or more students were significantly more confident in law enforcement preparedness, perceived that they had a stronger working relationship, and greater role clarity between themselves and law enforcement.

The crisis incident feared most by principals involved a dangerous intruder, possibly armed or shooting on their campuses. Although the responses were dispersed across several categories, there was a clear indication that the possession or use of a weapon was part of that fear. Principals with higher free and reduced lunch rates perceived that the geographic location of their school significantly influenced the type of crisis incidents they feared the most, and that the neighborhoods around their schools were significantly less safe. Female principals indicated that their crisis incident fears were significantly influenced by media reports of crisis incidents.

Implications for Practice

Principals are the individuals most responsible for the safety and security of those individuals at the school in their charge (Stephens, 2003). This has been the nature of the job since early on in its creation, and its complexity has increased as time has passed (Brunner et al., 1989; Ciminillo, 1980; Commission, 1918; Goodwin et al., 2005; IEL, 2000; U.S. Department of Health, 1977; USDOE, 2007). Though the likelihood of crisis incidents represents a low probability historically (Cornell, 2006; Mayer & Furlong, 2010; Wike & Frazier, 2009), the high toll of such events requires preparation and focus on the prevention and response to these events (Addington, 2009; CDC, 2004, 2012; Davies, 2008; Electronic Code, 2012; Ervin, 2006; FEMA, 2010; Florida Statutes, 2009; Lawrence & Birkland, 2004, Office of Safe and Drug-free Schools, 2007; USDOE, 2001).

The findings of this study have clear implications for those individuals working as policy makers for educational systems. In this study, areas have been identified where the perceptions of those impacted by and expected to implement policy could provide foci for future efforts to address needs of stakeholders in regard to school security. Those in policy development positions will find links between personal, environmental, and behavioral factors and specific groups of school leaders whose perceptions of their role and confidence in their ability to complete required tasks impacts the outcomes of crisis incidents in school settings. Presence of a law enforcement officer, for example, appeared to impact perceptions of principals in relation to overall preparedness, preparedness for specific incidents, and likelihood of crisis incidents. Specific items,

such as principals' perceptions of law enforcement readiness, belief that law enforcement values administrator input, and perceptions of preparedness for specific crisis incidents could also provide policy direction in regard to funding for professional development of school leaders and collaborative opportunities between community agencies and schools.

There are also implications for professionals working in schools in an administrative capacity. The perceptions of leaders working in similar circumstances could provide insight into role expectations, environmental influences, preparation, and resources that may influence confidence, decisions, and outcomes in the daily interaction with individuals and groups on a school campus. For example, knowledge of overall principal perceptions of likelihood for specific crisis incidents, differences in elementary and secondary grade configuration perceptions of preparedness, and law enforcement interaction perceptions could drive initiatives to increase awareness or seek resource allocations.

For law enforcement professionals, there are several significant findings within this study that could influence future interaction with school leaders. Self-reports indicated that law enforcement presence increased confidence in preparedness for specific crisis incidents, input value, and understanding of law enforcement preparedness. These could provide areas of focus for law enforcement interaction with schools. Knowledge of principal perceptions could provide insight in formulating changes in time allocation, improving visibility, and guiding future collaborative efforts to improve law enforcement impact on school campuses and in the community.

Another important aspect of this study that relates to policy development was the impact that characteristics of schools had on the perceptions of principal leaders. Differences in enrollment size, grade configuration, free and reduced lunch rates, and geographic location were significant indicators of preparedness, perceptions of neighborhood safety, and other influences on the incidents feared the most. Findings in this study could provide valuable information related to the future design, location, renovation, and construction of educational facilities.

Recommendations for Further Research

The goal of this study was to determine the extent to which there were differences in principals' perceptions and self-efficacy in relation to school security. Working professionals were surveyed, and subgroup responses to 23 items were analyzed for statistically significant differences guided by six research questions. Significant differences were found in a large number of subgroup categories. These findings, however, were limited in several ways. The sample itself was limited regionally to central Florida principals, and responses must be viewed as limited in generalizability by the impact of regional and state influences. There are other limitations that could provide avenues for further study.

1. There were small numbers of respondents in some sample categories. Small group size impacted grade configuration (K-8, other), student enrollment (3,000+) and "no" presence of a security plan group analysis. A larger sample

in future studies could provide greater reliability for findings associated with these groups.

2. Typed responses to item 21 on the crisis incident feared most provided an additional limitation. The open ended format of this survey item was designed to avoid restricting responses. Therefore, there were no controls placed on responses resulting in a wide variety of vocabulary utilized by members of the sample. This presented difficulty aggregating responses into groups for analysis. There were clear indications from overall percentages in types of incidents feared most, but the 22 resulting incident type groups so fragmented responses that reliability of the resulting statistical analysis was poor. Careful attention should be devoted to the construction of open response items in future studies.
3. Causal relationships were not a purpose of this study. However, Spearman correlations were conducted as a follow-up to Kruskal Wallace and Mann Whitney analysis. Many of the Spearman tests resulted in statistically significant findings. The design of the survey did not provide the breadth of range in responses that would possibly have provided clear visual confirmation of a monotonic relationship between group responses and independent variables. A wider range of Likert-type choices, as suggested by Bandura (2006), could possibly have provided some clarity. It is suggested that in future studies a 9- or possibly a 13-point scale be used to provide a larger response range of belief or agreement. Several Spearman test findings

indicated low to mid-range correlations suggesting that a potential causal relationship exists. For example, a mid-range negative correlation (r_s = -.770, ρ =.000) was found between presence of a law enforcement officer and preparedness to lead through a crisis.

