Preparation Matters: A Quantitative Examination of Faculty Active Shooter Preparedness

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Preparation Matters: A Quantitative Examination of Faculty Active Shooter Preparedness

by

Latisha Lenese Pitts

A Dissertation
Submitted to the Graduate School,
the College of Education and Psychology
and the Department of Educational Research and Administration
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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December 2018
ABSTRACT

In recent years, the occurrence of active shooter incidents has become more prevalent within the United States. Since the Virginia Tech massacre in 2007, there has been an increase in active shooter incidents at institutions of higher learning (IHLs). Educational settings have been identified by the FBI as the second most common place for active shooter incidents to occur. As a result, there has become an increased need for administrators at IHLs to create and maintain cultures of preparedness that include effective active shooter training. In this research study, Albert Bandura’s Social Cognitive Theory was used as a framework to explore faculty active shooter preparedness. A cross-sectional survey design was used to examine the environmental factors, behaviors, and personal and cognitive factors that contributed to faculty active shooter preparedness. A snowball sampling method was used to recruit participants for this study. This study was conducted in May of 2018. Participants completed the Faculty Active Shooter Preparedness Survey (FASPS) online. Findings from the FASPS revealed that only 57% of the respondents received active shooter training from their institution. In conjunction with that, about half of the respondents perceived themselves as being prepared for active shooter incidents on campus. Additionally, findings revealed that active shooter training at IHLs was limited to discussion-based training exercises and operations-based training exercises were rarely conducted. As a result, there is a need to improve the active shooter preparation efforts among IHLs, so that all faculty are prepared for the onset of an active shooter incident on campus. There is also a need to ensure that active shooter preparation efforts align with the U.S. Department of Education
ACKNOWLEDGMENTS

To my committee, thank you all for being dedicated, determined, and dependable. I was truly blessed to have each one of you. I appreciate everyone’s commitment to the completion of this project.

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Thank you all for believing in me!
DEDICATION

First and foremost, I want to thank my God and Savior, Jesus Christ for always being with me and for giving me the love, wisdom, knowledge, understanding, and resources to complete the dissertation process and have good success in life. Thank you, Lord for always ordering my steps, directing my paths, and making a way. Thank you for blessing me with your Holy Spirit, who comforts me and teaches me all things. Thank you for being good and faithful. Finally, thank you for blessing me with the greatest support system in the world.

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<th>Description</th>
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<tr>
<td>AST</td>
<td>Active Shooter Training</td>
</tr>
<tr>
<td>DHS</td>
<td>U.S. Department of Homeland Security</td>
</tr>
<tr>
<td>DOE</td>
<td>U.S. Department of Education</td>
</tr>
<tr>
<td>FASPS</td>
<td>Faculty Active Shooter Preparedness Survey</td>
</tr>
<tr>
<td>FBI</td>
<td>Federal Bureau of Investigations</td>
</tr>
<tr>
<td>IHL</td>
<td>Institution of Higher Learning</td>
</tr>
<tr>
<td>IRB</td>
<td>Institutional Research Board</td>
</tr>
<tr>
<td>NCES</td>
<td>The National Center for Educational Statistics</td>
</tr>
<tr>
<td>SCT</td>
<td>Social Cognitive Theory</td>
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<td>RQ</td>
<td>Research Question</td>
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CHAPTER I – INTRODUCTION

The active shooter epidemic at institutions of higher learning (IHLs) began in 1966 when Charles Whitman, a student at the University of Texas, killed his family, proceeded to the university’s iconic tower, and began randomly shooting individuals who were walking across the campus (Stearns, 2008). During this incident, over 30 people were wounded, and 13 people were killed. Forty-one years later, over 30 people were killed, and several others were wounded during an active shooter incident at Virginia Polytechnic Institute (Fox & Savage, 2009; Rasmussen & Johnson, 2008; Stearns, 2008). The Virginia Tech massacre is known as one of the deadliest active shooter incidents in the history of the United States. The United States Department of Homeland Security (DHS) (2008) defined an active shooter as, “an individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms and there is no pattern or method to their selection of victims” (p. 2). The Federal Bureau of Investigation’s (FBI) definition of active shooter coincides with the DHS’s definition of active shooter (OPS Active Shooter Guide, n.d.; U.S. Department of Homeland Security, 2008).

The number of active shooter incidents at IHLs has risen substantially during the 21st century (Blair & Scheweit, 2013; Booker, 2014; Campo-Flores, Carlton & Emshwiller, 2015; Fox & Savage, 2009; Sulkowski & Lazarus, 2011; Sullivan, 2012; Wang & Hutchins, 2010). In 2013, the FBI reported that 70% of the active shooter incidents that occurred in the United States between the years of 2000 and 2013, occurred in educational settings (Blair & Scheweit, 2013). The FBI also reported that as of September 8, 2016, between the years of 2000 and 2016, 16 active shooter incidents
occurred on college campuses (2016). Since the 1966 University of Texas tragedy, seven of these IHL active shooter incidents were mass shootings that resulted in mass casualties (see Table 1).

Table 1

*Active Shooter Incidents on College Campuses Resulting in Mass Casualties*

<table>
<thead>
<tr>
<th>Year</th>
<th>Institution</th>
<th>Fatalities</th>
<th>Wounded</th>
</tr>
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<tbody>
<tr>
<td>1966</td>
<td>University of TX</td>
<td>31</td>
<td>18</td>
</tr>
<tr>
<td>1976</td>
<td>CA State University, Fullerton</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>1991</td>
<td>University of Iowa</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>VA Tech</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>2008</td>
<td>Northern Illinois University</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>2012</td>
<td>Oikos University</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>2013</td>
<td>Santa Monica College*</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2015</td>
<td>Umpqua Community College</td>
<td>9</td>
<td>7</td>
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Note. *This shooting did not occur solely on a college campus.*

Apart from the 1966 massacre at the University of Texas, the 1976 California State University shooting, and the 1991 shooting at the University of Iowa, all of the mass shooting incidents that have occurred on college campuses, occurred between the years of 2006 and 2016 (Federal Bureau of Investigation, 2016).

Active shooter incidents on college campuses are unpredictable, can negatively impact institutions, and can be detrimental to members of the campus community (Booker, 2014; Moats, Chermack & Dooley, 2008; Wang & Hutchins, 2010). Indeed, the DHS and FBI have stated that active shooter incidents progress swiftly and are at times
unforeseeable (OPS Active Shooter Guide, n.d.; U.S. Department of Homeland Security, 2008). As such, these incidents are major crisis situations for IHLs. The prevalence of active shooter incidents on college campuses has caused IHLs to place more focus on campus security and institutional active shooter preparedness.

Overview of Theoretical Framework

Active shooter training (AST) plays a major role in preparing individuals to engage in active shooter situations (Readiness and Emergency Management for Schools Technical Assistance Center, n.d.; U.S. Department of Homeland Security, 2008). As a result of the potential threat of active shooter incidents on college campuses, institutions across the nation are providing AST to their faculty and staff (Action Guide for Emergency Management at Institutions of Higher Education, 2010). To frame literature pertaining to the aforementioned, Albert Bandura’s Social Cognitive Theory (SCT) is used as the framework for examining faculty members’ active shooter preparedness in this study. In accordance with Bandura, faculty members’ environment, personal and cognitive factors, and behaviors all play a role in their active shooter preparedness. SCT focuses on observational learning and the reciprocal interaction between individuals’ environment, personal and cognitive factors and behaviors (Bandura, 1986). SCT suggests that individuals can learn and may modify their perceptions and behaviors as a result of observing others (Bandura, 1986). ASTs serve as observational learning experiences because these trainings are comprised of a variety of learning experiences that enable faculty members’ to vicariously engage in active shooter incidents. ASTs and active shooter incidents that occur on college campuses both serve as observational learning experiences that may affect faculty’s environment, personal and cognitive
factors and behaviors. SCT will be used to examine the extent to which participating in AST influences faculty members’ environment, personal and cognitive factors and behaviors.

Problem Statement

As has been mentioned, campus shootings have become more prevalent in United States’ IHLs (Blair & Scheweit, 2013; Booker, 2014; Campo-Flores et al., 2015; Fox & Savage, 2009; Sulkowski & Lazarus, 2011; Sullivan, 2012; Wang & Hutchins, 2010). Although this is a multifaceted problem in higher education, active shooter trainings (ASTs) are essential to equipping personnel with the necessary information, resources, and tools that are needed to manage active shooter incidents (Readiness and Emergency Management for Schools Technical Assistance Center, n.d.). The Readiness and Emergency Management for Schools Technical Assistance Center reported that only a small number of institutions conduct training for active shooter situations (n.d.). Likewise, IHLs have failed and continue to fail to comply with the campus safety and security measures that have been mandated by the federal government (Booker, 2014; Sulkowski & Lazarus, 2011; Sullivan, 2012; Wang & Hutchins, 2010; Zdziarski, 2001).

Active shooter preparedness falls under the larger scope of crisis management. Literature on crisis management in higher education indicated that additional research is needed. In 2010, Wang & Hutchins reported that crisis management was a new research field in human resource development. Their research indicated that overall institutions lacked crisis management plans. In 2012, Sullivan found that emergency management in higher education needed to be more robust. He also suggested that additional research in this area should be conducted to obtain a clearer picture of the status of crisis
management in higher education. Booker reported in 2014 that there was still limited research on crisis management in higher education. He explained that there is limited research because higher education institutions are reactive in their crisis management planning (Booker, 2014). More specifically, research pertaining specifically to faculty active shooter preparedness and active shooter training is missing from the literature.

Implications

The results of this study have both theoretical and practical implications for administrators and faculty at IHLs. From the institutional standpoint, theoretically the results of this study may help administrators improve upon their faculty active shooter preparedness efforts by improving upon their roles in the retention, production, and motivational processes. The institutional approach to active shooter preparedness may need to be altered to incorporate the principles outlined in SCT and the training recommendations outlined by the DHS. From the faculty standpoint, theoretically, the results of this study may help faculty members reflect on their role in active shooter preparedness and may cause faculty to improve upon their attentional and motivational processes. Practically, the results of this study may reveal the need for administrators at IHLs to assess or reassess the organizational culture of preparedness at their institution, and the effectiveness of their active shooter training efforts. The results of this study may influence administrators to create a culture of preparedness at their institutions, if a culture of preparedness has not already been established. Results may also reveal the need for more operations-based training exercises to reinforce what is taught in discussion-based exercises. If this research finds that there is no link between faculty AST and active shooter preparedness, there is likely to be little or no change in how IHLs
prepare for or respond to active shooter threats and situations. There is also likely to be little or no change in how faculty view AST and view their active shooter preparedness.

Purpose

This study aimed to explore faculty members’ active shooter preparedness by examining the impact of active shooter incidents and AST on faculty members’ perceptions, behaviors, and environments. The main aspect of this study was to determine if faculty members believe they are prepared to engage in active shooter situations. This study aimed to describe the nature of faculty ASTs, to examine faculty members’ beliefs regarding organizational vulnerability, and to examine faculty members’ beliefs in their own ability to handle active shooter incidents. This research attempted to determine if there was a match between the AST recommendations and the elements of ASTs at IHLs. This study intended to examine the extent to which faculty members’ perceptions of their active shooter preparedness is related to faculty members’ environmental factors, personal and cognitive factors, and behaviors. In addition, the results from this study will add to the existing literature pertaining to faculty active shooter preparedness. These results may also help institutions assess faculty members’ active shooter preparedness, and help institutions refine faculty active shooter preparation efforts.

Research Questions

This study aimed to answer the following questions:

1. What is the nature of active shooter training at IHLs?
2. To what extent do the reported elements of AST at IHLs align with the DOE’s recommendations for active shooter preparedness?
3. What are the beliefs among faculty regarding the personal and cognitive factors that contribute to active shooter preparedness?

4. What precautionary measures do faculty take to demonstrate active shooter preparedness?

Definition of Terms

**Active Shooter Preparedness**

The ability to prevent, identify, and respond effectively to active shooter situations on college campuses by confidently implementing the knowledge and skills that were acquired through engaging in AST (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010; U.S. Department of Homeland Security, 2008). The reciprocal interaction between personal and cognitive factors, behavioral factors, and environmental factors (Bandura, 1986), AST

AST is based on the protocols and procedures for active shooters that are outlined in institutions’ emergency management plan. AST is provided periodically throughout the year, and it prepares faculty, staff, and students for engaging in active shooter situations (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010; U.S. Department of Homeland Security, 2008). AST also prepares faculty members to properly handle active shooter threats (Glover, 2016; Howard, 2015; Johnson et al., 2016; Zdziarski, 2016).

**Discussion-Based Training Exercises**

Training exercises which includes tabletop exercises, workshops, seminars, and games (U.S. Department of Homeland Security, 2013). During discussion-based training
exercises, crisis management plans, protocols, and policies are developed, refined, and discussed (U.S. Department of Homeland Security, 2013). During discussion-based training participants also discuss how they would respond to active shooter scenarios.

*Operations-Based Training Exercises*


*Delimitations*

The purpose of this study was to examine faculty active shooter preparedness at IHLs. This research was limited to the responses of faculty members who were employed at IHLs within the United States because there was little research available regarding faculty active shooter preparedness. Faculty members that teach at online IHLs were excluded from this study because research indicated that it is the college campuses that are vulnerable to active shooter incidents (Sulkowski & Lazarus, 2011; Wang & Hutchins, 2010). With regard to crisis preparedness, in prior research, faculty reported that they were not prepared for crisis situations (Bishop, 2013; Lott, 2012). When comparing faculty crisis preparedness to staff crisis preparedness, Liu et al. (2015) found that staff felt more prepared for crisis situations than faculty members. For these reasons, staff and students were excluded from the current research study. General crisis preparedness was also excluded from this research study because through the years general crisis preparedness at IHLs has already been extensively researched. The current
research study did not intend to evaluate active shooter training components. The current research merely intended to determine the nature of active shooter preparation efforts at IHLs and to examine the relationship between AST and faculty members’ perceptions of their active shooter preparedness.

Assumptions

There are several assumptions associated with this research study. First and foremost, it was assumed that all the participants have had some exposure to active shooter incidents either through media, training, or personal experiences. Faculty exposure to active shooter incidents was captured by a questionnaire. It was also assumed that the participants of this study voluntarily participated and were honest/forthcoming regarding their responses to all questionnaire items. The instrument used in this study was only completed by faculty members from IHLs (inclusive of private and public colleges and universities as well as community colleges). In efforts to ensure that participants were at liberty to respond honestly, participants names and email addresses were not collected. Participants were assured that their identities would remain anonymous. Finally, it was assumed that all the participants had some awareness of their institution’s plans and procedures related to active shooters or had access to said material should they so choose to review it.

Justification

Crisis planning, management, and preparedness for active shooter situations falls under the umbrella of institutional crisis preparedness and is a relatively new area of research in higher education. There is currently a limited amount of research regarding faculty ASTs. Until the 21st century, active shooter incidents at IHLs were rarely
encountered and there was no need to prepare for these types of occurrences. During the 21st century, active shooter incidents in educational settings became more common. As a result, more focus has been placed on ensuring that IHLs are prepared for these incidents (Blair & Scheweat, 2013; Federal Bureau of Investigation, 2016). Higher education institutions are now required by federal law to have emergency management plans in place to address these potential threats to campus. Even so, institutions have the autonomy to decide the best way to prepare their campuses for crisis situations (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010; U.S. Department of Education, 2014).

The goal of crisis planning, management, and preparedness research is to attempt to help keep college campuses as safe as possible, to ensure that campus personnel are equipped with the knowledge, skills, training, and resources needed to ensure their own safety and the safety of college students, and to ensure institutional compliance with campus safety legislation (Action Guide for Emergency Management at Institutions of Higher Education, 2010). The U.S. Department of Education (DOE) recommended that IHLs conduct trainings with faculty to help prevent active shooter incidents as well as to prepare faculty for the onset of active shooter incidents (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010).

Research conducted regarding faculty AST and faculty active shooter preparedness has the potential to help stakeholders better understand the active shooter preparation efforts at IHLs (Sullivan, 2012). Research conducted in this area can also help determine whether faculty are knowledgeable of their departmental and institutional
Crisis management plans, cognizant of associated procedures, familiar with crisis management teams, and aware of reporting protocols for suspicious activity (Readiness and Emergency Management for Schools Technical Assistance Center, n.d.). Additionally, research on faculty active shooter preparedness reveals if institutions are regularly disseminating information regarding their crisis management plans as it is outlined in legislation, if faculty are regularly disseminating this information to students, and if periodic trainings including drills are being conducted by institutions. Active shooter preparedness research will aid in the evaluation of the effectiveness of ASTs, by identifying the extent to which active shooter trainings are preparing faculty members to deter or engage in active shooter situations. These findings may also aid institutions in improving their active shooter preparation efforts, and cause institutions to become more proactive and strategic in their crisis planning and preparation of faculty.