4. The examination of principals' preparedness for specific crisis incidents and the likelihood of specific crisis incidents were limited to the demographic and school characteristic groups identified in this study. A more detailed examination with additional independent variables, in particular principal demographic variables, could provide greater insight into personal characteristics associated with specific crisis incidents.
5. The list of crisis incidents itself was limited to 16 items. An expanded list would enable a much more detailed examination of specific incidents. For example, abduction as an expanded category to custody abduction could provide more insight into group differences.
6. The majority of principals identified current training levels in prevention and response as adequate, but almost 50% responded that funding for training was either inadequate or they were unsure as to adequacy of funding for training. A detailed investigation of the adequacy of professional development funding of principals in regard to safety and security would be a beneficial area of further study.
7. There was a discrepancy found in the analysis of data to respond to Research Question 5 regarding administrative "interaction" with law enforcement.

Interaction between law enforcement and school administration was identified as methods, procedures, leadership, and decision making in survey items 14 and 15. Significant differences were found between several responding groups. In item 16, however, no statistically significant differences were found when the item identified interactions as "expectations" of first responders. Further research into the specifics of interaction with law enforcement concerns of principals, possibly through the use of scenarios or more clarity through definitions, could be beneficial.

8. Role clarity between school administration and law enforcement in the context of security preparation and response was an area where there were significant differences between principal groups. In particular principals in elementary level schools expressed significantly less confidence in law enforcement preparation, collaboration with schools, and believed their input was not valued by law enforcement. Further study of the use of school resource officers in elementary environments could provide foci for improvement of communication and understanding between elementary administrators and law enforcement. Further study in the area of school resource officer preparation programs and role expectations could provide insight into improving communication and developing a more collaborative relationship between school leaders and law enforcement.
9. The National Incident Management System is a network of resources designed to coordinate agency (including schools) response and interaction during and

following crisis incidents. A closer look at the integration of school administrative input into the system's organization and structure related to school crisis incidents could prove beneficial.

10. A missing dimension in the present study was the perspective of law enforcement. In as much as principal perspective is valuable, so is that of the agencies that respond to crisis incidents in the school setting. This avenue, in conjunction with principal responses, could provide a valuable opportunity to gather more complete information based on differences in the perspectives of the two groups. For example, surveying both groups using a working definition of "collaboration" would allow examination of both groups' perceptions as to whether "adequate" collaboration was taking place, thereby providing an avenue for the identification of discrepancies.
11. On December 14, 2012, a 20-year-old gunman entered Sandy Hook Elementary School in Middletown, Connecticut. The resulting tragedy ended with the death of 20 students and six school workers (Bradford, 2013). This incident occurred shortly after the completion of the survey portion of this study and highlights the continuing security concerns among stakeholders of every type who interact with schools. How do school administrators know that the processes and procedures that they have put in place on campuses to protect students and those who interact with them are working? This study provides a baseline examination of principals' perceptions regarding school security practices and related influences. Future studies periodically

comparing changes and differences in perceptions through the use of the PSSPS or a similar survey instrument could provide indicators of progress or failure from a program evaluation perspective.

Summary

The purposes of this study were to determine the differences, if any, that existed in principals' perceptions regarding school security, their perceived confidence to address critical crisis incidents on their campuses, their perceptions of the likelihood critical incidents could occur, their perceptions of interaction with law enforcement, the critical incidents they fear the most, and their perceptions of factors impacting the incidents they fear the most.

Significant differences were found in a large number of subgroup categories and led to the development of conclusions and implications for practice for policy makers for educational systems, professionals working in schools in an administrative capacity, and law enforcement professionals. The sample itself was limited regionally to Central Florida principals, and responses must be viewed as limited in generalizability by the impact of regional and state influences. Recommendations for further research were formulated after careful consideration of the findings, the conclusions, the implications for practice, and the limitations of the study.

APPENDIX A
PRINCIPAL SAFETY AND SECURITY PERCEPTION SURVEY

Principal Safety and Security Perception Survey

1. Welcome!

You have been selected to participate in a survey related to public school safety and security. This 5 to 7 minute survey is designed to collect the perceptions of current public school principals regarding security preparation, training, response, and interaction with law enforcement during crisis incidents on campus during the course of a normal academic school day. This survey is a key component of my doctoral research. Your participation is essential for a complete picture of current principal beliefs.

Your privacy is very important to me. No information regarding the identity of survey participants will be provided to anyone or included in the resulting research documentation. You can be assured your answers are kept completely confidential.