Summary

Crisis management at IHLs has evolved overtime due in part to the rise in active shooter incidents on college campuses. Research regarding active shooter preparedness generally suggests that IHLs are not fully compliant with campus safety legislation, that a culture of preparedness must be developed on every college campuses, and that faculty active shooter preparedness needs to be further cultivated. The literature lacks sufficient information pertaining to the effectiveness of AST and the preparation of faculty for active shooter situations. In seeking to increase understanding of faculty active shooter preparedness, Bandura’s Social Cognitive Theory (SCT) can serve as a theoretical foundation from which to examine faculty environments, personal and cognitive factors, and behaviors.
CHAPTER II – LITERATURE REVIEW

Over the past 50 plus years, IHLs have dealt with a variety of third party assaults (Epstein, 2002; Fox & Savage, 2009). Active shooter incidents on college campuses are classified as third-party assaults (Epstein, 2002; Farahany, 2004; Fox & Savage, 2009). Researchers suggest that college campuses are areas of high criminal activity because of their openness to the public (Epstein, 2002; Farahany, 2004; Foster & Lipka, 2007; Fox & Savage, 2009; Lake, 2007; Sulkowski & Lazarus, 2011). As a result, campus personnel and college students have an increased risk of being involved in a third-party assault incident while on campus. Incidents of third party assault at IHLs have resulted in a few landmark court cases that have clarified the duty of institutions to warn students of impending dangers and to protect students from present dangers (Bowden, 2007; Epstein, 2002; Farahany, 2004; Lake, 2007).

The Higher Education Opportunity Act indicated that IHLs have a responsibility to provide a safe environment and to protect the campus community (Bowden, 2007; Epstein, 2002; Farahany, 2004; U.S. Department of Education, 2010). Despite legislative and crisis management improvements, college campuses remain vulnerable to active shooter incidents (Booker, 2014; Fox & Savage, 2009; Mitroff et. al., 2006; Sullivan, 2012; Wang & Hutchins, 2010). The campus population, location and size of campuses, campus design, and low police presence on college campuses contribute to the vulnerability of institutions to active shooters (Sulkowski & Lazarus, 2011; Wang & Hutchins, 2010).

As mentioned in chapter 1, active shooter situations are unpredictable incidents that normally end before law enforcement officers arrive (Booker, 2014; Doherty, 2016;

Campus Safety and Security Legislation

A major turning point in campus safety and security legislation occurred after the 1986 rape and murder of Jeanne Clery (Janosik & Gregory, 2003). On the night of the incident, a male student entered Clery’s dorm room at Lehigh University while she was sleeping. The male student sexually assaulted and killed Clery while she was on campus (“Clery Center for Campus Security”, 2018). Following the incident, Jeanne Clery’s parents filed a law suit against Lehigh University claiming that the institution was negligent because the institution failed to protect their daughter from foreseeable danger (“Clery Center for Campus Security”, 2018; Whissemore, 2015). At the time of this incident IHLs were not mandated by law to provide students with warnings regarding criminal activity on or near campus.

After their daughter’s murder, the Clerys’ recognized the need for improved legislation regarding campus security and improved security measures on college campuses (“Clery Center for Campus Security”, 2018; Whissemore, 2015). As a result of this need, the Clerys began lobbying for reform in campus safety and security legislation
on Capitol Hill (“Clery Center for Campus Security”, 2018). Congress enacted the Clery Act in response to the Clerys’ efforts. The Clery Act applies to both private and public IHLs and it mandates institutions to provide timely warnings to students and employees about any crime posing a threat to campus, disclose institutional security policies, and report crime statistics (Foster & Lipka, 2007; Janosik & Gregory, 2003; Whissemore, 2015).

In 1990, President George Bush, Sr. signed the act into law and the Clery Act was codified as an amendment to the Higher Education Act of 1965 (Janosik & Gregory, 2003; Whissemore, 2015). As well, the Campus Security Act of 1990 required IHLs to have their own crisis or emergency response plans (Sulkowski & Lazarus, 2011; U.S. Department of Education, 2014). This act also required institutions to promptly disclose threats to the campus community and all personnel. Research indicated that two decades later, many IHLs were still not fully compliant with the requirements of this act (Booker, 2014; Sulkowski & Lazarus, 2011; Sullivan, 2012; Wang & Hutchins, 2010; Zdziarski, 2001).

The 2007 Virginia Tech active shooter incident placed national spotlight back on college campus security and safety. The incident led to another major turning point in campus safety and security because it forced IHLs across the nation to place more focus on campus safety and active shooter preparedness. The DOE launched an investigation of Virginia Tech after the shootings occurred and found that the institution was indeed negligent in the way that they handled the active shooter incident (Layton, 2014). As a result, the Higher Education Act of 2008 mandated that IHLs have emergency responses and evacuation procedures; annually disclose these procedures to faculty, staff
and students; annually test emergency response and evacuation procedures; and immediately notify members of the campus community of threatening activity (Fox & Savage, 2009; U.S. Department of Education, 2010). It also recommended that IHLs provide training to personnel and students.

Legislation clearly outlines the necessary components of effective crisis management planning for IHLs (U.S. Department of Education, 2010). Many of the best crisis management practices identified in the literature have been mandated by the Campus Security Act of 1990 and by the Higher Education Act of 2008. The 2008 Higher Education Act allocated grant monies to IHLs to help relieve some of the financial burden associated with crisis management, to aid institutions in complying with federal legislation, and to help institutions improve campus safety. However, it is up to institutions to implement best practices and adequately prepare their campus communities for crisis situations.

Institutional Crisis Management

Effective crisis management is an ongoing process (Zdziarski, 2016). Institutions can either be reactive or proactive in their crisis planning and preparation (Booker, 2014; Mitroff & Alpaslan, 2003; Mitroff, Diamond, & Alpaslan, 2006; Wang & Hutchins, 2010). Prior to the Virginia Tech incident, active shooter incidents were not regularly encountered on college campuses (Fox & Savage, 2009; Mitroff & Alpaslan, 2003). The active shooter incident at Virginia Tech highlighted the inadequacy of the reactive approach to crisis management that is employed at most IHLs. Institutions that are reactive in their crisis planning are open to major calamity in the event of an active shooter situation because they are prepared only for normally encountered incidents, such
as fires, suicides, student deaths, sexual assaults, lawsuits, campus disturbances, and crimes (Booker, 2014; Mitroff et al., 2006; Wang & Hutchins, 2010; Zdziarski, 2001). To combat this, proactive preparation for active shooter incidents must be employed in efforts to minimize casualties, minimize loss, and to keep the college campus community safe (Booker, 2014; Fox & Savage, 2009; Wang & Hutchins, 2010; Moats et al., 2008). Institutions that are proactive in their crisis planning develop and maintain effective crisis management plans and review them regularly (Booker, 2014; Mitroff & Alpaslan, 2003; Mitroff et al., 2006).

Institutional crisis management teams are necessary to ensure that effective crisis management planning and preparation is occurring on college campuses (Booker, 2014; Fox & Savage, 2009; Mitroff & Alpaslan, 2003; Rasmussen & Johnson, 2008; Sullivan, 2012; Sulkowski & Lazarus, 2011; Wang & Hutchins, 2010; Waugh & Streib, 2006). Research indicated that the crisis management teams should have representatives from all operational areas of the institution. Such teams are responsible for ensuring that crisis plans are in place, implemented, and practiced periodically. These teams are also responsible for responding to threats and actual crisis situations as well as disseminating crisis prevention and containment protocols and procedures to faculty, staff and students. For crisis plans to be effective, the campus community should be informed, educated, and trained (Booker, 2014; Fox & Savage, 2009; Kapucu & Khosa, 2013; Mitroff & Alpaslan, 2003; Rasmussen & Johnson, 2008; Sullivan, 2012; Sulkowski & Lazarus, 2011; Wang & Hutchins, 2010; Waugh & Streib, 2006; Zdziarski, 2016).

Crisis management planning is most effective when it is a proactive process, which enables institutions to clearly identify procedures that should be followed before,
during, and after a crisis (Booker, 2014; Fox & Savage, 2009; Kapucu & Khosa, 2013; Mitroff & Alpaslan, 2003; Mitroff et. al., 2006; Waugh & Streib, 2006; Wooten & James, 2008). Among IHLs, crisis management is also referred to as emergency management. In recent years, institutions have worked to improve their crisis management policies and procedures to better prepare for active shooter situations (Campo-Flores et al., 2015; Fox & Savage, 2009; Rasmussen & Johnson, 2008; Wang & Hutchins, 2010). Having an effective crisis management plan that includes active shooter preparedness efforts enables institutions to be better prepared to deter or manage active shooter incidents.

The DOE indicated that there are four phases of emergency management on which institutions should base their crisis management plans. These phases are prevention, preparedness, response, and recovery (Action Guide for Emergency Management at Institutions of Higher Education, 2010). The DHS has indicated that there are five similar phases of emergency management: prevention, protection, mitigation, response, and recovery (Guide for developing high quality emergency operations plans for institutions of higher education, 2013). Regardless of the number of steps included, the most effective crisis management plans are extensively detailed and outline steps for managing a wide variety of crisis situations (Booker, 2014; Fox & Savage, 2009; Howard, 2015; Kapucu & Khosa, 2013; Mitroff & Alpaslan, 2003; Mitroff et. al., 2006; Wang & Hutchins, 2010; Zdziarski, 2016). These plans list action steps, tactics to employ, and the means to deploy personnel, resources, and equipment.

Institutional Crisis Management Research and AST

The literature revealed that faculty active shooter preparedness which includes AST has primarily been examined in conjunction with institutional crisis management
(Akers, 2007; Campo-Flores et al., 2015; Fox & Savage, 2009; Lott, 2012; Rasmussen & Johnson, 2008; Sullivan, 2012; Sullivan & Perry, 2014; Wang & Hutchins, 2010). The bulk of the research that is available primarily focuses on crisis management and organizational preparedness. Throughout the literature, the same researchers are consistently cited (Mitroff & Alpaslan, 2003; Mitroff et. al., 2006; Rasmussen & Johnson, 2008; Sulkowski & Lazarus, 2011; Sullivan, 2012; Snyder, 2014; Wang & Hutchins, 2010; Waugh & Streib, 2006; Zdziarski, 2001, 2016). The tipping point in higher education crisis management research occurred in 2001 when Eugene Zdziarski examined the status of crisis management from the perspective of student affairs administrators. Zdziarski examined the types of crises that four-year institutions were prepared for, the stages of crises institutions prepared for, the systems that were put in place to address crisis situations, and the level of stakeholder involvement in institutional crisis preparedness (Zdziarski, 2001).

One hundred forty-six institutions were represented in Zdziarski’s study. Through his research, Zdziarski found that although administrators perceived their institutions as generally prepared to respond to a variety of crisis situations, institutional crisis management was approached from a reactive standpoint (2001). His research revealed that institutions placed less emphasis on the pre-crisis phase of crisis management and more emphasis on the actual crisis and the post-crisis phase of crisis management. Zdziarski also found that a wide range of stakeholders were involved in institutional crisis planning and response efforts (2001). Zdziarski’s study did not include specific active shooter preparation efforts, however, his study revealed that with regard to training, crisis simulations and tabletop exercises were seldom conducted.
In 2007, Akers also examined the status of crisis management in higher education by surveying and interviewing 51 student affairs personnel. Fifty-one IHLs were represented in this study. Akers found that there were some discrepancies between the perceptions of crises management held by administrators and the perceptions held by student affairs personnel (Akers, 2007). He identified these discrepancies through analyzing the crisis response strategies, policies, and programs that were in place at each institution, and compared that information to the respondents’ survey and interview responses. The participating institutions all reported having active crisis response teams that developed crisis response protocols for the institutions.

Akers found that training type, training content, training evaluation methods, and frequency of trainings varied across institutions and varied within institutions by department (2007). Generally, crisis training included either engaging participants in case study discussions, drills, or tabletop exercises (Akers, 2007). Tabletop training exercises were conducted with and without external partners. Akers found that crisis management plans, emergency notifications, immediate response procedures, and crisis follow-up protocols were covered during training sessions. Student affairs personnel reported being responsible for providing training to faculty members. The respondents in Akers study stated that crisis training lacked sufficient formalized training processes and needed to be improved in many areas (Akers, 2007).

In 2008, the first Higher Education Emergency Management Survey was administered to IHLs. The survey was developed and administered to gather data regarding institutional crisis management, and to identify crisis management trends at IHLs (Sullivan, 2012; Sullivan & Perry, 2014). The Higher Education Emergency
Management Survey was administered again in 2011 and in 2014. The survey was predominantly completed by emergency management personnel at IHLs. Through the years, roughly 100 to 150 public and private institutions have been represented in this research study. The 2008 survey results were used as the baseline data for future research. The 2008 version of the survey did not include any questions regarding crisis training and evaluation, but the 2011 and 2014 versions of the survey did (Sullivan, 2012; Sullivan & Perry, 2014).

Although AST was not specifically mentioned in the 2011 or 2014 surveys, significant information regarding crisis training and training exercises was gathered. The 2011 survey results indicated that 74% of participating institutions reported conducting some form of crisis training exercise in 2010 (Sullivan, 2012). The 2014 survey results showed a 5% increase in the number of crisis training sessions that were being conducted at institutions (Sullivan & Perry, 2014). In 2014, participants indicated that tabletop training exercises were the most common method of crisis training being conducted at institutions (Sullivan & Perry, 2014).

In 2012, Mary Lott surveyed faculty, staff, students, and crisis management team members from five universities to examine university crisis management. In Lott’s analysis, she compared the team members’ responses to the responses of the faculty, staff, and students (2012). There were 52 participants in this research study. Lott found that the faculty, staff, and students that participated in her study all reported that they felt they were not familiar with the procedures associated with handling crisis situations. Although the participants reported that their institutions conducted drills; faculty, staff,
and students reported that if a crisis incident occurred on their campus, they would not be prepared to respond to it (Lott, 2012).

In 2016, the National Higher Education Emergency Program Management Programs Needs Assessment was conducted to determine the status of emergency management at IHLs across the nation. About 600 participants from institutions in 45 states completed this assessment survey. Active shooters were mentioned in this assessment, but AST was not examined. Sixty-nine percent of the respondents reported that their campuses provided crisis training to faculty and staff, and 32% of the respondents reported that training needed to be improved (The National Center for Campus Public Safety, 2016). The results from the 2016 assessment also revealed that tabletop training exercises were the most commonly employed method of crisis training (The National Center for Campus Public Safety, 2016). The findings from the national assessment are consistent with prior research. The increase in the use of tabletop trainings through the years is a major improvement from Zdziarski’s findings in 2001.

Research has consistently noted that recent crisis incidents which include campus shootings have caused a major shift in institutional crisis preparedness and management (Akers, 2007; Campo-Flores et al., 2015; Fox & Savage, 2009; Lott, 2012; Rasmussen & Johnson, 2008; Sullivan, 2012; Sullivan & Perry, 2014; The National Center for Campus Public Safety, 2016; Wang & Hutchins, 2010). As of 2014, IHLs were still not using the most recent training recommendations, which is the Department of Homeland Security Exercise and Evaluation Program model for crisis training (Sullivan, 2012; Sullivan & Perry, 2014). Data from the 2014 survey revealed that a large portion of institutions were still not compliant with the Higher Education Opportunity Act (Sullivan & Perry, 2014).
During the 2016 assessment, participants reported that the belief on their campus was that a major crisis situation would not happen on their campus (The National Center for Campus Public Safety, 2016). These findings are consistent with research that suggested that IHLs are reactive in their crisis preparedness efforts (Booker, 2014; Mitroff & Alpaslan, 2003; Mitroff et. al., 2006; The National Center for Campus Public Safety, 2016; Wang & Hutchins, 2010; Zdziarski, 2001).

The findings from the 2011 and 2014 Higher Education Emergency Management survey were consistent with the research findings of Akers. Like Aker’s research, the Higher Education Emergency Management survey revealed that crisis management policies and protocols varied across institutions (Akers, 2007; Lott, 2012; Sullivan, 2012; Sullivan & Perry, 2014). The findings indicated that overall the status of crisis preparation and management in higher education has improved. However, more improvements are needed, especially in the area of crisis training (Akers, 2007; Lott, 2012; Sullivan, 2012; Sullivan & Perry, 2014; The National Center for Campus Public Safety, 2016; Zdziarski, 2001).

Theoretical Framework

The nature of AST, elements of AST, faculty beliefs regarding institutional vulnerability, and faculty beliefs regarding their active shooter preparedness will be examined through the lens of Bandura’s Social Cognitive Theory (SCT). In 1986, SCT emerged as an avenue to explain human behavior. This theory provides the foundation for examining faculty active shooter preparedness. SCT contends that people are not completely driven by internal forces neither are they controlled and shaped by external forces (Bandura, 1986). Through SCT, Bandura explained human behavior as the
reciprocal interaction between cognitive and personal factors, the environment, and behaviors. The three factors in this interaction are determinants of each other. Bandura refers to this interaction as triadic reciprocal determinism (1986). He noted that the reciprocality of the interaction does not mean that the factors influence each other with the same strength or in the same direction. The influence of each factor on the other factors varies depending on circumstances, activities, and individuals. With this framework in mind, the main aspect of this research study was to describe faculty active shooter preparedness by examining faculty members’ personal and cognitive factors, environmental factors, and behavioral factors. Figure 1 illustrates this interaction.

Figure 1. Active Shooter Preparedness Situated in Reciprocal Determinism

Within this framework, faculty active shooter preparedness is defined as the reciprocal interaction between personal and cognitive factors, behavioral factors, and environmental factors.
factors (Bandura, 1986). Personal and cognitive factors consist of faculty beliefs regarding organizational vulnerability, personal safety, forethought, AST, and self-efficacy. Environmental factors consist of the nature of AST or the lack thereof, and the culture of preparedness or the lack thereof. Finally, behavioral factors consist of precautionary measures and the intent to transfer or not transfer what is learned during AST. The reciprocal interaction between these three factors describe faculty active shooter preparedness.

Observational Learning

In Social Foundations of Thoughts and Action, Bandura noted that people can learn vicariously through observing other people’s behaviors and the consequences associated with said behaviors. Based on this principle, SCT implies that active shooter preparedness can be achieved without being directly involved in an actual active shooter incident (Ellies, 2015; Johnson et al., 2016; Pitrowski, 2014; Snyder, 2014; U.S. Department of Homeland Security, 2008). Faculty members can learn how to respond to, deter, and/or engage in active shooter situations through observing the behaviors of others who have been involved in such incidents. ASTs and media coverage of active shooter incidents on college campuses serve as vicarious learning experiences for faculty members. Learning through observation allows faculty to improve their skills and deepen their knowledge based on the information conveyed and behaviors modeled by others. Observations aid faculty members in developing new rules of behavior because they serve as a guide for future actions (Bandura, 1986).

According to Bandura, affective learning can also occur through vicarious experiences (Bandura, 1986). Faculty members can develop strong emotional reactions
toward active shooter threats and incidents without ever being directly involved in them (Bandura, 1986). Fear associated with the possibility of encountering an active shooter on campus can arise in faculty because of exposure to the casualties and devastation that has been caused by active shooters on other campuses.

During ASTs, desired survival behaviors are modeled. Modeling is a forceful means to transfer thoughts, values, and behaviors by imparting new conceptual understandings onto observers (Bandura, 1986). Through observing the performance of others, people can obtain cognitive skills and perform new patterns of behavior (Bandura, 1986). Media coverage, tabletop exercises, games, functional exercises, and full-scale exercises provide opportunities for faculty members to observe other people’s behaviors in relation to active shooters (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Homeland Security, 2013). The modeling that occurs in AST situations teach faculty new skills and provides faculty with rules for putting the new skills into practice. Extending Bandura’s notion that individuals need repeated exposures to the target behavior, faculty members must have repeated exposure to behaviors that demonstrate how to avert active shooter situations (Bandura, 1986).

Faculty should receive a variety of AST opportunities (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Homeland Security, 2008, 2013). The overarching goal of training is to produce new behavior thus, the goal for AST is to prepare individuals to successfully deter or engage in active shooter situations.

There are four processes that influence observational learning. These processes are attentional processes, retention processes, production processes, and motivational
processes (Bandura, 1986). With regard to attentional processes, Bandura noted that for people to learn through observation, they must “attend to and accurately perceive the relevant aspects of modeled activities” (1986, p. 51). With regards to faculty active shooter preparedness, this means faculty must want to pay attention to ASTs and want to accurately perceive the information that is conveyed during the trainings to learn from the training exercises. Personal expectations govern what people decide to give their attention to. People generally give their attention to learning from situations that they believe are similar to situations that they will have to manage in the future (Bandura, 1986). Faculty who hold the expectation that they will one day be involved in a similar task as the one being observed pay greater attention and learn more from the training situations. Faculty who consider the modeled behaviors as irrelevant learn less. The anticipated benefits of employing modeled behaviors and skills serve as incentives to encourage people to pay greater attention to the modeled behaviors. Staying alive and saving others’ lives are the major benefits of demonstrating active shooter preparedness (Blair & Schweit, 2013; Morris, 2014). These benefits serve as incentives for faculty members to be actively engaged during active shooter trainings.

Retention processes are the second processes that influence observational learning. Faculty must be able to retain what they have learned through observational learning experiences, so that they can be influenced by it (Bandura, 1986). According to Bandura, rehearsal improves retention, finding that people who practice modeled behaviors and people who cognitively rehearse are more likely to retain what they have seen or learned than those who do not (Bandura, 1986). Operations-based AST exercises provide faculty members with the opportunity to rehearse their responses to active
shooter situations. Rehearsing decision-making skills and rehearsing procedures for dealing with active shooter situations have the potential to help faculty to retain the knowledge, understandings, and new behaviors that they obtained from the discussion-based training exercises (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Johnson et al., 2016; U.S. Department of Homeland Security, 2013).

The third type of processes that influence observational learning are the production processes. These processes deal with performance and feedback (Bandura, 1986). Observational learning absent of practice will not result in perfect performance because there may be a mismatch between the learners’ conceptions of the observed behaviors and the actions that are required to execute the observed behaviors (Bandura, 1986). During the production process, faculty translate their understandings into practice. Practice alone is not enough to ensure perfect performance because without proper feedback, the learners could be practicing incorrectly under the personal assumption that they are practicing the actions correctly (Bandura, 1986). Operations-based training exercises aid trainers and administrators in identifying what faculty have partially learned or missed during the discussion-based trainings. Practicing active shooter survival tactics in conjunction with providing faculty with corrective feedback will help faculty develop a survival mindset, build self-efficacy, and heightens attentional processes (Blair & Schweit, 2013; Ellies, 2015; Johnson et al., 2016; Morris, 2014; Pitrowski, 2014; Snyder, 2014; U.S. Department of Homeland Security, 2008). The absence of practice combined with corrective feedback after learning in discussion-based AST, could leave faculty
unprepared to perform the learned tactics in the event of an actual active shooter situation.

Motivational processes are the final processes that influence observational learning. Motivational processes account for the discrepancies between what is learned and what is performed. There is a tendency not to perform behaviors that lack functional value. Directly experienced consequences and observed outcomes can lead to changes in human behavior (Bandura, 1986). Knowledge can be gained vicariously about the benefits and risks associated with different actions through observing the outcomes of others who employ similar actions or engage in similar situations (Bandura, 1986). This means that faculty have the capability to learn and benefit from the experiences of others who have engaged in active shooter situations or trainings.

Forethought

Bandura (1986) pointed out that forethought regulates most of human behavior. Forethought is the careful consideration of the necessary actions that will be required in future situations. It serves as a guide for actions and a mechanism for personal motivation (Bandura, 1986). Through forethought people anticipate the consequences or rewards that are likely to be associated with certain actions and they adjust their behaviors according to whichever outcomes they find favorable (Bandura, 1986). Bandura pointed out that although future events do not serve as determinants of behavior, personal actions are causally impacted by the cognitive representations of future events (1986). These representations can have a strong impact on a person’s action. With regard to active shooter incidents at IHLs, it is important for faculty to carefully consider the possibility of being involved in an active shooter situation so that they may demonstrate the positive
behaviors that are associated with active shooter preparedness (Johnson et al., 2016; Kapucu & Khosa, 2013; Howard, 2015; Zdziarski, 2016).

Bandura stated that, “images of desirable future events tend to foster the behavior most likely to bring about their realization. By representing foreseeable outcomes symbolically, people can convert future consequences into current motivators and regulators of foresightful behavior” (Bandura, 1986, p. 19). Self-regulating mechanisms help translate forethought into action (Bandura, 1986). Media coverage of active shooter incidents on college campuses and images that are displayed during ASTs serve as the mediums to represent active shooter incidents and outcomes to faculty members. These images help faculty develop mental images that aid in their forethought, decision making, and choice of behaviors.

*Outcome Expectations*

People tend to adjust their actions to achieve the outcomes they desire. They also judge the likelihood of the consequences and rewards that behaviors will produce. This is known as outcome expectation (Bandura, 1986). Faculty may carry out actions expecting to either prevent future trouble or obtain future benefits. The presence of positive outcomes increases the likelihood that acquired knowledge is performed when needed (Bandura, 1986). When observers view the behaviors of the model being rewarded, the tendency of the observers to behave in a similar fashion increase (Bandura, 1986). When observers view the behavior of the model being punished, the tendency of the observers to behave in a similar fashion decreases (Bandura, 1986). Observed outcomes can influence the observers’ level of motivation (Bandura, 1986). Seeing others survive active shooter situations motivates observers to engage in the actions that result in survival.
Seeing others succeed in responding to simulated active shooter incidents also motivates observers to engage in actions that result in survival. On the contrary, seeing fatalities associated with active shooter situations deters observers from repeating behaviors that decrease the chances of survival. According to Bandura, some actions are carried out without the presence of immediate external punishments or rewards (1986). Bandura noted that if there is no immediate reward or punishment associated with certain behaviors, people motivate themselves and create their own guides for their actions (1986).

**Personal Effort**

Personal effort is determined by the effects that people believe their actions will have on a situation. People adjust the amount of effort they exert in any given situation based on the effect they expect their actions to have, because of this, beliefs serve as a predictor of behavior (Bandura, 1986). Faculty beliefs regarding active shooter threats and incidents will influence their willingness to actively participate in ASTs, and their willingness to employ behaviors that indicate preparedness. Faculty beliefs regarding the impact of their ability to affect an active shooter situation will also influence their willingness to employ preventative and deterring behaviors. Bandura stated,

> To function effectively, people must anticipate the probable effects of different incidents and courses of action and regulate their behavior accordingly. Without anticipatory capacities, they would be forced to act blindly in ways that often prove to be fruitless, if not injurious. (1986, p. 182)

Based on Bandura’s statement, if faculty members maintain the attitude that active shooter situations will never happen on their campus, faculty members will exert limited
amounts of effort regarding preparing for active shooter incidents. Since people adjust their behaviors to match the outcomes they expect, faculty members who maintain this attitude may fail to learn from active shooter trainings and may fail to demonstrate active shooter preparedness. There may be fatal outcomes associated with failing to prepare to engage in active shooter situations (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Johnson et al., 2016; Kapucu & Khosa, 2013; Howard, 2015; U.S. Department of Homeland Security, 2008, 2013; Zdziarski, 2016). On the contrary, if faculty members anticipate that active shooter situations could occur on their campuses, faculty members will be more likely to exert maximum effort regarding preparedness efforts. Faculty members would also be more likely to demonstrate behaviors that could prevent active shooter situations from occurring or minimize the severity of active shooter situations.

Self-Efficacy

Internal standards and personal evaluations of one’s own behavior are vehicles through which people regulate their behavior. Bandura (1986) stated that, “people often do not behave optimally even though they know full well what to do. This is because self-referent thought mediates the relationship between knowledge and action” (Bandura, 1986, p. 391). People choose behaviors and motivate themselves to engage in certain behaviors based on their judgment of their own capabilities. This is known as self-efficacy. Self-efficacy is linked to performance. “Perceived self-efficacy is defined as people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). The concept of self-efficacy suggests that perceived self-efficacy influences persistence,
effort, behavioral settings and choice of activities (Bandura, 1977; Bandura 1986). Faculty members’ perceptions of their self-efficacy can affect their choice of behaviors before, during, and after active shooter situations. These self-perceptions may also influence the extent to which faculty members willingly and actively engage in AST.

Perceptions of self-efficacy do not solely determine people’s actions. To behave proficiently faculty members must possess the necessary skills, believe that they can carry out whatever actions are required, and carry out either precautionary or survival actions (Bandura, 1986). Bandura found that the stronger an individual’s perceived self-efficacy, the more determined, effective, diligent, and successful the individual will be unless their beliefs are miscalibrated (Bandura, 1977; Bandura, 1986). A false sense of preparedness could cause faculty members’ self-efficacy to be miscalibrated (Bandura, 1986).

Furthermore, successes and failures influence self-efficacy. Once self-efficacy is developed and elevated through successful experiences, self-efficacy can be generalized to other experiences. A strong level of self-efficacy is minimally affected by sporadic failures (Bandura, 1986). Vicarious experiences and verbal persuasion also influence people’s self-efficacy (Bandura 1986). With regard to active shooter preparation, faculty can enhance their self-efficacy by engaging in ASTs. These trainings provide opportunities for faculty to participate in vicarious learning experiences, practice mastery of skills and behaviors, receive verbal persuasion, and view the physiological reactions of others (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Johnson et al., 2016; Kapucu & Khosa, 2013; Howard, 2015; U.S. Department of Homeland Security, 2008, 2013; Zdziarski, 2016). The desired outcome of AST is active

Culture of Preparedness

To prepare for active shooter incidents, institutions must create a culture of preparedness on their campuses (Johnson et al., 2016; Kapucu & Khosa, 2013; Howard, 2015; Zdziarski, 2016). Research indicated that in order for institutions to create a culture of preparedness and be well prepared for active shooter incidents, institutions must have comprehensive emergency management plans; must conduct periodic risk assessments; must develop strong partnerships with community stakeholders; must practice executing their emergency management plans; must regularly conduct drills; must post procedures and evacuation plans; must monitor the campus using surveillance cameras and security; and must provide active shooter response training to all students, faculty, and staff (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Allen & Lengfellner, 2016; Doherty, 2016; Guide for Developing High Quality Emergency Operations Plans for Institutions of Higher Education, 2013; Jenkins & Goodman, 2015; Kapucu & Khosa, 2013; Howard, 2015; Morris, 2014; Zdziarski, 2016). By extending SCT to this idea, creating and maintaining a culture of preparedness on college campuses enhances the four processes that influence observational learning (Bandura, 1986). Creating and maintaining a culture of preparedness may also help to make active shooter preparation efforts relevant faculty.
Crisis Preparedness Research

In 2013, Bishop surveyed faculty from four institutions to identify their levels of crisis preparedness and perceptions of risks. Sixty-three faculty members participated in Bishop’s study (Bishop, 2013). Much like in Lott’s study (2012), faculty perceived themselves as not being prepared to engage in crisis situations. These findings confirm Bandura’s assertion that exposure and practice alone do not result in mastery or improved self-efficacy (1986). By viewing these findings through the lens of SCT, one could conclude that if the desired outcome of preparedness was not achieved, the trainings and drills may be ineffective. Bishop’s findings also revealed that faculty held a general perspective that emergency events were unlikely to occur on their campuses (Bishop, 2013). Based on SCT, these perspectives may negatively affect the amount of effort that faculty put into engaging in training and in demonstrating preparedness.

In 2015, Liu, Blankson and Brooks conducted a research study to identify the group differences in university employee’s beliefs about crisis preparedness and active shooter risks. They surveyed full time faculty and staff from a medium-sized comprehensive university. One hundred and eleven university employees participated in the research study. The results of Liu et al.’s (2015) study were consistent with the findings of Bishop (2013) and Lott (2012) in that faculty were not knowledgeable of appropriate crisis responses and were not prepared to engage in a variety of crisis situations. In contrast, staff members demonstrated higher levels of crisis preparedness and self-efficacy than faculty members (Liu, Blankson and Brooks, 2015). Overall, women demonstrated higher levels of crisis preparedness than men. Overall results from this study indicated that crisis response training and communication were lacking at the
participating institution (Liu et al., 2015). Although the findings of Liu et al. cannot be generalized to the larger institutional faculty population, these findings are consistent with the prior research that indicated that crisis training at IHLs is either lacking altogether or lacking effectiveness (Akers, 2007; Liu et al., 2015; Lott, 2012; Myers, 2016; Sullivan, 2012; Sullivan & Perry, 2014; Zdziarski, 2001).

Active Shooter Training

Effective training is a key component of organizational preparedness (Booker, 2014; Fox & Savage, 2009; Kapucu & Khosa, 2013; Mitroff & Alpaslan, 2003; Rasmussen & Johnson, 2008; Sullivan, 2012; Sulkowski & Lazarus, 2011; Wang & Hutchins, 2010; Waugh & Streib, 2006; Zdziarski, 2016). Training is one of the most important components of active shooter preparedness. Effective training helps to facilitate a culture of preparedness on college campuses. Training provides opportunities for observational learning, practice, and corrective feedback to occur. Although it is impossible to prepare for every type of active shooter situation, research indicated that students, faculty, and staff must be trained on how to properly implement the institution’s emergency management plan in the event of an active shooter situation (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Allen & Lengfellner, 2016; Doherty, 2016; Guide for Developing High Quality Emergency Operations Plans for Institutions of Higher Education, 2013; Jenkins & Goodman, 2015; Kapucu & Khosa, 2013; Howard, 2015; Morris, 2014; Zdziarski, 2016). Glover suggested that campus personnel and students should be educated on the importance of promptly reporting threats and incidents to the proper campus authorities (2016). Zdziarski (2016) noted that IHLs must encourage and support faculty members who identify and report potential
threats to campus safety. Institutions must also promptly respond to potential threats to campus in order to maintain safety (Glover, 2016; Zdziarski, 2016).