If possible, please complete the survey by February 15, 2011 and submit your answers. If you have questions regarding the content of the survey or would like to receive information related to the research when it is completed, please feel free to contact me at the email address below.

Thanks again for your participation!
Julian Jones
Principal
Galaxy Middle School
Doctoral Student
University of Central Florida

jfjones@knights.ucf.edu

Principal Safety and Security Perception Survey

2. Demographic Information

Please mark the single response that best reflects your current situation.

1. What is your gender?

- ◯ Male
- ◯ Female

2. How long have you been a school principal?

- ◯ 0 - 1 year
- ◯ 2 - 5 years
- ◯ 6 - 10 years
- ◯ 11 - 15 years
- ◯ 16 years or more

3. At what school level are you currently the principal?

- ◯ Elementary School
- ◯ Kindergarten - 8th Grade
- ◯ Middle School
- ◯ High School
- ◯ Other

4. What is the size of your current student population?

- ◯ 0 - 500
- ◯ 501 - 1000
- ◯ 1001 - 1500
- ◯ 1501 - 2000
- ◯ 2001 - 2500
- ◯ 2501 - 3000
- ◯ More than 3000

Principal Safety and Security Perception Survey

5. What is your school's current percentage of students qualifying for free and reduced lunch?

- ◯ 0 - 33%
- ◯ 34 - 67%
- ◯ 68 - 100%

6. A Law Enforcement Officer is assigned to work at your school site:

- ◯ Full Time
- ◯ Part Time
- ◯ Never

7. Your school site has a crisis management or security plan.

- ◯ Yes
- ◯ No

Principal Safety and Security Perception Survey

3. Current Beliefs

Please mark the single response that best represents your current belief.

8. To what extent do you believe your role as principal impacts the safety and security of students, staff, and visitors on your campus during the course of a normal academic school day?

- ◯ Not at all
- ◯ A little
- ◯ Some
- ◯ Quite a bit
- ◯ A great deal

9. To what extent do you believe you are prepared to lead your school through a crisis incident that threatens the safety and security of your students, staff and visitors on your campus during the course of a normal academic school day?

- ◯ Not at all
- ◯ A little
- ◯ Some
- ◯ Quite a bit
- ◯ A great deal

10. To what extent do you believe training you have received in the "prevention" of a crisis incident on your campus has prepared you to do an effective job?

- ◯ Not at all
- ◯ A little
- ◯ Some
- ◯ Quite a bit
- ◯ A great deal

Principal Safety and Security Perception Survey

11. To what extent do you believe training you have received in "responding" to crisis incidents on your school campus has prepared you to do an effective job?

- ◯ Not at all
- ◯ A little
- ◯ Some
- ◯ Quite a bit
- ◯ A great deal

12. To what extent do you believe law enforcement is prepared to meet the demands of a crisis incident on your school campus involving the safety and security of students, staff, and visitors on campus?

- ◯ Not at all
- ◯ A little
- ◯ Some
- ◯ Quite a bit
- ◯ A great deal

Principal Safety and Security Perception Survey

4. Current Level Of Agreement

Please mark the single answer that best represents your current level of agreement.

13. Methods and procedures during a crisis incident on your school campus are clear and well-defined between school-based administration and law enforcement.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Unsure
- ◯ Agree
- ◯ Strongly Agree

14. Leadership and decision making responsibilities during crisis incidents on your school campus are clear and well-defined between school administration and law enforcement.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Unsure
- ◯ Agree
- ◯ Strongly Agree

15. Adequate funding has been spent training you as principal to prepare for and respond to crisis incidents on your school campus.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Unsure
- ◯ Agree
- ◯ Strongly Agree

Principal Safety and Security Perception Survey

16. Expectations regarding school-based administration interaction with first responders to crisis incidents on your campus are clear and well-defined.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Unsure
- ◯ Agree
- ◯ Strongly Agree

17. Law Enforcement places a high value on school-based administration input regarding crisis incidents on your school campus.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Unsure
- ◯ Agree
- ◯ Strongly Agree

18. Adequate collaboration in preparation for a potential crisis incident on your campus has taken place between school-based administration and Law Enforcement.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Unsure
- ◯ Agree
- ◯ Strongly Agree

Principal Safety and Security Perception Survey

5. Current Perception of Likelihood

19. Please mark the single choice on each row that best represents your belief regarding the likelihood of each crisis incident occurring on your campus during the course of a normal academic school day.

	Very unlikely	Unlikely	Unsure	Likely	Very Likely
Battery on a student	◯	◯	◯	◯	◯
Battery on a school board employee	◯	◯	◯	◯	◯
Dangerous intruder on campus	◯	◯	◯	◯	◯
Firearm use on campus	◯	◯	◯	◯	◯
Firearm possession on campus	◯	◯	◯	◯	◯
Weapon use on campus (other than firearm)	◯	◯	◯	◯	◯
Weapon possession on campus (other than firearm)	◯	◯	◯	◯	◯
Fire on campus	◯	◯	◯	◯	◯
Explosive device or bomb on campus	◯	◯	◯	◯	◯
Weather event on or near campus	◯	◯	◯	◯	◯
Chemical/Toxic Spill on or near campus	◯	◯	◯	◯	◯
Crowd Control Incident / Riot on campus	◯	◯	◯	◯	◯
Custody related abduction	◯	◯	◯	◯	◯
Rape on campus	◯	◯	◯	◯	◯
Suicide attempt / Baker Act on campus	◯	◯	◯	◯	◯
Gang/Secret Society related crime or violence	◯	◯	◯	◯	◯

Principal Safety and Security Perception Survey

20. Please mark the single choice on each row that best represents your belief regarding your level of preparedness for each crisis incident during the course of a normal academic school day.

	Very unprepared	Unprepared	Unsure	Prepared	Very prepared
Battery on a student	◯	◯	◯	◯	◯
Battery on a school board employee	◯	◯	◯	◯	◯
Dangerous intruder on campus	◯	◯	◯	◯	◯
Firearm use on campus	◯	◯	◯	◯	◯
Firearm possession on campus	◯	◯	◯	◯	◯
Weapon use on campus (other than firearm)	◯	◯	◯	◯	◯
Weapon possession on campus (other than firearm)	◯	◯	◯	◯	◯
Fire on campus	◯	◯	◯	◯	◯
Explosive device or bomb on campus	◯	◯	◯	◯	◯
Weather event on or near campus	◯	◯	◯	◯	◯
Chemical/Toxic Spill on or near campus	◯	◯	◯	◯	◯
Crowd Control Incident / Riot on campus	◯	◯	◯	◯	◯
Custody related abduction	◯	◯	◯	◯	◯
Rape on campus	◯	◯	◯	◯	◯
Suicide attempt / Baker Act on campus	◯	◯	◯	◯	◯
Gang/Secret Society related crime or violence	◯	◯	◯	◯	◯

Principal Safety and Security Perception Survey

6. Open Ended Question

Please provide a brief response to the following question in the space provided.

21. What specific crisis incident do you fear most that would endanger students, staff, and visitors during the course of a normal academic school day?

22. Please mark the answers that identify influences impacting the incident you fear most.

	Yes	No
Geographic location of your school	◯	◯
Personal experience with this specific incident	◯	◯
Media coverage of this type of incident	◯	◯
A similar incident in your community	◯	◯
Training or simulation experience with this type of incident	◯	◯
Other	◯	◯

23. Please choose the answer choice that best describes your belief regarding the neighoborhood surrounding your school.

	Very Safe	Safe	Unsure	Unsafe	Very Unsafe
The neighborhood surrounding my school is	◯	◯	◯	◯	◯

APPENDIX B
INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Julian F. Jones**

Date: **September 21, 2011**

Dear Researcher:

On 9/21/2011, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	PRINCIPAL PERCEPTIONS OF SELF-EFFICACY IN RELATION TO SCHOOL SECURITY PREPARATION, IMPLEMENTATION, AND SOCIAL COGNITIVE INFLUENCES
Investigator:	Julian F Jones
IRB Number:	SBE-11-07851
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 09/21/2011 09:25:44 AM EDT

Joanne Muratori

IRB Coordinator

APPENDIX C
SCHOOL DISTRICT APPROVAL

ASSESSMENT, ACCOUNTABILITY AND EVALUATION

SCHOOL BOARD OF POLK COUNTY
1915 SOUTH FLORAL AVENUE
BARTOW, FLORIDA 33830
PHONE (863) 534-0688
FAX (863) 534-0770

Wilma Ferrer
Senior Director
(863) 534-0691
51491

Candy Amato
Assessment
Senior Coordinator
(863) 534-0690
51490

Research & Evaluation
Senior Coordinator
(863) 534-0736
51534

Donna Buckner
Accountability
Senior Coordinator
(863) 534-0717
51515

Robert Campbell
Testing & Data Analysis
Senior Coordinator
(863) 647-4281
67943

Eileen Schofield
Administrative
Secretary
(863) 534-0688
51488

"The Mission of Polk County Public Schools is to ensure rigorous, relevant learning experiences for our students that result in high achievement."

February 1, 2012

Julian Jones
1608 Horseshoe Road
Enterprise, Florida 32725

Re: *Principal Perceptions of Self-efficacy in Relation to School Security Preparation, Implementation, and Social Cognitive Influences*

Dear Mr. Jones:

The Office of Assessment, Accountability, and Evaluation of Polk County Schools has **approved** your request for research to study principal perceptions regarding school security. Based on your proposal, your research request will be approved for the period of February 1, 2012 to March 30, 2012. Should you desire to continue your research efforts after this period of time, you must submit a progress report on the status of your research and request renewed approval for continuation of the project. Any significant changes or amendments to the procedures or design of this study must be approved by resubmitting the request for research to this office.

In the interest of continued research benefits and the coordination of research interests, please send this office one copy of your results and discussion. This information, and any other relevant information you may have, will be filed in our research library and added to the annotated listing of research projects. We look forward to your results and any suggestions they may offer toward improving the educational process in Polk County Schools.

Please feel free to call me if I can be of further assistance.