According to Howard (2015) and Johnson et al. (2016), faculty training regarding how to respond to and assist active shooter responders should occur. The authors further contend that this training should occur on campus regularly, so that everyone is made aware of their roles and responsibilities during active shooter threats and incidents. In SCT, Bandura suggested that rehearsal helps to improve retention, so conducting regular ASTs could enhance retention process (1986).

Survival

Participating in AST helps participants develop a survival mindset (Ellies, 2015; Johnson et al., 2016; Pitrowski, 2014; Snyder, 2014; U.S. Department of Homeland Security, 2008). Failure to be prepared mentally to engage in an active shooter situation can result in panic and panic during an active shooter situation will lead to more casualties (Johnson et al., 2016). By engaging in AST, faculty members can gain a better understanding of basic survival tactics. During ASTs, participants learn tactics associated with “avoid, deny, defend” (Johnson et al., 2016) and “run, hide, fight” (U.S. Department of Homeland Security, 2013). These tactics may help faculty members think quickly and clearly during active shooter situations (Glover, 2016; Howard, 2015; Johnson et al., 2016). Glover (2016) noted that participating in active shooter drills instill and reinforce precautionary behaviors into the participants, and when applied, these tactics can save lives (2016). SCT suggests that training that includes practice and corrective feedback yields the best results (Bandura, 1986).
Types of Active Shooter Training

The Action Guide for Emergency Management at Institutions of Higher Education was created by the DOE to assist institutions with emergency planning and management. The action guide also suggested that ASTs be conducted periodically on college campuses (Action Guide for Emergency Management at Institutions of Higher Education, 2010). The action guide recommended that ASTs include community partners, first responders, and any other key stakeholders. The training guide also recommended that a full range of training should be used to effectively prepare personnel, staff, and all other stakeholders for active shooter incidents. The DHS indicated that individuals must be prepared physically and mentally to engage in active shooter situations because of the nature of these incidents (Readiness and Emergency Management for Schools Technical Assistance Center, n.d.; U.S. Department of Homeland Security, 2008).

The DHS also indicated that conducting mock AST exercises is the best way to prepare people for being involved in an actual active shooter situation. Mock exercises allow for observational learning experiences that can include practice and corrective feedback. SCT suggests that practice with corrective feedback increases the likelihood that the learner performs and builds the learner’s self-efficacy (Bandura, 1986). To improve the likelihood of surviving an active shooter situation, individuals must be able to recognize potential threats, employ a survival mindset, recognize the sound of gunshots, react quickly either through hiding or evacuating, call 911, and cooperate with law enforcement (Ellies, 2015; Johnson et al., 2016; Pitrowski, 2014; Snyder, 2014; U.S. Department of Homeland Security, 2008).
In 2010, the DOE outlined five types of training exercises that should be conducted at IHLs. These exercises include orientation meetings, tabletop exercises, drills, functional exercises, and full-scale exercises (Action Guide for Emergency Management at Institutions of Higher Education). In contrast, the DHS outlined seven types of training exercises that should be conducted to facilitate crisis preparedness. These exercises include seminars, workshops, tabletop exercises, games, drills, functional exercises, and full-scale exercises (U.S. Department of Homeland Security, 2013). The DHS recommended that organizations use a progressive approach to training, where each training session or exercise builds on previous training exercises (2013).

According to the DHS, seminars, workshops, tabletop exercises, and games have been categorized as discussion-based training exercises (2013). In contrast, drills, functional exercises, and full-scale exercises have been categorized as operations-based exercises (U.S. Department of Homeland Security, 2013). The seminars recommended by the DHS serve the same purpose as the orientation meetings recommended by the DOE. During both seminars and orientation meetings, the institution’s emergency management plan is introduced and shared with key stakeholders (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Homeland Security, 2013). Workshops serve as a means for participants to engage in the emergency management planning process and provide participants the opportunity to help create, review or revise emergency plans, and standard operating procedures (U.S. Department of Homeland Security, 2013).

Although the DHS concluded that operations-based exercises are the best way to prepare people for active shooter situations, as of 2016, tabletop exercises were the most

According to DHS, participating in active shooter preparation games allow participants to practice decision-making skills in a competitive environment. During games, participants are placed in teams and are provided with data, rules, and procedures to use to overcome a hypothetical active shooter situation (U.S. Department of Homeland Security, 2013). Participating in games also provide participants with the opportunity to carefully examine the consequences associated with certain decisions and actions. Participating in games may help faculty further develop their outcome expectations and adjust their behaviors to meet their expectations (Bandura, 1986). Games provide an avenue for participants to practice working together as a team to survive active shooter situations.

Operations-based exercises are mock exercises. During operations-based activities such as active shooter drills, functional exercises, and full-scale exercises, participants practice how to respond to active shooter threats and situations on the campus grounds and in campus buildings (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Homeland Security, 2013). Drills permit participants to practice and maintain the active shooter response skills that they acquired during the discussion-based training exercises (U.S. Department of Homeland Security,
Drills also help institutions refine active shooter procedures and test active shooter communications.

According to recent research, functional and full-scale exercises are the least commonly used form of AST at IHLs (Sullivan & Perry, 2014; The National Center for Campus Public Safety, 2016). Functional and full-scale exercises are an extension of active shooter drills. During functional exercises the campus community practices implementing the emergency management plan and procedures during a realistic active shooter simulation (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Homeland Security, 2013). Full scale exercises are the most expensive and most time-consuming training exercises to perform (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Homeland Security, 2013). Full scale exercises are an extension of functional exercises. During full scale exercises, participants also engage in a realistic simulated active shooter incident. However, full scale exercises involve students, staff, faculty, and all other emergency responders and community stakeholders. These exercises allow institutions to test the collaborative efforts of the campus community, personnel, agencies, communication systems, equipment, and public information systems (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Homeland Security, 2013). Operations-based exercises help participants build self-efficacy and permit the crisis management team to identify and correct misunderstandings and deficiencies (Bandura, 1986).
There is a limited amount of research available regarding ASTs and faculty active shooter preparedness at IHLs. Between the years of 2001 and 2016 several dissertation research studies have been conducted that included some sort of active shooter preparedness or AST examination (Akers, 2007; Ellies, 2015; Lott, 2012; Myers, 2016; Pitrowski, 2014; Snyder, 2014; Zdziarski, 2001). AST and preparedness have been examined via both quantitative and qualitative methods with most using survey methodology. Both experimental and non-experimental research designs have been used to explore this area of research, however non-experimental designs were most frequently employed.

In 2014, Snyder examined the effects of AST on students’ perceptions of personal safety. Snyder employed an experimental design for this research. Students were placed in four groups, groups one through three each received a different AST treatment. One group completed the DHS’s active shooter resilience training, one group completed a private active shooter resilience course, and one group completed both training programs (Snyder, 2014). The fourth group was deemed the control and did not receive any type of training. Snyder’s study showed that each training treatment had a positive influence in either the students’ perceptions of safety, fear, and resilience (Snyder, 2014).

Pitrowski conducted a research study similar to Snyder’s in 2014. Pitrowski examined the influence of training seminars on the emergency preparedness of administrators and faculty. The participants of this study participated in either an active shooter threat seminar, a hurricane preparedness seminar, a hazardous materials seminar, a combination of either two or three of the seminars, or engaged in no seminars.
Pitrowski’s results indicated that faculty members who engaged in all 3 seminars scored higher on the crisis preparedness survey (Pitrowski, 2014). Pitrowski (2014) and Snyder’s (2014) results both indicated that training had a positive influence on preparedness.

In efforts to assist in the development of a shared AST program for IHLs, Ellies (2015) attempted to evaluate the effectiveness of an AST program. A pretest/posttest experimental design was employed for this study. Thirty faculty and staff members from the same university participated in this study. Ellies found that after engaging in the training sessions, participants scored higher on the post training assessment than they did on the pre-training assessment (Ellies, 2015). The findings from Snyder (2014), Pitrowski (2014), and Ellies (2015) coincide with the literature that suggested that engaging in AST helps participants develop a survival mindset and that this mindset increases levels of perceived active shooter preparedness (Johnson et al., 2016; U.S. Department of Homeland Security, 2008).

In 2016, Myers conducted a qualitative research study investigating the perceptions of institutional preparedness held by public safety directors at IHLs. She interviewed eight public safety directors from eight private institutions. In conjunction with conducting interviews, Myers reviewed institutional active shooter policies, training procedures, and protocols. Like the researchers who previously examined crisis management and preparedness, she found that preparedness efforts varied among institutions (Akers, 2007; Lott, 2012; Myers, 2016; Sullivan, 2012; Sullivan & Perry, 2014). Only half of the institutions that participated in this study reported having current active shooter policies. Out of the eight institutions that were represented, only two of the institutions reported
conducting mandatory AST (Myers, 2016). Voluntary ASTs were more prevalent, however, participation in these trainings were low. All the participants of Myers’ study reported that their institutions did not conduct mandatory active shooter drills or exercises (Myers, 2016). Although these findings cannot be generalized to the larger higher education population, these findings are also consistent with the research that suggests that IHLs are reactive in preparing for crisis situations (Booker, 2014; Mitroff & Alpaslan, 2003; Mitroff et. al., 2006; Wang & Hutchins, 2010; Zdziarski, 2001). To increase faculty active shooter preparedness on college campuses, IHLs must provide faculty with effective AST (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010; U.S. Department of Homeland Security, 2008).

Summary

Crisis management at IHLs has evolved over time due in part to the rise in active shooter incidents on college campuses. Research regarding active shooter preparedness generally suggests that IHLs are not fully compliant with campus safety legislation, that a culture of preparedness must be developed on every college campuses, and that faculty active shooter preparedness needs to be further cultivated. Prior research conducted by Zdziarski (2001), Lott (2012), and Liu et al. (2015) was the closest in similarity to the current research study. Overall, the literature lacked sufficient information pertaining to the effectiveness of AST and the preparation of faculty for active shooter situations. In seeking to increase understanding of faculty active shooter preparedness, Bandura’s Social Cognitive Theory (SCT) served as a theoretical foundation from which to examine the personal and cognitive factors, environmental factors, and behavioral factors that define faculty active shooter preparedness.
CHAPTER III – METHODOLOGY

Introduction

The focus of this chapter is to describe the methodological procedures employed to examine faculty active shooter preparedness. A cross-sectional survey design was used in the current research study (Gay, Mills, Airasian, 2009). Survey data was collected from postsecondary faculty members. The data was analyzed using Qualtrics™.

Research Questions

This study aimed to answer the following questions:

1. What is the nature of active shooter training at IHLs?
2. To what extent do the reported elements of AST at IHLs align with the DOE’s recommendations for active shooter preparedness?
3. What are the beliefs among faculty regarding the personal and cognitive factors that contribute to active shooter preparedness?
4. What precautionary measures do faculty take to demonstrate active shooter preparedness?

Participants

As of the 2015-2016 academic year, there were 4,583 degree-granting IHLs in the United States including public, private, and for-profit 2-year and 4-year institutions (National Center for Educational Statistics, 2018). There was a total of 1,620 public institutions, 1,701 private non-profit institutions, and 1,262 private for-profit institutions. The target population for this study is postsecondary faculty. The National Center for Educational Statistics (NCES) defined faculty as, “professors, associate professors, assistant professors, instructors, lecturers, assisting professors, adjunct professors, and
interim professors” (2017). The NCES reported that as of fall 2015, there were about 1.6 million postsecondary faculty members employed at degree-granting institutions in the United States (2017). Fifty-two percent of these faculty members were full time and 48% were part time (National Center for Educational Statistics, 2017). As of 2015, 42% of the total population of fulltime faculty were white males, 35% were white females, and less than 20% of the population were minorities (National Center for Educational Statistics, 2017).

Sampling

Due to the nature of this research, a nonprobability sampling approach was employed. A snowball sample was used to gather a snapshot of faculty active shooter preparedness. To capture the differences in faculty active shooter preparedness in IHLs across the United States, 2-year colleges were selected from states that have 100 or more degree granting IHLs. Private 4-year institutions were selected from states that have more than 48 degree-granting IHLs, and public 4-year institutions were selected from states with less than 49 degree-granting IHLs. Research indicated that the design of the college campus makes it more vulnerable to active shooter situations and 70% of all active shooter incidents occur in educational settings (Blair & Scheweit, 2013; Sulkowski & Lazarus, 2011; Wang & Hutchins, 2010). Because of these findings, faculty from IHLs with physical campuses were selected to participate in the current study. A list of the contacted IHLs is attached to Appendix A.

The target population for this study was easily accessible. Postsecondary faculty from around the United States were recruited for this study via institutional email. Once IRB approval was obtained from the University of Southern Mississippi, the dean of each
college or the director of each academic department at each institution was contacted via email with a request to electronically distribute the questionnaire and all pertinent information to their faculty. Participation in this study was completely voluntary.

Data Collection

*Research Design*

This study employed a cross-sectional survey design. This research design was selected to gather information regarding faculty active shooter preparedness. The cross-sectional survey design permitted the researcher to quickly gather data regarding faculty’s demographics, background, environmental factors, personal and cognitive factors, and behavioral factors as they pertain to active shooter preparedness. This research design was also selected because of its replicability.

*Procedures*

Prior to distributing the instrument to participants, a pilot study was conducted. Gay et al. (2009) noted that pilot testing provides the researcher with suggestions for improvement and it helps the researcher identify errors or discrepancies. Five faculty members were included in the pilot testing of the Faculty Active Shooter Preparedness Survey (FASPS). These faculty members were encouraged to provide constructive feedback regarding the instrument. The FASPS was revised based on the results from the pilot testing (Gay et al., 2009). Once revisions were completed, the FASPS was submitted with the IRB application to the University of Southern Mississippi’s Institutional Research Board (IRB).

Before recruiting participants for this study, approval was obtained from IRB. The IRB approval form is attached as Appendix B. Once IRB approval was granted, the dean
or department director from each institution was contacted by email and asked to forward
the recruitment email to their faculty. The recruitment email contained an overview of the
research study and instructions for responding to the survey. The recruitment email is
attached as Appendix C.

The IRB approval form and a comprehensive information letter were included as
attachments to the recruitment email. Prospective participants were informed that their
identities would not be revealed in both the recruitment email and the information letter.
They were also informed of the benefits and potential risks associated with participating
in the study, as well as who to contact if they had questions regarding the study. The
comprehensive information letter included a statement that read, “By completing the
attached survey, the respondent gives permission for the anonymous data to be used for
the purposes described above.” By continuing to the survey and submitting their
responses, the respondents provided informed consent regarding their rights as
participants and allowed the researcher to utilize the data collected as it was outlined in
the information letter. The information letter is attached as Appendix D.

The initial recruitment email was distributed on May 9, 2018. An additional
recruitment email was sent out on May 18, 2018 to improve the participation rate. The
survey data was collected from May 9th to May 29th. No survey responses were accepted
after May 29th. On May 30th, the researcher began analyzing the survey data.

Instrumentation

Due to the lack of an available instrument pertaining to the current
conceptualization of faculty active shooter preparedness, the questionnaire used in this
study was created by the researcher using Qualtrics™. The Faculty Active Shooter
Preparedness Survey (FASPS) was used to collect data for this research study. A web-based method was used to distribute the questionnaire to participants and collect data regarding faculty active shooter preparedness. Rea and Parker noted that with web-based questionnaires, participants are contacted via email and asked to participate in the study (2005). After agreeing to participate in the study, the participants completed the questionnaire online and their results were submitted electronically (Rea & Parker, 2005).

There are several advantages and disadvantages associated with using a web-based method. The web-based method yields fast results and is a cost-efficient way to reach the target population (Gay et al., 2009; Rea & Parker, 2005). The web-based method allows for easy follow up with the participants. It also provides the researcher with the means to keep participants’ identities confidential (Gay et al., 2009; Rea & Parker, 2005). Using a web-based questionnaire allowed the researcher to standardize procedures and questions for the participants (Gay et al., 2009). However, the disadvantages of using a web-based questionnaire distribution method include: the lack of researcher involvement, self-selection bias, and the possibility of participants replying to the questionnaire more than once (Gay et al., 2009; Rea & Parker, 2005). Also, with the web-based method, the researcher cannot probe the participants, explain questionnaire items or ask follow-up questions while the participants are completing the questionnaire (Gay et al., 2009).