Sincerely,

Wilma Ferrer

Wilma Ferrer, Senior Director
Chair, Research Review Committee
Research and Evaluation
(863)534-0688
Fax: (863)534-0770
wilma.ferrer@polk-fl.net

THE SCHOOL DISTRICT OF OSCEOLA COUNTY, FLORIDA

817 Bill Beck Boulevard • Kissimmee• Florida 34744-4492
Phone: 407-870-4600 • Fax: 407-870-4010 • www.osceola.k12.fl.us

February 3, 2012

Julian F. Jones
c/o Galaxy Middle School
1608 Horseshoe Road
Enterprise, FL 32725

Dear Mr. Jones:

This letter is to inform you that we have received your request to conduct research in our School District. Based on the description of the research you intend to conduct, I am pleased to inform you that you may proceed with your work as you have outlined.

I will remind you that all information obtained for the purpose of your research must be dealt with in the strictest of confidentiality. At no time is it acceptable to release any student or staff identifiable information.

I wish you the best of luck in your future endeavors. If I can be further assistance, please do not hesitate to contact me.

Sincerely,

Angela Marino

Angela Marino
Director
Research, Evaluation & Accountability

Cc: Dr. Rosemarye Taylor

Hillsborough County
PUBLIC SCHOOLS
Excellence in Education

March 1, 2012

Mr. Julian F. Jones
1608 Horseshoe Road
Enterprise, Florida 32725

Dear Mr. Jones:

The Hillsborough County Public School district has agreed to participate in your research proposal, *Principal Perceptions of Self-Efficacy in Relation to School Security Preparation, Implementation, and Social Cognitive Influences*. A copy of this letter **MUST** be presented to all participants at each school to assure them your research has been approved by the district. Your **approval number is RR1112-304**. You must refer to this number in all correspondence. Approval is given for your research under the following conditions:

1) Participation by the schools is to be on a voluntary basis. That is, participation is **NOT MANDATORY** and you must advise **ALL PARTICIPANTS** that they are not obligated to participate in your study.

2) If a principal agrees the school will participate, it is up to you to find out what rules the school has for allowing people on campus and you must abide by the school's check-in policy. You will **NOT BE ALLOWED** on any school campus without first following the school's rules for entering campus grounds.

3) You must coordinate with the district's Office of Communications to coordinate with them to ensure that your surveys do not conflict with the distribution of other surveys to district students, parents, and/or employees. Ms. Linda Cobb is the External Communications Manager and can be reached at linda.cobb@sdhc.k12.fl.us or at 813-272-4060.

4) You may not remind your potential participants about the survey once it has been distributed. That is, once the survey has been distributed, no further communication can be transmitted to the participants.

5) Confidentiality must be assured for all. That is, **ALL DATA MUST BE AGGREGATED SUCH THAT THE PARTICIPANTS CANNOT BE IDENTIFIED**. Participants include the district, principals, administrators, teachers, support personnel, students and parents.

6) Student data **MUST be DESTROYED** when the project has been completed **unless the parents** have been notified that the data has to be kept longer.

7) Research **approval does not constitute the use of the district's equipment, software, email, or district mail service**. In addition, **requests that result in extra work** by the district such as data analysis, programming or assisting with electronic surveys, may have a cost borne by the researcher.

Raymond O. Shelton School Administrative Center • 901 East Kennedy Boulevard • Tampa, Florida 33602
School District Main Office: 813-272-4000 • P.O. Box 3408 • Tampa, Florida 33603 • website: www.sdhc.k12.fl.us
Assessment and Accountability Office: 813-272-4341 • Fax: 813-272-4340
e-mail: Samuel.whitten@sdhc.k12.fl.us

Submit this form and a copy of your proposal to:
Accountability, Research, and Assessment
P.O. Box 271
Orlando, FL 32802-0271

Orange County Public Schools

RESEARCH REQUEST FORM

RECEIVED DEC 0 2 2011

Your research proposal should include:
- Project Title
- Purpose and Research Problem
- Instruments
- Procedures and Proposed Data Analysis

Requester's Name Julian Jones Date December 1, 2011

E-mail jfjonesiii@gmail.com Phone 386-561-7593

Address 1608 Horseshoe Road (Street) Enterprise, Florida (City, State) 32725 (Zip)

Institutional Affiliation University of Central Florida

Project Director or Advisor Dr. Rosemarye Taylor Phone 407-823-1469

Degree Sought: (check one) ☐ Associate ☒ Doctorate ☐ Bachelor's ☐ Not Applicable ☐ Master's ☐ Specialist

Project Title: Principal Perceptions Of Self-efficacy In Relation To School Security Preparation, Implementation, And Social Cognitive Influences

ESTIMATED INVOLVEMENT

PERSONNEL/CENTERS	NUMBER	AMOUNT OF TIME (DAYS, HOURS, ETC.)	SPECIFY SCHOOLS BY NAME AND NUMBER OF TEACHERS, ADMINISTRATORS, ETC.
Students	0		
Teachers	0		
Administrators	177	7 to 10 minutes	
Schools/Centers	177	0	Attached
Others (specify)	0		

Specify possible benefits to students/school system: Analysis of principal perceptions regarding school security practices may lead to a better understanding of school based leadership preparedness to address critical crisis incidents, and a better understanding of leader confidence in implementation of security procedures and interaction with law enforcement. Analysis may also provide potential areas of focus for future leadership professional development.