The FASPS contained 52 questions and it was divided into eight sections: demographics/background, the nature of ASTs, organizational vulnerability and preparedness, forethought, thoughts about training, behaviors, self-efficacy, and transfer. The instrument consisted of primarily of closed-ended questions. Closed-ended questions
were used because closed-ended questions limit irrelevant responses and provide the respondents with uniform answer choices (Rea & Parker, 2005). Rea and Parker indicated that closed-ended questions also increase question response rate. Using closed-ended questions allowed the researcher to make clean comparisons between respondents (Rea & Parker, 2005). This will be useful when attempting to identify the differences and similarities between groups. Single answer and multiple answer multiple-choice items were used to capture respondents' demographic information, background information, and behaviors. Nominal response items were used to label different factors and capture the frequency in which certain factors occurred (Rea & Parker, 2005). Ordinal scaled Likert type items were used to gauge respondents’ attitudes and beliefs (Rea & Parker, 2005). Both four and 5-point Likert type scales were used for the scaled response items (Rea & Parker, 2005). All the items included in the FASPS were informed by the literature (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Bandura, 1986; Ellies, 2015; Howard, 2015; Johnson et al., 2016; Kapucu & Khosa, 2013, Pitrowski, 2014; Snyder, 2014; U.S. Department of Homeland Security, 2008, 2013; Zdziarski, 2016).

The terms active shooter, active shooter situation, and active shooter training were defined for the participants in the instrument. These definitions were included in efforts to eliminate misunderstandings while responding to the survey. The instrument is attached as Appendix E.

*Conceptualization and Operationalization*

Active shooter preparedness involves being in a state of readiness to deter or engage in active shooter situations (Action Guide for Emergency Management at
For the purposes of the current research study, active shooter preparedness has been conceptualized as the interaction between faculty members’ environmental factors, personal and cognitive factors, and behaviors in reaction to AST. These variables each influence faculty members’ perceptions of their level of active shooter preparedness. The interaction between these variables also influences the extent to which faculty members utilize precautionary behaviors. The responses captured in the sections 2 through 8, serve as indicators of faculty active shooter preparedness.

**Variables**

*Demographic/Background.* To gather demographic and background data about the respondents, the first section of the instrument contained multiple-choice items regarding race, gender, rank, institution type, region, and exposure to active shooter incidents. The first section of the instrument also contained two questions that prompted respondents to input their age and years of service as a faculty member. Eight items were used to capture demographic data and three items were used to capture background data. The demographic data were useful for determining if the sample adequately represented the faculty population. This information was also useful for making comparisons between groups. The background data were useful for capturing the respondents’ exposure to active shooter situations.

*Environmental Factors.* With regard to active shooter preparedness, environmental factors are conceptualized as the campus culture; which includes the nature of active shooter training (Johnson et al., 2016; Kapucu & Khosa, 2013; Howard, 2015; Zdziarski,
To obtain a better understanding of the nature of faculty ASTs, the FASPS contained 15 items that addressed institutional active shooter preparation efforts. In item 1.12 respondents were asked to indicate if participating in AST was optional or mandatory at their IHL.

In the beginning of section two, a screening question was asked to determine which items the respondents needed to answer next (Rea & Parker, 2005). The screening question asked if the respondents had received AST at their institution. If the respondents selected no, they skipped the next set of items in section two and moved to the third section of the instrument. In section two, the respondents were prompted to report the number of ASTs they participated in during the 2017-2018 academic year. They were also prompted to report the number of active shooter drills, the number of functional exercises, and the number of full-scale exercises that were conducted at their institution each year. Multiple answer multiple-choice items were used to allow respondents to select the different types of active shooter training exercises they have participated in, the components included in the ASTs, and the survival tactics that were modeled during their ASTs. With regard to those items, respondents were instructed to select from lists all that applied. In item 2.10 respondents were asked if they were permitted to ask questions during AST. In item 2.11 respondents were asked if they were given the opportunity to provide feedback after AST.

In section three of the FASPS, items 3.1, 3.2, and 3.3 have also been classified as questions regarding environmental factors. Items 3.1 and 3.3 prompted respondents to select yes or no to indicate if a culture of preparedness has been established on their campus and if the active shooter policies had been shared with them. Item 3.2 prompted
respondents to select either yes, no, or unsure to indicate if their institution has active shooter policies. The data obtained from the aforementioned 15 items were useful for determining the nature of AST at IHLs.

*Personal and Cognitive Factors.* Personal and cognitive factors help explain human behavior (Bandura, 1986). Faculty members’ beliefs and attitudes regarding their personal safety, organizational vulnerability, active shooter training, preparedness, efficacy, attentional processes, forethought, and anticipated outcomes are the personal and cognitive factors being analyzed in this research.

The FASPS contained 19 items that inquired about various personal and cognitive factors. Six of these items were included in section three of the instrument. These six items pertained to faculty members’ perspectives regarding personal safety, organizational vulnerability, fear, and active shooter preparedness. Items 3.4 and 3.5 deal with safety. In item 3.4, respondents were asked to select either yes or no to indicate whether they feel safe on campus. In item 3.5, respondents were asked to indicate how safe they perceived their campus to be by selecting either very safe, somewhat safe, neutral, somewhat unsafe, or very unsafe. Item 3.6 deals with forethought. Item 3.6 asked respondents to indicate the likelihood that an active shooter situation could occur on their campus by selecting either extremely likely, likely, unlikely, or extremely unlikely. Item 3.7 dealt with personal fear. In item 3.7 respondents were asked to rate their level of fear of being involved in an active shooter situation on campus by selecting either extremely fearful, fearful, slightly fearful, or not fearful at all. Items 3.10 and 3.11 dealt with active shooter preparedness. For these items respondents were asked to assess their level of personal preparedness to engage in active shooter situations and the level of preparedness
of their colleagues by selecting either extremely prepared somewhat prepared, somewhat unprepared, or extremely unprepared.

Three of the 19 items used to capture faculty members’ personal and cognitive factors were in section four of the FASPS. These three items pertained to forethought. In items 4.1 and 4.2 respondents were asked to indicate by selecting yes or no, if they have thought about the possibility of being involved in an active shooter situation on campus and if they have thought about the actions they would need to take if an active shooter enters their classroom or office. In item 4.3 respondents were prompted to indicate their level of concern regarding active shooters on campus by selecting either extremely concerned, moderately concerned, somewhat concerned, slightly concerned, or not at all concerned.

Section five of the FASPS contained four of the 19 items used to capture faculty members’ personal and cognitive factors. These four items pertained to the respondents’ thoughts about training. Items 5.1 and 5.2 dealt with the attentional processes. In item 5.1, respondents were asked to indicate how important they believe ASTs were by selecting either extremely important, very important, moderately important, slightly important, or not at all important. In item 5.2, respondents were asked to indicate the level of attention they provide during ASTs by selecting either high, medium, low, none, or I have not had AST. Item 5.3 deals with observational learning. In item 5.3, respondents were asked to indicate if they believe they learn from watching others engage in AST by selecting either yes, no, or I have not had AST. Item 5.4 deals with motivational processes. Item 5.4 asked faculty to indicate the level of usefulness of the
information shared in AST by selecting either extremely useful, very useful, moderately useful, slightly useful, or not at all useful.

Two of the 19 items used to capture faculty members’ personal and cognitive factors were in section six of the FASPS. Items 6.1 and 6.2 also deal with motivational processes. In item 6.1 respondents were asked to indicate if the potential threat of an active shooter motivated them to take precautionary measures by selecting either yes or no. In item 6.2 respondents were asked to indicate the level of influence they believe their actions would have on an active shooter situation by selecting either extremely influential, very influential, slightly influential, somewhat influential, or not at all influential.

The final four of the 19 items used to capture faculty members’ personal and cognitive factors were in section seven of the FASPS. Items 7.1, 7.2, 7.3, and 7.4 deal with self-efficacy. In items 7.1 and 7.2, respondents were asked about their level of confidence in their ability to perform the necessary actions during and after an active shooter situation prior to receiving AST. In items 7.3 and 7.4, respondents were asked about their level of confidence in their ability to perform the necessary actions during and after an active shooter situation after receiving AST. Respondents were prompted to indicate their level of confidence in each item by selecting either extremely confident, moderately confident, slightly confident, somewhat confident, not at all confident, or I have not had active shooter training. The data obtained from the aforementioned 19 items were useful for obtaining information regarding personal and cognitive factors.

Behaviors. Behaviors are conceptualized as the precautionary actions used by faculty to deter active shooter situations and the survival actions employed by faculty to engage in

The FASPS contained seven items that examined faculty behaviors. Two of these items were in the third section of the instrument. Item 3.8 dealt with intent. Item 3.8 asked respondents to indicate the likelihood that they would employ precautionary behaviors after the knowledge of the vulnerability of the college campus by selecting either extremely likely, likely, unlikely, or extremely unlikely. Item 3.9 deals with affect. Item 3.9 asked respondents to indicate the level of affect employing precautionary behaviors has on the campus community by selecting either major effect, moderate affect, minor affect, or no affect.

Two of the seven items that examined faculty behaviors were in the sixth section of the FASPS. Items 6.3 and 6.4 asked the respondents to report the precautionary actions that they took on campus before and after receiving AST. Respondents were prompted to select all that apply from the following list: opted into campus safety texts or email alerts, programmed the contact number for campus police in your cellphone, promptly reported any suspicious persons, vehicles, or activity, knowledgeable of evacuation routes, locking office doors, locking classroom doors, being alert and aware of surroundings, taking self-defense classes, participating in AST exercises, knowledgeable of active shooter response procedures, or I did not take any precautionary actions.

The final three of the seven items used to explore faculty behaviors were in section eight of the FASPA. Item 8.1 deals with intent to transfer. In item 8.1,
respondents were asked to indicate the likelihood that they would follow the procedures they learned in AST during an active shooter situation by selecting either extremely likely, likely, unlikely, extremely unlikely, or I have not had AST. Items 8.2 and 8.3 deal with transfer. In item 8.2, respondents were asked to input the number of times they discussed active shooter policies with their students during each academic term. In item 8.3, respondents were asked to indicate if they included information about active shooter threats in their course syllabus by selecting either yes or no. The data obtained from the aforementioned 7 items were useful for obtaining information regarding faculty behaviors.

Prior Reliability and Validity.

Liu et al. (2015) was the only relevant research study that contained some of the measures that were included in the FASPS. These measures were: perceptions of vulnerability and preparedness, awareness, knowledge, and self-efficacy. The researchers reported a Cronbach alpha for each scale of measurement used in their research. Liu et al. (2015) reported a Cronbach alpha of .760 for vulnerability, .70 for preparedness, .833 for awareness, .907 for knowledge, and .927 for self-efficacy. Both Zdziarski (2001) and Lott (2012) reported pilot testing as a means to ensure the reliability and validity of their instruments. Both studies lacked specific information regarding the reliability and validity of the measures in their instruments.

Data Analysis

Initially, data was collected via Qualtrics™. Basic statistical data was generated from the FASPS results. Frequencies and measures of central tendency were obtained to
summarize the data (Rea & Parker, 2005). Trends within the data were identified based on the summary data. Frequencies were used to answer the research questions.

After analyzing the data, the data was compared to prior literature and to the recommendations from the DOE and DHS. Consistencies and inconsistences between the data and prior literature were also identified. Consistencies and inconsistences between the reported elements of active shooter training and the recommended elements of active shooter training were identified.

The data analysis used in the current research study is consistent with the data analysis that were conducted by Zdziarski (2001), Lott (2012), and Liu et al. (2015). The aforementioned researchers all used survey data to describe crisis management and/or crisis preparedness. Out of all the relevant research, the aforementioned studies were the closest in similarity to the current research. Zdziarski (2001) and Lott (2012) did not specifically examine faculty active shooter preparedness, as their research focused more on the examination of institutional crisis management. However, Liu et al.’s (2015) research was closely aligned to the current research as Liu et al. examined university employees’ perceptions of crisis preparedness and risks pertaining to school shootings.

Summary

This chapter outlines the methodological procedures used to examine faculty active shooter preparedness at IHLs. A cross-sectional survey design was employed to obtain quantitative data from the sample population. Faculty members from IHLs across the United States were solicited via institutional email to complete the FASPS. The data analysis procedures employed in this study are consistent with the data analysis
procedures used in the literature. Frequencies were generated to summarize the data and answer the research questions.
CHAPTER IV – ANALYSIS AND FINDINGS

A quantitative research study was conducted to obtain a better understanding of the current state of active shooter preparedness among faculty employed by IHLs within the United States. The findings from the Faculty Active Shooter Preparedness Survey (FASPS) are presented in this chapter. The findings are organized by the research questions. This chapter includes a brief overview of the methodological procedures, a description of the sample, description of the background items, data pertaining to RQ 1, data pertaining to RQ 2, data pertaining to RQ 3, data pertaining to RQ 4, and a summary.

The FASPS was distributed on May 9, 2018 via email to deans/department directors at 51 IHLs across the U.S. A total of 425 recruitment emails were sent. On May 18, 2018 follow-up emails were sent to encourage participation from non-respondents. One hundred seven faculty members responded during the recruitment period. Of the 107 respondents, 98 faculty members completed the FASPS and nine partially completed it. Partially completed surveys were excluded from the current analysis resulting in a sample size of 98. The data obtained from the FASPS was analyzed using Qualtrics™. Frequencies were generated for the responses in each item. The frequencies were used to summarize respondents’ demographic and background information, and to answer research questions.

Description of Sample

The sample was chosen to be representative of the target population. The sample included faculty members employed by IHLs from each region of the U.S. The number of
respondents varied among regions with the fewest in the Pacific region at 2.04% (N=2), 6.12% (N=6) from the North, 10.20% (N=10) from the Midwest, 21.42% (N=21) from the Northeast, 22.45% (N=22) from the South, and 37.76% (N=37) from the West for a total of 98 participants. With regard to institution type, 71.43% (N=70) of respondents were employed at public IHLs while 28.57% (N=28) were employed at private IHLs. Additionally, 91.84% (N=90) of respondents were employed at universities and 8.16% (N=8) were employed at community colleges. Within this sample 8.16% (N=8) were adjuncts or lecturers, 32.65% (N=32) were assistant professors, 16.33% (N=16) were associate professors, and 42.86% (N=42) were full professors. The sample is 81.37% (N=83) Caucasians and 18.62% (N=15) Non-Caucasians with ages that ranged from 32 to 75 years. With regard to gender, 38.78% (N=38) of the respondents were male, 59.18% (N=58) were female, and 2.04% (N=2) chose not to disclose their gender. Respondents within the sample have between 1 to 46 years of service as postsecondary faculty.

Findings

The FASPS contained three items that inquired about prior exposure to active shooter situations. All of the 98 participants responded to these items. Of the 98 respondents, 92.86% (N=91) of faculty reported that neither they nor their immediate family had been involved in an active shooter incident while on a college campus. Likewise, 90.82% (N=89) reported that neither they nor their immediate family had been involved in an active shooter incident outside of a college campus. Roughly 94.90% (N=93) of faculty viewed media coverage of active shooter incidents that occurred on a college campus. These findings indicated that while most of the respondents did not have
direct experience with active shooters, the vast majority of them did have prior exposure to such events through media coverage.

**RQ 1: What is the nature of active shooter training at IHLs?**

In alignment with Bandura’s SCT, active shooter training (AST) was classified as the environment. Active shooter training was classified as the environment because it is the context in which faculty are prepared for active shooter incidents. Twelve of 52 items on the FASPS inquired about the nature of active shooter training at IHLs. Of the 98 respondents, 57.14% (N=56) received AST from their institution. Additionally, AST was mandatory for only 33.67% (N=33) of respondents. Respondents were asked if a culture of preparedness had been established at their institution with regards to active shooters. Over half of the respondents (61.22%) reported that a culture of preparedness had not been established at their institution.

Within the sample, 56 respondents received AST from their institution. These faculty members responded to 10 additional questions on the FASPS regarding AST. There was little variation in the quantity of AST received during the 2017-2018 academic year. Most respondents (N=37) participated in only one training session, while hardly (N=5) any participated in two or more sessions. Interestingly, several respondents (N=13) received no training at all. The duration of training sessions varied among respondents. AST sessions for the majority of participants (58.93%) were typically less than one hour. A much smaller percentage of respondents (28.57%) participated in AST sessions lasting more than one hour. Even less respondents (12.50%) participated in AST sessions lasting two or more hours.
When asked to report the number of active shooter drills, functional exercises, and full-scale exercises that were conducted at their institution per year, 28.57% (N=16) reported that at least one drill was conducted per year. Only 10.71% (N=6) reported that at least one functional exercise was conducted per year. Less than that, 7.14% (N=4) reported that at least one full-scale exercise was conducted per year.

Respondents varied substantially with regards to the types of AST received. Figure 2 and Figure 3 show the types of AST respondents participated in at their institutions. Seminars and online training were the most common types of AST received, followed by workshops. As mentioned in Chapter 1, online training, seminars, workshops are classified as discussion-based trainings. The data indicated that respondents received more discussion-based training exercises than operations-based training exercises, thus indicating that operations-based exercises were seldomly conducted at the IHLs represented by the sample.