ASSURANCE

Using the proposed procedures and instrument, I hereby agree to conduct research in accordance with the policies of the Orange County Public Schools. Deviations from the approved procedures shall be cleared through the Senior Director of Accountability, Research, and Assessment. Reports and materials shall be supplied as specified.

Requester's Signature Julian F. Jones

Approval Granted: ☒ Yes ☐ No Date: 1-24-12

Signature of the Senior Director for Accountability, Research, and Assessment

Volusia County Schools

P.O. Box 2118 • 200 North Clara Avenue • DeLand, Florida 32721-2118

DeLand (386) 734-7190 | Daytona Beach (386) 255-6475 | New Smyrna Beach (386) 427-5223 | Osteen (386) 860-3322

Dr. Margaret A. Smith
Superintendent of Schools

School Board of Volusia County

Dr. Al Williams, Chairman
Ms. Judy Conte, Vice-Chairman
Mr. Stan Schmidt
Ms. Candace Lankford
Mrs. Diane Smith

January 18, 2012

Julian Jones
1608 Horseshoe Road
Enterprise, FL 32725

Dear Julian:
I have received your request to conduct research within Volusia County Schools. I have approved your request to conduct research on the topic of "Principal Perceptions of Self-efficacy in Relation to School Security Preparation, Implementation, and Social Cognitive Influences" As with all requests to do research; participation is at the sole discretion of the principals, teachers and parents of all students involved. Parent Consent Forms will be necessary for all data gathered from the students of Volusia County Schools.

By copy of this letter, you may contact the school principals who allow this research to be conducted with their faculty and students. We request that you conduct your survey with as little disruption to the instruction day as possible.

I would aporeciate receiving a copy of your project at the completion of your study.

Sincerely,

Bambi J. Lockman, LL.D.
Deputy Superintendent, Instructional Services

BJL/mh

Pasco County Schools

District School Board of Pasco County

7227 Land O' Lakes Boulevard • Land O' Lakes, Florida 34638 • 813/ 794-2000

Heather Fiorentino, Superintendent www.pasco.k12.fl.us

Research and Evaluation Services
Peggy Jones, Ph.D., Director
813/ 794-2338 Fax: 813/ 794-2118
727/ 774-2338 TDD: 813/ 794-2484
352/ 524-2338 pejones@pasco.k12.fl.us

December 20, 2011

Mr. Julian Jones
1608 Horseshoe Road
Enterprise, Florida 32725

Dear Mr. Jones:

Attached you will find an approval to conduct research for your study project in the District School Board of Pasco County entitled, *Principal Perceptions of Self-efficacy in Relation to School Security Preparation, Implementation and Social Cognitive Influences*. Individual participation is voluntary.

The purpose of this study is to examine differences, if any exist, in principal perceptions regarding readiness, training, interaction with law enforcement, and the likelihood of and ability to address specific critical crisis incidents on their campuses.

We are always interested in the outcome of research in our school system. As you continue to refine your study, please forward a brief summary of your findings to the Research and Evaluation Department.

Best of luck as you pursue the subject of your research.

Sincerely,

Peggy Jones

Peggy Jones, Ph.D.
Director

/jg
Attachments

xc: All Principals

December 1, 2011

Approved Debbie Moffitt 12/21/11

Director Moffitt,

My name is Julian Jones, and I am currently a doctoral candidate at the University of Central Florida in Educational Leadership. I am also the principal of Galaxy Middle School in Volusia County. I am contacting you to request permission to include school principals in Sumter County Public Schools in my research study for my dissertation.

My study is titled *Principal Perceptions of Self-efficacy In Relation to School Security Preparation, Implementation, and Social Cognitive Influences*. This study is designed to seek perceptions through a 7 to 10 minute online survey from principals of public non-charter schools in 15 Central Florida counties of varying sizes along the I-4 corridor. This would include approximately 1000 principals.

The study has been approved by the University of Central Florida Institutional Review Board, and my supervising professor is Dr. Rosemarye Taylor. Dr. Taylor is an Associate Professor in the Department of Teaching, Learning and Leadership. I have listed her contact information if you would like to speak with her as well.

The following pages contain a synopsis of the study including the methods to be used to analyze the data gathered. I have also attached a hard copy of the online survey. All participant information collected in the survey will be completely confidential, and no information that would identify participants will be reported as a part of the study results. Study results will be made available to all participants and districts after the final report of results is accepted.

Thank you for considering this request. I believe that the collective perceptions of school-based leaders hold valuable insights for schools in general regarding security related preparation, implementation, and interaction with law enforcement.

Best regards,

Julian F. Jones
UCF Doctoral Candidate
Principal
Galaxy Middle School
1608 Horseshoe Road
Enterprise, Florida 32725
jfjonesiii@gmail.com
386-561-7593

Dr. Rosemarye Taylor
Associate Professor
Department of Teaching, Learning and Leadership
University of Central Florida
4000 Central Florida Blvd
Orlando, Florida 32816
rosemarye.taylor@ucf.edu
407-823-1469

Brevard Public Schools
THE FUTURE OF FLORIDA'S SPACE COAST

School Board of Brevard County
Office of Accountability, Testing & Evaluation

Vickie Hickey
School Improvement Resource Teacher

Office (321) 633-1000, ext. 528 • Fax: (321) 633-5465
E-mail: Hickey.Vicroi@brevardschools.org
2700 Judge Fran Jamieson Way • Viera FL, 32940-6601

of Accountability, Testing, and Evaluations
Research Application

ssurances Form

I understand that I am requesting permission to engage in a research Project, and I am not requesting information pursuant to Open Records Legislation. If my research project requires participation with students, I understand that I may be subject to the appropriate School Board policy regarding background investigations, as well as any applicable costs associated. Additionally, if my request is granted, I agree to abide by all policies, rules and regulations of the District, INCLUDING THE SECURING OF WRITTEN PARENT PERMISSION PRIOR TO IMPLEMENTATION OF MY PROJECT.

x _____ 12/1/2011

Researcher — Date

I have read the procedures for Research Projects in the Brevard County Public School System and understand that supervision of this project and responsibility for an outcome report rests with me. I also understand that the privileges of conducting future studies in the Brevard County Public School System is conditioned upon the fulfillment of such obligations.

x _____ 12-1-11

Sponsor/Advisor of Research Project (signature required for student research) — Date

Approval of Office of Accountability, Testing and Evaluation*:

_____ 11/30/11

Signature — Date

*Approval of the study at the district level does not obligate principals to participate in the proposed research.

Approval of Principal*:

_____ _____

Signature — Date

*The principal's signature suggests that the research project has been reviewed and that the school will participate, subject to the researcher's compliance with District policies.

Marion County Public Schools
Where Every Child Can Learn

Guidance & Testing
215 S.E. 6th Street • Ocala, FL 34471
(352) 671-7157 • Fax (352) 671-7587
F R S (800) 955-8770 (voice) • (800) 955-8771 (TTY)

December 9, 2011

Mr. Julian Jones
1608 Horseshoe Road
Enterprise, FL 32725

Dear Mr. Jones,

I have received your application to conduct research entitled *Principal Perceptions of Self-efficacy In Relation to School Security Preparation, Implementation, and Social Cognitive Influences.* Your proposal takes into consideration the standard safeguards associated with a request to conduct scholarly research, and it complies with our district criteria for research projects.

Please consider this letter as approval for you to conduct the above-referenced project within Marion County Public Schools as you have proposed. Although the participation of our district school principals will be voluntary, I hope that many of them will choose to respond.

Per your request, a list of the email addresses of Marion County school principals is enclosed. Please notify me if you need to make any substantial changes in your research project as it is implemented in our district. Let me know if I may be of further assistance to you. You have my best wishes for a successful project.

Yours truly,

Janet Weldon

Janet Weldon, Ed.S.
Director of Guidance and Assessment

Gmail

Julian Jones <jfjonesiii@gmail.com>

Permission from Indian River County School District

1 message

Gage, Betty <Betty.Gage@indianriverschools.org> **Thu, Dec 1, 2011 at 4:57 PM**
To: "jfjonesiii@gmail.com" <jfjonesiii@gmail.com>

Dear Mr. Jones,

Dr. Fran Adams, Superintendent, has granted you permission to contact school principals in the Indian River County School District regarding your dissertation.

Best of luck

Betty Gene Gage, Administrative Assistant

School District of Indian River County

1990 25th Street

Vero Beach, FL 32960

(772) 564-3149

(772) 564-3128

APPENDIX D
COMMUNICATIONS WITH PARTICIPATING PRINCIPALS

Research Request

jfjones
Wed 1/11/2012 10:58 PM
To: jfjonesiii@gmail.com <jfjonesiii@gmail.com>;
Bcc:

2 attachments
Permission Letter.jpg; Study Disclosure Letter.JPG;

Good Morning,

My name is Julian Jones, and I am currently the principal of Galaxy Middle School in Volusia County. I am conducting research as a part of my doctoral dissertation in the area of principal interaction with school safety and security. This involves over 1000 principals in Central Florida completing a short 7 to 10 minute survey of principal perceptions regarding leadership in crisis situations and interaction with law enforcement.

I have attached a letter from your district granting permission to include you in this research and a disclosure letter, but your participation is completely your decision. The answers you give are completely confidential, and I would very much appreciate it if you would choose to provide your insight regarding safety and security matters.

In about a week you will receive an email containing a link from Surveymonkey that will take you directly to the online survey. If you should have questions or would like more information about this project, please feel free to email me at the address below. I believe that school leaders hold much untapped knowledge in the area of school security. Your input can help bring those perceptions forward.

Thank you for your participation!