Figure 2. Types of Active Shooter Training Received (Frequencies)
Among respondents, AST involved numerous components. Figures 4 and 5 show the components of AST as the respondents were instructed to select all of the components included in the AST they received. As illustrated in Figures 4 and 5, more respondents were exposed to lectures, videos, scenarios, group discussions, and survival tactics during AST than readings, simulations, role play, modeling, news media, and games. These results coincided with the previous results in that institutional ASTs rely heavily on discussion-based training methods.

Figure 4. Active Shooter Training Components (Frequencies)
Figure 5. Active Shooter Training Components (Percentages)
Respondents participated in trainings that covered the following survival tactics: “Run, Hide, Fight”, “Lock Down”, “Avoid, Deny, Defend”, and “See Something, Say Something”. Prior to 2013, “Lock Down” was considered the standard survival tactic employed to combat active shooters in educational settings (Guide for developing high quality emergency operations plans for institutions of higher education, 2013). Only 20% of respondents were exposed to the “Lock Down” survival tactic. After 2013, the DHS and DOE found that “Lock Down” procedures alone were not sufficient to deter active shooters. As a result, “Run, Hide, Fight” became the standard survival tactic recommended to institutions (Guide for developing high quality emergency operations plans for institutions of higher education, 2013). In conjunction with that, the DHS and DOE also recommended that institutions use a variety of tactics. Most of the respondents (45.26%) were exposed to “Run, Hide, Fight”. In addition to that, 17.89% of respondents were exposed to “See Something, Say Something” and 16.84% were exposed to “Avoid, Deny, Defend”. These findings indicated that most of the respondents were unfamiliar with the recommended survival tactics. During AST, most of the respondents (69.64%) had the opportunity to ask questions to clear up any misunderstandings.

RQ 2: To what extent do the reported elements of AST at higher education institutions align with the DOE’s recommendations for active shooter preparedness?

The Higher Education Act of 2008 mandated that IHLs have emergency response and evacuation procedures. It also instructed IHLs to annually disclose these procedures to faculty, staff, and students (Fox & Savage, 2009; U.S. Department of Education, 2010). Less than half of respondents 43.88% (N=43) indicated that their institution had active shooter policies. Of those 43 respondents, 88.37% (N=38) indicated that
institutional active shooter policies had been shared with them. These findings suggest that some of the IHLs represented by the sample are not compliant with the Higher Education Act.

The DOE recommended that IHLs provide training to personnel, however only 57.14% (N=56) of respondents received AST from their institution. The Higher Education Act of 2008 also mandated IHLs to test emergency responses and evacuation procedures (Fox & Savage, 2009; U.S. Department of Education, 2010). Emergency responses and evacuation procedures are tested during operations-based AST exercises. Of the 56 respondents that received AST, 71.43% (N=40) indicated that their IHL did not conduct active shooter drills, 89.29% (N=50) indicated that their IHL did not conduct functional exercises, and 92.86% (N=52) indicated that their IHL did not conduct full-scale exercises. This indicated that at most of the institutions represented by the sample, emergency responses and evacuation procedures were not being tested as recommended.

In the Action Guide of Emergency Management at Institutions of Higher Education, the DOE recommended that IHLs periodically train personnel and utilize a full range of training exercises ranging from discussion-based exercises to operations-based exercises (2010). Findings revealed that a full range of training exercises were not being conducted at most of the IHLs represented in this study because operation-based training exercises were seldomly conducted. The findings from the FASPS also revealed that there is a substantial amount of the sample that had not received AST (42.86%) and had not been exposed to active shooter policies (47.92%). Thus, the reported elements of AST do not align with the DOE recommendations for active shooter preparedness.
RQ 3: What are the beliefs among faculty regarding the personal and cognitive factors that contribute to active shooter preparedness?

In alignment with Bandura’s SCT, the personal and cognitive factors that contributed to active shooter preparedness were examined. On the FASPS, faculty were asked 16 questions regarding these factors. Respondents were asked about their perceptions of personal safety, campus safety, organizational vulnerability, personal fear, active shooter preparedness, and colleagues’ preparedness. Respondents were also asked about forethought, their level of concern toward active shooter threats, the importance of AST, the level of attention provided during training, observational learning during training, beliefs about self-efficacy, and the use of precautionary behaviors.

When examining perceptions of personal safety, most respondents (87.76%) felt safe on their campus. With regards to institution type, a greater percentage of respondents employed by private IHLs (92.86%; 26 of 28) felt safer on campus than those employed by public IHLs (85.71%; 60 of 70). Comparatively, respondents that participated in AST (89.29%; 50 of 56) felt safer on campus than those that had not participated in AST (85.71%; 36 of 42). As expected more of the respondents that perceived themselves as prepared for active shooter events felt safe (92%; 46 of 50) on campus that those that perceived themselves as unprepared (83.33%; 40 of 48). These particular distinctions may be expected to some degree seeing as how preparation is likely to be conducive to perceptions of safety.

Perceptions of campus safety varied among respondents yet most of respondents (75.51%) agreed that their campuses were safe. With regard to institution type, a greater percentage of respondents employed by private IHLs (85.17%; 24 of 28) perceived their
campus to be safe than those employed by public IHLs (71.43%; 50 of 70). Comparatively, more respondents that participated in AST (76.79%; 43 of 56) perceived their campus as safe than those that have not participated in AST (73.81%; 31 of 42).

Overall, 44.90% (N=44) of respondents believed that it was likely for an active shooter incident to occur on their campus and 1.02% (N=1) believed it was extremely likely. Conversely, 43.88% (N=43) believed it was unlikely and 10.20% (N=10) believed that it was extremely unlikely. Figure 6 and Figure 7 provide a graphical representation of respondents’ beliefs regarding the likelihood of an active shooter on campus by institution type. Comparatively, a greater percentage of respondents from public IHLs (51.43%; 36 of 70) believed that an active shooter incident was likely to occur on their campuses than respondents from private IHLs (31.03%; 9 of 29). On the other hand, a greater percentage of respondents from private IHLs (65.52%; 19 of 29) believed it was unlikely for active shooter incidents to occur on their campus than respondents from public IHLs (48.57%; 34 of 70). These finding reinforce the idea that respondents employed private IHLs feel safer on campus than respondents employed by public IHLs. Figure 6. Likelihood of Active Shooter Incidents by Institution Type (Frequencies)
Figure 7. Likelihood of Active Shooter Incidents by Institution Type (Percentages)
Overall, none of the respondents were extremely fearful of being involved in an active shooter situation while on campus. Interestingly, a substantial number of respondents (37.76%) were not fearful of the possible occurrence of an active shooter situation on campus. Only 11.22% (N=11) of respondents reported being fearful and 51.02% (N=50) reported being slightly fearful.

Figure 8 and Figure 9 shows a graphical representation of the levels of fear by institution type. Comparatively, more respondents employed by private IHLs (53.57%; 15 of 28) than respondents employed by public IHLs (31.43%; 22 of 70) were not fearful of being involved in an active shooter situation while on campus. Additionally, more respondents employed by public IHLs (54.29%; 38 of 70) than respondents employed by private IHLs (42.86%; 12 of 28) were slightly fearful. Lastly, more respondents employed by public IHLs (14.29%; 10 of 70) than respondents employed by private IHLs (3.57%; 1 of 28) were fearful of being involved in an active shooter situation while on campus. These findings showed that respondents employed by private IHLs are less fearful of being involved an active shooter incident than those employed by public IHLs.

Figure 8. Level of Fear by Institution Type (Frequencies)
Respondents varied in their levels of perceived preparedness to handle active shooter incidents. Overall, 51.02% (N=50) of respondents reported that they were prepared to handle an active shooter incident on campus and 48.98% (N=48) reported they were unprepared. Within the levels of reported unpreparedness, 17.35% (N=17) of respondents reported being extremely unprepared to handle active shooter incidents.

Figure 10 and Figure 11 show a breakdown of the levels of active shooter preparedness reported by the presence or absence of AST. Respondents who received AST were more prepared (69.64%; 39 of 56) than those that did not (26.19%; 11 of 42). On the other hand, respondents who did not received AST were more unprepared (73.81%; 31 of 42) than respondents who had AST (30.36%; 17 of 56). Also, more of the respondents who had no AST reported being extremely unprepared (33.33%; 14 of 42) to
handle active shooter situations than those that had AST (5.36%; 3 of 56). These findings indicated a link between AST and active shooter preparedness. It is also worthy to point out that despite training a substantial percentage of respondents (39.29%) still perceived themselves as being underprepared to handle active shooter situations.

Figure 10. Active Shooter Preparedness (Frequencies)

Figure 11. Active Shooter Preparedness (Percentages)
With regard to the respondents’ perceptions of their colleagues’ active shooter preparedness, more than half of the respondents (66.33%) perceived their colleagues as unprepared to handle active shooter situations. With regard to forethought, 92.86% (N=91) of respondents reported they have thought about the possibility of being involved in an active shooter situation while on campus. Additionally, 92.86% (N=91) of respondents have also thought about the actions that they would need to take in the event that an active shooter enters their office or classroom.

Figure 12 and Figure 13 provide a graphical depiction of respondents’ level of concern regarding active shooters on campus. Overall, most respondents (85.71%) reported some level of concern regarding active shooters on campus. Only 14.29% (N=14) were not concerned.
Figure 12. Level of Concern Regarding Active Shooters on Campus (Frequencies)

Figure 13. Level of Concern Regarding Active Shooters on Campus (Percentages)
Respondents were assessed in terms of their perceived importance of AST. Only 4.08% (N=4) of respondents (N=98) believed that AST was not important. The rest of the respondents believed that AST was either slightly important (4.08%), moderately important (20.41%), very important (44.90%), or extremely important (26.53%).

Of the 56 respondents who received AST, 62.50% (N=35) provided a high level of attention during AST while 26.79% (N=15) provided a medium level of attention. Only 7.14% (N=4) of respondents provided a low level of attention during AST, and none of the respondents paid no attention during AST.

With regard to observational learning, 46.43% (N=26) of the respondents who participated in AST believe they learned from watching their colleagues engage in active shooter training exercises. However, 25% (N=14) believed they did not learn anything from watching their colleagues. These findings indicated that observational learning occurs to some extent during active shooter training. When examining faculty beliefs about the usefulness of the information shared during AST, the majority of respondents (94.64%) who participated in AST believed that the information shared was useful.

Concerning self-efficacy, prior to receiving AST, 64.29% (N=36) of respondents had some level of confidence in their ability to perform the necessary actions during an active shooter situation. However, 35.71% (N=20) of respondents were not confident in their ability to perform the necessary actions during an active shooter situation. After receiving AST, 94.64% (N=53) of respondents had some level of confidence in their ability to perform the necessary actions during active shooter situations and only 3.57% (N=2) of respondents were not confident in their ability. There was an increase in
confidence levels after the respondents participated in AST. These findings indicated that AST may be related to faculty self-efficacy in some way.

Understanding that college campuses are open access environments, of all respondents (N= 98), 64.29% (N=63) believed they were likely to practice precautionary behaviors. Respondents that received AST were more likely to practice precautionary behaviors than those that did not receive AST. Figure 14 and Figure 15 show the likelihood of respondents employing precautionary behaviors based on the presence or absence of AST. Comparatively, respondents who participated in AST were more likely (66.07%; 37 of 56) to practice precautionary behaviors than respondents who did not participate in AST (61.90%; 26 of 42). On the other hand, respondents who did not participate in AST were more unlikely (38.10%; 16 of 42) to practice precautionary behaviors than respondents who participated in AST (33.93%; 19 of 56). These findings indicated that there may also be a link between AST and the use of precautionary behaviors. Interestingly, respondents from private IHLs were more likely (75%; 21 of 28) to practice precautionary behaviors than respondents from public IHLs (60%; 42 of 70).
Figure 14. Likelihood of Employing Precautionary Behaviors (Frequencies)

Figure 15. Likelihood of Employing Precautionary Behaviors (Percentages)
Overall 83.67% (N=82) of respondents believed that employing precautionary behaviors had some level of effect on the campus community. More respondents employed by public IHLs (85.71%; 60 of 70) believed that employing precautionary behaviors affected the campus community than respondents employed by private IHLs (78.57%; 22 of 28). With regard to respondents’ motivation to practice precautionary behaviors, the potential threat of an active shooter motivated 57.14% (N=56) of respondents to practice precautionary behaviors. Over half of the respondents (86.73%) believed that their actions would have some level of influence in an active shooter situation. However, most of those respondents (41.84%) believed that their actions would only be slightly influential. When asked to indicate the likelihood of following procedures learned during AST during an active shooter situation, 67.35% (N=66) believed they were likely to follow procedures.

**RQ 4: What precautionary measures do faculty exhibit to demonstrate active shooter preparedness?**

In alignment with Bandura’s SCT, precautionary measures are classified as behaviors. Respondents were asked to choose from a list of precautionary actions that have been employed as measures to deter active shooter situations. Such actions included the following: opted into campus safety texts or email alerts, programmed the contact number for campus police in their cellphone, promptly reported any suspicious persons, vehicles, or activity, being knowledgeable of evacuation routes, locking office doors, locking classroom doors, being alert and aware of surroundings, taking self-defense classes, participating in active shooter training exercises, and being knowledgeable of active shooter response procedures. Figure 16 and Figure 17 show the precautionary
actions respondents took prior to participating in AST. Prior to receiving AST, opting into campus safety texts or email alerts was the most frequently used precautionary measure. This was followed by being alert and aware of one’s surroundings (18.68%; 71 of 380), being knowledgeable of evacuation routes (14.76%; 56 of 380), locking office doors (11.32%; 43 of 380), and promptly reporting suspicious persons, vehicles, or activity (10.53%; 40 of 380).

Figure 16. Precautionary Actions Taken Prior to Receiving Active Shooter Training (Frequencies)
Figure 17. Precautionary Actions Taken Prior to Receiving Active Shooter Training (Percentages)

Figure 18 and Figure 19 show the precautionary actions respondents took after they received active shooter training. After receiving AST, being alert and aware of one’s surroundings was the most frequently (13.51%; 45 of 333) used precautionary measure.
This was followed by being knowledgeable of evacuation routes (12.61%; 42 of 333) and opting into campus safety texts or email alerts (12.61%; 42 of 333), being knowledgeable of active shooter response procedures (12.31%; 41 of 333), promptly reporting suspicious persons, vehicles, or activity (9.31%; 31 of 333) and locking office doors (7.81%; 26 of 333).

Figure 18. Precautionary Actions Taken After Receiving Active Shooter Training (Frequencies)
Figure 19. Precautionary Actions Taken After Receiving Active Shooter Training (Percentages)

- I do not take any precautionary actions: 1.20%
- Taking self-defense classes: 1.50%
- Locking classroom doors: 4.20%
- Participating in active shooter training exercises: 6.31%
- Programmed the contact number for campus police in your cellphone: 7.21%
- Locking office doors: 7.81%
- Promptly report any suspicious persons, vehicles, or activity: 6.31%
- I have not received active shooter training: 11.41%
- Knowledgeable of active shooter response procedures: 12.21%
- Opted into campus safety text or email alerts: 12.61%
- Knowledgeable of evacuation routes: 12.61%
- Being alert and aware of surroundings: 13.51%
Comparatively, after receiving AST, more respondents (66.07%) indicated that they were knowledgeable of active shooter response procedures than they did prior to receiving AST (24.53%). More respondents (23.21%) also indicated that they locked classroom doors after receiving AST than before receiving AST (18.87%). Surprisingly, the occurrence of opting into campus alerts, programming campus police contact number in cellphone, promptly reporting suspicious persons, vehicles, or activity, being knowledgeable of evacuation routes, locking office doors, and being alert of one’s surroundings decreased after receiving AST.

Only 26.53% (N=26) of respondents discussed active shooter procedures with their students. Additionally, only 3.06% (N=3) of respondents included information regarding active shooter threats in their syllabi. This indicated that most respondents did not discuss the possible threat of active shooters with their students nor did they disseminate information about active shooter procedures and evacuation routes to students.

Summary

Data obtained from the Faculty Active Shooter Preparedness Survey was presented in this chapter. Ninety-eight faculty members from across the United States completed the FASPS. The research questions were answered using the frequencies of the responses for each item. The findings revealed that some of the IHLs represented in the sample were not compliant with the DOE’s recommendations for active shooter preparedness. Only 57% of the respondents received AST from their institution. Additionally, active shooter policies were only shared with 52.08% of the respondents. Overall, more respondents believed they were prepared for active shooter situations than
unprepared. Respondents who received AST believed they were more prepared than respondents who did not. Also, respondents employed by private IHLs believed their campuses were safer and felt safer on campus than respondents employed by public IHLs. Respondents also reported using a full range of precautionary behaviors to avert active shooters. The findings presented in this chapter are discussed further in chapter five.
CHAPTER V – DISCUSSION

The primary goal of this study was to examine faculty active shooter preparedness. The study focused on the environmental, behavioral, personal, and cognitive factors that contributed to active shooter preparedness. The FASPS was developed to obtain a snapshot of active shooter preparedness among post-secondary faculty by examining faculty members’ active shooter incident exposure, AST, beliefs, and behaviors. The main aspect of this chapter is to discuss the findings from the FASPS, implications of the research, limitations associated with the study, and the directions for future research. In order to answer the research questions, findings from the FASPS were compared to prior crisis preparedness literature, recommendations from the Higher Education Act, and recommendations from the Department of Homeland Security.

Personal and cognitive factors, environmental factors, and behaviors were discussed in order to further describe faculty active shooter preparedness. The current study employed a quantitative approach to answer the following four research questions:

RQ 1: What is the nature of active shooter training at IHLs?

RQ 2: To what extent do the reported elements of AST at IHLs align with the DOE’s recommendations for active shooter preparedness?

RQ 3: What are the beliefs among faculty regarding the personal and cognitive factors that contribute to active shooter preparedness?

RQ 4: What precautionary measures do faculty take to demonstrate active shooter preparedness?

Research Question 1

What is the nature of active shooter training at IHLs?
The literature indicated that AST is necessary to prepare people for active shooter situations (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Readiness and Emergency Management for Schools Technical Assistance Center, n.d.; U.S. Department of Homeland Security, 2008). The DOE also recommended that IHLs provide AST to personnel and students (U.S. Department of Education, 2010). A majority of the sample (57.14%) within the current study have received AST from their institution. Surprisingly, despite recent active shooter incidents within the U.S., the vulnerability of the college campus to active shooters, and recommendations from the DOE, some IHLs within the sample are still not providing AST to faculty (42.86%). In addition to that, participating in AST is not mandatory at most of the institutions (66.33%) represented by the sample. Findings supported literature that suggested that IHLs can be either proactive or reactive in their approach to crisis preparedness (Booker, 2014; Mitroff & Alpaslan, 2003; Mitroff et. al., 2006; Wang & Hutchins, 2010; Zdziarski, 2001).

As mentioned in chapter two, active shooter incidents occur quickly and progress quickly, so without the proper training, faculty are less likely to be prepared for active shooters (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Ellies, 2015; Glover, 2016; Howard, 2015; Johnson et al., 2016; Lott, 2012; Pitrowski, 2014; Snyder, 2014; U.S. Department of Homeland Security, 2008; U.S. Department of Homeland Security, 2013). Institutions that lack active shooter procedures and AST are more vulnerable to active shooters than institutions that have active shooter procedures in place and provide AST. The findings from the FASPS coincided with the literature because respondents who did not receive AST perceived themselves as less
prepared and more unprepared for active shooters than those who received training. Results from the FASPS indicated that there is a link between AST and active shooter preparedness. The findings from the FASPS supported research that indicated that training had a positive influence on preparedness (Ellis, 2015; Pitrowski, 2014; Snyder, 2014). Respondents who received AST perceived themselves as more prepared and less unprepared than those who did not receive training.

Prior research argued that maintaining a culture of preparedness toward active shooters within institutions is essential for active shooter preparedness (Johnson et al., 2016; Kapucu & Khosa, 2013; Howard, 2015; Zdziarski, 2016). On the FASPS, more than half (61.22%) of the respondents in the sample reported that a culture of preparedness toward active shooters had not been established on their campuses. Unexpectedly, a substantial number of respondents who received AST (57.14%) also reported that a culture of preparedness had not been established on their campuses. This finding indicates that there were some deficiencies in the active shooter preparation efforts at the IHLs represented by the sample. Failure to create and maintain a culture of preparedness within IHLs could lead to more casualties during active shooter incidents.

It is worthy to note that some of the respondents that received AST from their institution, did not receive AST during the 2017-2018 academic year. Institutions that do not provide yearly AST are not reinforcing active shooter procedures and are not practicing emergency responses and evacuation plans. Reinforcing procedures and practicing emergency responses and evacuation plans increase the likelihood that the appropriate actions will be carried out in the event of an active shooter situation (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Allen &
As expected, types of training received, frequency of training, and duration of training varied among respondents. These variations may be the reason why some respondents who received AST perceived themselves as being more prepared than other respondents who also received AST. The literature stated that tabletop training exercises were the most common method of crisis preparedness training (Akers, 2007; Sullivan & Perry, 2014; The National Center for Campus Public Safety, 2016; U.S. Department of Homeland Security, 2008). However, the findings from the FASPS indicated that online training and seminars have replaced tabletop exercises as the most common methods of training used by IHLs. The literature also stated that functional and full-scale exercises were the least common method of crisis training used by IHLs (Sullivan & Perry, 2014; The National Center for Campus Public Safety, 2016). Findings from the FASPS confirm that functional and full-scale exercises were still the most seldomly used method of training at IHLs.

As mentioned, drills, functional exercises, and full-scale exercises are operations-based training methods. In relation to SCT, the absence of the use of operations-based training exercises, prohibits faculty from translating what they learned during discussion-based training into actions. Additionally, the lack of rehearsal impairs the retention processes (Bandura, 1986). Bandura noted that practice combined with proper feedback yields the best results (1986). Although survival tactics are introduced and explained during discussion-based trainings, without operations-based trainings, respondents are not
given the opportunity to practice executing these tactics and are not receiving the necessary feedback. The lack of the use of operations-based training exercises hinders active shooter preparation efforts and limits active shooter preparedness. Respondents who have not participated in operations-based exercises may not have developed a survival mindset and may not be prepared for active shooter situations.

Research Question 2

To what extent do the reported elements of AST at IHLs align with the DOE’s recommendations for active shooter preparedness?

As mentioned in chapter two, the DOE mandated that IHLs have emergency responses and evacuation procedures; annually disclose these procedures to faculty, staff and students; annually test emergency response and evacuation procedures; and immediately notify members of the campus community of threatening activity (Fox & Savage, 2009; U.S. Department of Education, 2010). Findings from the FASPS indicated that some of the IHLs represented by the sample were not compliant with the mandates from the DOE. Although most of the respondents (52.08%) indicated that active shooter policies had been shared with them, active shooter policies had not been shared with everyone in the sample (47.92%). A substantial number of respondents also reported that they were unsure if their institution had active shooter policies. This indicated that some IHLs are not annually disclosing active shooter policies to faculty. In addition to that, findings indicated that most of the IHLs represented by this sample are not annually testing emergency responses and evacuation procedures because they are not conducting operations-based training exercises. As previously mentioned, the DHS specified that engaging in operations-based training exercises is the best way to prepare for active

The DOE suggested that IHLs provide periodic AST to personnel, so that the campus community can be prepared for the onset of active shooter incidents (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010). It has been recommended by the DOE that IHLs use a full range of training, starting with orientation meetings and ending with full-scale exercises (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010). Findings from the FASPS revealed that most IHLs (57.14%) are providing AST to faculty. However, a full range of training exercises are not being used. Respondents reported that AST relied heavily on discussion-based trainings and operations-based trainings were seldomly used. The lack of operations-based training exercises may leave faculty unprepared for active shooter situations. Without rehearsal, faculty will be less likely to retain what they have been taught during discussion-based training exercises and will feel less confident in their ability to handle active shooter situations.

The DOE and DHS also recommended that a variety of survival tactics be used to deter active shooters (Guide for developing high quality emergency operations plans for institutions of higher education, 2013). In addition to that, in 2013 “Run, Hide, Fight” replaced “Lockdown” as the recommended survival tactic to be used by IHLs and schools (Guide for developing high quality emergency operations plans for institutions of higher
education, 2013). FASPS findings indicated that over half of the respondents had not been exposed to “Run, Hide, Fight” and less than that were exposed to “Lock Down”, “See Something, Say Something”, and “Avoid, Deny, Defend”. Respondents lacked exposure to the various recommended survival tactics; this implied another misalignment with the DOE’s recommendations.

Research Question 3

What are the beliefs among faculty regarding the personal and cognitive factors that contribute to active shooter preparedness?

Overall, most respondents reported feeling safe on campus (87.76%), believed their campuses were safe (75.51%), and believed that active shooter incidents were unlikely to occur on their campuses (54.08%). These findings were consistent with the findings from The National Center for Campus Public Safety (2016) in that participants believed that a major crisis situation would not occur on their campuses. There appears to be a false sense of safety among most of the respondents because the literature indicated that IHLs are areas of high criminal activity (Epstein, 2002; Farahany, 2004; Foster & Lipka, 2007; Fox & Savage, 2009; Lake, 2007; Sulkowski & Lazarus, 2011) and it indicated that active shooter situations were more likely to occur in educational settings (Blair & Scheweit, 2013; Federal Bureau of Investigation, 2016; Johnson et al., 2016). In conjunction with Bandura’s SCT, maintaining the idea that active shooter incidents were unlikely on college campuses may leave faculty at a disadvantage because they will be less likely to prepare for active shooter incidents. At institutions where AST is optional, faculty may choose not to participate in AST because they maintain the belief that they will not be involved in active shooter situation while on campus.
Contrary to the beliefs held by the participants in the research study conducted by The National Center for Campus Public Safety (2016), 44.90% of FASPS respondents believed that it was likely for an active shooter incident to occur on their campus and 1.02% believed it was extremely likely. These findings indicated that FASPS respondents were more aware of the threats to campus safety than the participants in the 2016 study. This awareness may be a result of the increase of active shooter incidents in the media and the increase of AST at IHLs. Increased awareness improves the likelihood that faculty will participate in AST and use precautionary behaviors.

As expected, most respondents (62.24%) indicated some level of fear regarding active shooters on campus. Only 7.14% of FASPS respondents reported that they or their immediate family members have previously been involved in an active shooter situation while on campus and 9.18% reported that they or their immediate family members have previously been involved in an active shooter situation off campus. However, 94.90% of respondents have viewed media coverage of active shooter incidents on college campuses. Based on SCT, media exposure served as vicarious learning experiences for the respondents. Findings support the notion that affective learning occurs through vicarious experiences (Bandura, 1986). Findings indicated that, exposure to casualties and devastation caused by active shooters on other campuses through the media contributed to the respondents’ fear.

With regard to active shooter preparedness, more respondents reported some level of active shooter preparedness (51.02%) than unpreparedness (48.98%). Although the differences are miniscule, these differences are due in part to the presence of AST. Respondents who received AST were more prepared (69.64%) than those that did not
receive AST (26.19%). These findings suggested that active shooter preparedness is influenced by AST. When comparing these findings to prior research, FASPS respondents were more prepared for active shooters than the faculty in research conducted by Bishop (2013), Lott (2012), and Liu et al. (2015). In the aforementioned studies faculty perceived themselves as being unprepared for active shooter incidents. The differences in the perceptions of active shooter preparedness between FASPS respondents and faculty from previous research may be due in part to an increase in AST at IHLs over the past couple of years. FASPS findings supported the literature that suggested that AST prepares faculty for active shooter situations (Action Guide for Emergency Management at Institutions of Higher Education, 2010; Glover, 2016; Howard, 2015; Johnson et al., 2016; U.S. Department of Education, 2010; U.S. Department of Homeland Security, 2008; Zdziarski, 2016).

As mentioned in chapter two, Bandura (1986) found that forethought regulates human behavior. Almost all of the FASPS respondents (92.86%) have thought about encountering an active shooter on campus and the actions they would need to take if an active shooter entered their office or classroom. According to SCT, the respondents’ forethought regarding active shooter situations on campus serves as a guide for their actions and a mechanism for their personal motivation (Bandura, 1986). The respondents’ thoughts about being involved in active shooter incidents were mental representations that impacted their behaviors (Bandura, 1986). Faculty who envisioned themselves in active shooter situations in the future were more likely to participate in AST, were more likely to pay greater attention during training, and were more likely to use precautionary behaviors.
In addition to that, most respondents (85.71%) expressed some level of concern regarding the potential threat of active shooters on campus. This concern may be due to the fact that they had not been fully trained and a culture of preparedness had not been established at their institution. Providing a full range of AST may possibly alleviate some of the respondents’ concern. Participating in a full range of AST would provide respondents with the opportunity to ask questions, receive feedback, learn survival tactics, learn procedures, and practice what they have learned (Action Guide for Emergency Management at Institutions of Higher Education, 2010; U.S. Department of Education, 2010; U.S. Department of Homeland Security, 2013).

Generally, 95.92% of the respondents believed that AST was important to some degree and more than half of the respondents that received AST (62.50% ) reported paying high levels of attention during training. Bandura (1986) noted that people give high levels of attention to situations that they believe they will one day encounter. However, only 45.92% of respondents believed that active shooter incidents were likely to occur on their campuses. This finding contradicted that notion that only people who believe a situation is likely to occur in the future will provide a high level of attention. Respondents that provide high levels of attention during AST benefit the most from training because for them learning is enhanced.

Findings revealed that observational learning was occurring during AST. Only 16.33% of respondents indicated that they did not learn from watching their colleagues engage in AST. This finding supported Bandura’s (1986) claim that people can learn vicariously through observing others’ behaviors and through observing the consequences
associated with other people’s actions. By observing the behaviors of others, respondents learn how to respond to, deter, and/or engage in active shooter situations.

Findings from the FASPS also revealed a link between AST and self-efficacy because respondents’ self-efficacy improved after receiving AST. Faculty that were confident in their ability to handle active shooters were more likely to perform optimally during active shooter situations as long as their self-efficacy is not miscalibrated. Bandura (1986) noted that successes and failures influenced self-efficacy. Participating in operations-based active shooter exercises give faculty the opportunity to build their self-efficacy. The lack of the use of operations-based exercises prohibit faculty from fully developing their self-efficacy. This indicated that respondents who did not participate in operations-based training exercises may have a false sense of preparedness and their self-efficacy may be miscalibrated because they lacked actual experience responding to active shooter situations.

**Research Question 4**

What precautionary measures do faculty take to demonstrate active shooter preparedness?

Overall, only 45.92% of the respondents believed that active shooter incidents were likely to occur on their campuses. However, all of the respondents indicated that they used some sort of precautionary measure to deter active shooters. The potential threat of active shooters only motivated 57.14% of respondents to take precautionary actions while on campus. Additional research is needed to determine what motivated the other 42.86% of respondents to use precautionary measures.

Respondents used a variety of precautionary measures. Prior to receiving AST, opting into campus safety texts or email alerts was the most frequently used
precautionary measure used by the respondents. This was followed by being alert and aware of one’s surroundings, being knowledgeable of evacuation routes, locking office doors, and promptly reporting suspicious persons, vehicles, or activity. Comparatively, after participating in AST; being alert and aware of one’s surroundings, being knowledgeable of evacuation routes, opting into campus safety texts or email alerts, being knowledgeable of active shooter response procedures, promptly reporting suspicious persons, vehicles, or activity, and locking office doors were the most frequently used precautionary measures used by the respondents. Findings indicated that participating in AST caused respondents to become more aware of active shooter response procedures because there was an increase in the respondents’ awareness of procedures after receiving AST.

Meaning of the Findings

Overall, faculty were underprepared for active shooter incidents. There was a considerable number of respondents that did not receive AST from their institution. Likewise, there was a considerable number of respondents that continued to perceive themselves as being unprepared for active shooter situations in spite of receiving AST. Although findings from the current research and from previous research show that active shooter preparation efforts at IHLs have drastically improved since Virginia Tech, more improvements are needed to ensure that all faculty are aware of active shooter policies and are prepared for active shooter incidents through effective training. A little more than half of the respondents reported that they are prepared for active shooter situations however, findings pertaining to the nature of AST revealed that respondents may not be as prepared as they believe themselves to be because they are not practicing procedures,
evacuation plans, or survival tactics. Institutional active shooter preparation efforts appeared to be lacking because discussions-based trainings were not being consistently conducted, operations-based trainings were rarely conducted, and most faculty were unsure of active shooter procedures.

Implications

The current research study has numerous theoretical and practical implications. From a theoretical standpoint, the findings provided support for the use of Bandura’s (1986) SCT as a framework to examine active shooter preparedness. The findings indicated that active shooter preparedness involved the reciprocal interaction between respondents’ environment, behaviors, and personal and cognitive factors. Findings from the FASPS solidified the use of triadic reciprocal determinism to investigate and explain the interaction between the variables that contributed to active shooter preparedness (Bandura, 1986). From a practical standpoint, findings from the FASPS identified strengths and deficiencies in the active shooter preparation efforts at IHLs. Compared to the literature, active shooter preparation efforts have improved at IHLs. However, findings revealed the need for the DOE to push IHLs to mandate AST for all institutions. In conjunction with that, the DOE should encourage all IHLs to create a culture of preparedness toward active shooters on all campuses. At the institutional level, the frequencies of AST need to be improved. AST should also be expanded to include a full range of training exercises as it is recommended by the DHS and DOE. Doing so makes active shooter preparation efforts more effective. There is also a need for IHLs to assess the effectiveness of ASTs.
Findings revealed the need for administrators at IHLs to ensure that faculty have access to active shooter policies and are aware of active shooter procedures. Administrators should ensure that active shooter response procedures and evacuation plans are tested each year. With regard to faculty, findings indicated that faculty are thinking about the potential threat of active shooters and their role in active shooter preparedness. The findings of the FASPS showed a link between the environment, personal and cognitive factors, and behaviors that contributed to active shooter preparedness. This research may serve as a benchmark for future analysis in that it serves as a useful starting point by examining the variables associated with active shooter preparedness.