Julian Jones
Principal
Galaxy Middle School
UCF Doctoral Candidate
jfjonesiii@gmail.com
386-561-7593

Dear Educator:

You are being invited to take part in a research study. Whether you take part is up to you. Thank you for taking the time to participate in this important study about principal perceptions of effectiveness planning and implementing safety and security protocols. You are among approximately 1,000 educators who have been invited to provide input for this research. My hope is that this study will contribute to our understanding of how leader's perceptions and levels of confidence drive change and impact activities designed to raise awareness and preparation.

The study is confidential. To help ensure the confidentiality of your identity you will be assigned a numeric code. This code, along with all the information gathered through the study questionnaire, will be held confidential and discarded upon completion of the research study. Viewing of any personally identifiable information will be limited to myself, my dissertation committee, and the Institutional Review Board at the University of Central Florida.

There are no anticipated risks or benefits to participating in this study. Since the research is conducted electronically, you will be able to participate from anywhere you so choose. All that is required is internet access. There is a one month window in which to complete the online questionnaire in order for your input to be included in the study. The questionnaire should take approximately 7 to 10 minutes to complete. Upon completion of this study, you will have the opportunity to receive a copy of the published results.

If you have any questions about this study on principal perceptions and security protocols, please contact me at 2011securitysurvey@gmail.com. My faculty advisor, Dr. Rosemarye Taylor, may be contacted by phone at (407) 823-1469 or by email at rtaylor@mail.ucf.edu.

Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (IRB). Questions or concerns about research participants' rights may be directed to the UCF Institutional Review Board Office at the University of Central Florida, Office of Research and Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246. The phone numbers are (407) 823-2901 or (407) 882-2276.

By completing the questionnaire, you are consenting to participate in this study. You are free to withdraw your consent to participate at anytime without consequence. If you choose to withdraw your consent, please contact me using the provided email address.

Thank you for taking the time to complete this survey. Your time and effort are greatly appreciated.

Best Regards,

Julian Jones
Principal
Galaxy Middle School
Doctoral Candidate, University of Central Florida
2011securitysurvey@gmail.com

Delivery Date

Recipients

EMAIL SENT
January 19, 2012
8:01 AM
TOTAL
SENT TO
New / Unsent

To: [Email]

From: "2011securitysurvey@gmail.com via surveymonkey.com" <member@surveymonkey.com>

Subject: Safety and Security Survey

Body: Good Morning.

This is just a reminder that I am conducting a survey on Principal Safety and Security Perceptions, and your response would be appreciated. This survey will take approximately 7 to 10 minutes to complete.

Here is a link to the survey:
https://www.surveymonkey.com/s.aspx

This link is uniquely tied to this survey and your email address. Please do not forward this message.

Thanks for your participation!

Julian Jones
Principal
Galaxy Middle School
UCF Doctoral Student
jfjonesiii@gmail.com

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout.aspx

Delivery Date

Recipients

DATE SENT
February 2, 2012
8:03 AM
TOTAL SENT
Not Responded

To: [Email]

From: "2011securitysurvey@gmail.com via surveymonkey.com" <member@surveymonkey.com>

Subject: Survey Request

Body: Thank you for your participation in the Principal Perceptions Survey regarding school-based Safety and Security.

Here is a link to the survey:
https://www.surveymonkey.com/s.aspx

Your participation is very important to my study. I appreciate your input in to the collective perceptions of principals in the Central Florida area.

The link will take you directly to the 7 to 10 minute survey.

Thanks again for your participation!

Julian Jones
Principal
Galaxy Middle School
UCF Doctoral Student
2011securitysurvey@gmail.com
386-561-7593

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout.aspx

Delivery Date

Recipients

EMAIL SENT
February 15, 2012
8:01 AM
TOTAL
SEND TO
Not Responded

To: [Email]
From: "jfjonesiii@gmail.com via surveymonkey.com" <member@surveymonkey.com>
Subject: Thank You For Your Help
Body: Good Morning,

This is just a reminder that I am conducting a survey on Principal Safety and Security Perceptions, and your response would be appreciated. This survey will take approximately 7 to 10 minutes to complete.

Here is a link to the survey:
https://www.surveymonkey.com/s.aspx

This link is uniquely tied to this survey and your email address. Please do not forward this message.

Thanks for your participation!

Julian Jones
Principal
Galaxy Middle School
UCF Doctoral Student
jfjonesiii@gmail.com

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout.aspx

Delivery Date

Recipients

EMAIL SENT
March 5, 2012
8:04 AM
TOTAL SENT TO
Not Responded

To: [Email]
From: "jfjonesiii@gmail.com via surveymonkey.com" <member@surveymonkey.com>
Subject: Participation Request
Body: Good Morning,

This is just a reminder that I am conducting a survey on Principal Safety and Security Perceptions, and your response would be appreciated. This survey will take approximately 7 to 10 minutes to complete.

Here is a link to the survey:
https://www.surveymonkey.com/s.aspx

This link is uniquely tied to this survey and your email address. Please do not forward this message.

Thanks for your participation!

Julian Jones
Principal
Galaxy Middle School
UCF Doctoral Student
jfjonesiii@gmail.com

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.
https://www.surveymonkey.com/optout.aspx

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