Limitations

There are several limitations associated with the current research study. The first limitation involved the sampling method. A non-probability sampling method was used to select members from the target population. As a result, there is an unknown portion of the target population that was not included in the study. The findings of the current research cannot be generalized to the larger population of faculty at IHLs.

The second limitation involved recruitment. The current research study was conducted at the end of the Spring semester. Conducting the research study at the end of academic year limited the number of participants. At the time of the recruitment, some institutions were already on summer break, as a result some faculty did not view the recruitment email. The researcher received several automated response emails that indicated that institutions were already on summer break. The automated response emails also stated that faculty would not be checking their intuitional email during that time.
Conducting this study at the beginning or middle of the Spring semester may have improved the response rate.

The third limitation associated with the study is that the instrument lacked internal consistency and thus needed to be reorganized to improve clarity for the respondents. As a result of this limitation, some of the respondents’ answer choices were inconsistent. Additionally, a standard unit of measurement should have been used on the response items in order to improve clarity for respondents and consistency during the data analysis.

The fourth limitation deals with the absence of baseline data. Baseline data obtained from administering a survey to faculty prior to receiving active shooter training would have permitted the researcher to make certain inferences regarding the extent to which AST influences faculty members’ personal and cognitive factors, behaviors, and environments. Without the baseline data, the researcher could not determine the extent to which faculty active shooter preparedness was a result of participating in active shooter training. The researcher also could not adequately determine if faculty behaviors changed as a result of participating in AST.

The final limitation associated with this study is that the researcher did not administer AST to the participants. The type of training received, training content, and frequency of trainings varied by institution. The variation in AST limited the conclusions that could be made regarding the relationship between AST and active shooter preparedness. This also prevented the researcher from determining why respondents employed by private IHLs felt safer and perceived themselves as more prepared than respondents from public IHLs.
Directions for Future Research

The current research study examined the active shooter preparedness of postsecondary faculty. Prior studies explored crisis management at IHLs (Akers, 2007; Lott, 2012; Booker, 2014; Sulkowski & Lazarus, 2011; Sullivan, 2012; Sullivan & Perry, 2014; Wang & Hutchins, 2010; Zdziarski, 2001), AST at IHLs (Ellies, 2015; Snyder, 2014), and active shooter preparedness at IHLs (Mitroff & Alpaslan, 2003; Mitroff et. al., 2006; Myers, 2016; Pitrowski, 2014). The current study filled the gap in research by revealing the current state of active shooter preparation efforts among IHLs, by assessing faculty perceptions of their active shooter preparedness, and by revealing the factors that may have contributed to active shooter preparedness. However, the limitations associated with this study prohibited the researcher from making certain assertions. Additional research is needed to further examine institutional preparation efforts, AST, and the link between active shooter training and active shooter preparedness.

The findings from the current research revealed that faculty employed by private IHLs felt safer on campus than faculty employed by public IHLs. Future research should be conducted to determine if this finding remains within a larger more representative sample. Future research should also be conducted to investigate why faculty at private IHLs feel safer than faculty at public IHLs. Examining the difference between the crisis preparedness efforts and campus structures of public and private IHLs may help determine how to improve active shooter preparation efforts, so that faculty from public IHLs are more prepared and feel safer on campus.

Findings also revealed that a substantial percentage of respondents still perceived themselves as being underprepared for active shooter situations despite having
participated in AST. Additional research should be conducted to determine if this finding was due to deficiencies in the AST received by these respondents or due to some other factors. The lack of preparedness by respondents who received AST revealed the need for additional research regarding the components of AST at IHLs and the effectiveness of AST at IHLs. In addition to this finding, prior research also indicated that information regarding the components of AST and the effectiveness of AST is missing from the literature. Research conducted by Akers (2007) and the National Center for Campus Public Safety (2016) revealed that postsecondary personnel believed that crisis preparedness training needed to be improved. Future research might be helpful to further examine the areas where there are deficiencies in AST and to identify the limitations of AST. This information will help improve active shooter preparation efforts at IHLs.

Lastly, future research is needed to determine the extent to which active shooter training is related to active shooter preparedness. Knowing the extent to which AST makes a difference in active shooter preparedness may encourage more IHLs to provide AST to their faculty. The findings of the FASPS indicated that respondents who had AST perceived themselves as being more prepared to manage active shooter situations than respondents who did not. Additionally, research should be conducted in this area to determine the extent to which the different types of ASTs causes a change in levels of active shooter preparedness. This information will help determine if modeling, role play, simulations, games, drills, functional exercises, and full-scale exercises have any measurable effects on the active shooter preparedness of personnel at IHLs. Knowing how AST relates to preparedness helps support the argument for providing consistent
AST to faculty. This information would also help IHLs select the most effective types of AST and obtain greater results from the training.

Summary

This chapter provided a discussion of the research findings presented in chapter four. Bandura’s Social Cognitive Theory (SCT) was also used to explore the environmental, behavioral, personal and cognitive factors that contributed to faculty member’s active shooter preparedness. These factors were discussed in relation to SCT in efforts to describe the current state of faculty active shooter preparedness. In this chapter, the findings of the FASPS have been compared to the crisis preparedness literature in higher education, the crisis preparedness recommendations of the Higher Education Act, and the active shooter preparation recommendations of DHS to determine the current state of faculty active shooter preparedness.

Conclusion

This research study used Bandura’s Social Cognitive Theory as a framework to examine active shooter preparedness among faculty from IHLs within the United States. Using a quantitative approach, the researcher determined the nature of AST at IHLs and the current state of faculty active shooter preparedness. Findings showed that online trainings and seminars were the most common types of AST respondents received. In addition to that, AST was not provided on a consistent basis throughout the academic year. Findings from the FASPS revealed that some IHLs are still not fully compliant with the Higher Education Act’s recommendations for crisis preparedness because only 57% of the sample received active shooter training and active shooter policies were only shared with 52%. In addition to those findings the majority of the respondents had not
participated in any type of operations-based training exercises. The failure to provide operations-based training is contrary to the recommendations of the DHS and the DOE. As a result of these findings, improvements are still needed in the preparation of faculty to deter or engage in active shooter incidents.

Generally, most of the sample believed their campuses were safe. However, the majority of the sample had thought about being the possibility of being involved in an active shooter incident while on campus. Findings from the FASPS revealed that a little more than half of the sample believed they were prepared for active shooter situations. Respondents that perceived themselves as prepared to engage in active shooter situation had more AST, were less fearful, were more likely to employ precautionary behaviors, felt safer on campus, perceived their campuses to be safer, thought about the possibility of being involved in an active shooter incident while on campus, and have thought about the actions that they would need to take in the event of an active shooter. Lastly, the results of the FASPS revealed that respondents employed by private IHLs felt safer on campus and perceived themselves as more prepared to handle active shooter situations than respondents employed by public IHLs. However, in the absences of practice, respondents may not actually be as prepared as they perceived themselves to be.
APPENDIX A – List of Contacted IHLs

University of Mobile
University of Alaska Southeast
Arizona Christian University
John Brown University
San Diego City College
University of Denver
University of Connecticut
University of Delaware
University of D.C.
North Florida Community College
Georgia Piedmont Technical College
University of Hawaii
University of Idaho
Highland Community College
University of Notre Dame
Drake University
Hesston College
University of Pikeville
Tulane University
University of Maine
Johns Hopkins University
Massbay Community College
Monroe Community College
Normandale Community College
University of Mississippi
State Fair Community College

University of Montana
University of Nebraska Lincoln
University of Nevada Las Vegas
University of New Hampshire
Saint Peters University
University of New Mexico
Guttman Community College
Central Carolina Community College
North Dakota State University
Cuyahoga Community College
Oral Roberts University
Concordia University
Butler Community College
University of Rhode Island
Anderson University
University of South Dakota
Nashville State Community College
Tarrant County College
Utah State University
University of Vermont
Blue Ridge Community College
Seattle University
West Virginia University
Marquette University
University of Wyoming
APPENDIX B – IRB Approval Letter

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional-review-board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the ‘Adverse Event Report Form’.
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 18050701
PROJECT TITLE: Preparation Matters: The Examination of Faculty Active Shooter Preparedness
PROJECT TYPE: Doctoral Dissertation
RESEARCHER(S): Latisha Pitts
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Educational Research and Administration
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 05/08/2018 to 05/07/2019

Lawrence A. Hosman, Ph.D.
Institutional Review Board
Subject: Participation Request for Faculty Active Shooter Preparedness Survey

Greetings,

I am Latisha L. Pitts, a Ph.D. candidate in Higher Education Administration at The University of Southern Mississippi. I would like to invite the faculty at your institution to participate a research study. The FBI reported that between the years of 2000-2013, 70% of all active shooter incidents occurred in an educational setting (Blair & Scheweit, 2013). This finding along with recent active shooter incidents at institutions of higher learning have sparked my interest in faculty active shooter preparedness.

The purpose of this research study is to gather a snapshot of the current state of active shooter preparedness among faculty at institutions of higher learning. Participation in this study is voluntary and may be withdrawn at any time. Faculty who choose to participate in this study will be asked questions about their exposure to active shooter incidents, the nature of active shooter training at their institution, and their perspectives regarding active shooter preparation efforts. Responses to this questionnaire will remain anonymous. The data gathered from this study will be analyzed and used in my dissertation; which is titled, “Preparation matters: An examination of faculty active shooter preparedness.”

I would greatly appreciate if you and your colleagues would complete my questionnaire. It should take no longer than 15 minutes to complete. Please forward this email which includes the link to the questionnaire to all the faculty within your college, department, or division.
To complete the questionnaire, click here:

https://usmep.co1.qualtrics.com/jfe/form/SV_bfIWABA6lNGlBB3

By completing and submitting this questionnaire you are giving consent for your responses to be included in the research study. Please view the attached information letter and IRB approval letter for additional information.

If you have any questions about this research, please contact me at

latisha.brown@usm.edu.

This study has been reviewed and approved by The University of Southern Mississippi Institutional Review Board.

Thank you,

Latisha L. Pitts
APPENDIX D – Information Letter

Dear Faculty,

I would like to ask you to consider participating in a study because you are a faculty member at an institution of higher learning and teach on a college campus. The purpose of this study is to examine faculty active shooter preparedness at institutions of higher learning within the United States. This examination is being performed to obtain a snapshot of the current state of faculty active shooter preparedness. I intend to explore faculty active shooter preparedness by examining faculty beliefs, behaviors, and personal and cognitive factors. The results of this research may help refine active shooter preparation efforts, may add to the body of literature pertaining to the active shooter preparation of faculty, and may serve as a basis for future evaluation of active shooter preparation efforts.

If you choose to participate in this study, you will be asked to complete a questionnaire. The questionnaire will gauge faculty beliefs towards organization vulnerability, safety, fear, and active shooter training. It will also ask questions about various types of active shooter trainings and precautionary behaviors. The questionnaire should take less than 15 minutes to complete.

Participation in this study is completely voluntary. There are minimal risks involved with participating in this study. Participants may experience discomfort if they have been directly or indirectly involved in an active shooter situation. Participants may withdraw their participation at any time without penalty or prejudice.

All data collection associated with this study will remain completely anonymous. Any identifying information inadvertently obtained during the course of this study will
remain completely confidential. The data and information collected from this study will be used to add to the body of knowledge pertaining to active shooter preparedness at institutions of higher learning. The data collected from this research will be analyzed and reported in the researcher’s dissertation. The results from this research may also be presented in publications and at educational conferences. After analyzed, the data collected from this research will be saved by the researcher on Dropbox and on an external drive.

If you have questions concerning this research, please contact Latisha Pitts at Latisha.Brown@usm.edu. This research is being conducted under the supervision of Eric Platt, Ph.D.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

By completing and returning the questionnaire, the respondent gives permission for this anonymous and confidential data to be used for the purposes described above. Thank you for your consideration.

Sincerely,

Latisha L. Pitts
APPENDIX E – FASPS

Demographics

Q1.1 How old are you?

Q1.2 Gender

   Male (1)
   Female (2)
   Transgender (3)
   I prefer not to specify. (4)

Q1.3 What is your race? Please select all that apply.

   White (1)
   African American/Black (2)
   Native American/American Indian (3)
   Hispanic/Latino (4)
   Asian/Pacific Islander (5)
   Other (6)

Q1.4 Professional Rank

   Adjunct/Lecturer (1)
   Assistant Professor (2)
   Associate Professor (3)
   Full Professor (4)
   Professor Emeritus (5)

Q1.5 How many years have you served as a faculty member at your current institution?
Q1.6 Indicate the type of institution you are employed at.

Community College /Junior College (1)

University (2)

Other (3)

Q1.7 Indicate if your institution is public or private.

Public (1)

Private (2)

Q1.8 Indicate where your institution is located.

▼ Alabama (1) ... Wyoming (51)

Q1.9 An active shooter situation is an incident where someone is actively engaged in killing or attempting to kill people with a firearm in a confined and populated area. Have you or any member of your immediate family ever been involved in an active shooter situation while on a college campus?

Yes (1)

No (2)

Q1.10 Have you or any member of your immediate family ever been involved in an active shooter situation outside of a college campus?

Yes (1)

No (2)
Q1.11 Have you viewed media coverage of an active shooter situation that occurred on a college campus?

Yes (1)

No (2)

Q1.12 Is participating in active shooter training optional or mandatory at your institution?

Optional (1)

Mandatory (2)

The Nature of Active Shooter Trainings

Q2.1 Active shooter training prepares individuals to prevent and engage in active shooter situations. Active shooter training includes; seminars, workshops, web-based training, games, drills, tabletop exercises, functional exercises, and full-scale exercises. Have you received active shooter training from your institution?

Yes (1)

No (2)

Q2.2 How many active shooter trainings have you had during the 2017-2018 academic year?

Q2.3 Generally, about how long does the active shooter training sessions last?

Less than 1 hour (1)

More than 1 hour (2)

2 or more hours (3)
Q2.4 During active shooter drills, participants practice how to respond to active shooter incidents while on campus. How many active shooter drills that involve faculty are conducted at your institution each year?

Q2.5 Functional active shooter exercises are an extension of active shooter drills. During functional exercises, the campus community participates in realistic active shooter simulations. How many functional exercises that involve faculty are conducted at your institution each year?

Q2.6 Full scale training exercises are an extension of functional exercises. During full scale exercises, faculty, staff, students, emergency responders, and community stakeholders engage in realistic active shooter simulations. How many full-scale training exercises are conducted at your institution each year?

Q2.7 Indicate the active shooter training exercises that you have participated in at your institution. Please select all that apply.

- Seminars (1)
- Workshops (2)
- Tabletop Exercises (3)
- Games (4)
- Drills (5)
- Functional Exercises (6)
- Full Scale Exercises (7)
- Online Training (8)
Q2.8 Indicate the components that have been included in the active shooter trainings that you have received. Please select all that apply.

Lecturer/Verbal Training (1)  
Group Discussion (2)  
Simulations (3)  
Role Play (4)  
Games (5)  
Modeling (6)  
Videos (7)  
Survival Tactics (8)  
Reading (9)  
Scenarios (10)  
News Media (11)

Q2.9 Indicate which of the following tactics have been modeled during the active shooter trainings that you have participated in. Please select all that apply.

"Run, Hide, Fight" (1)  
"Avoid, Deny, Defend" (2)  
"Lock Down" (3)  
"See Something, Say Something" (4)  

Q2.10 Have you been given the opportunity to ask questions during the training sessions?

Yes (1)  
No (2)
Q2.11 Have you been given the opportunity to provide feedback after the training sessions?

   Yes (1)
   No (2)

Faculty Perspectives Regarding Organizational Vulnerability and Preparedness

Q3.1 Has a culture of preparedness towards the threat of an active shooter been established on your campus?

   Yes (1)
   No (2)

Q3.2 Does your institution have active shooter policies?

   Yes (1)
   No (2)
   Unsure (3)

Q3.3 Have institutional active shooter policies been shared with you?

   Yes (1)
   No (2)

Q3.4 Do you feel safe on your campus?

   Yes (1)
   No (2)

Q3.5 How safe do you perceive your campus to be.

   Very safe (1)
   Somewhat safe (2)
   Neutral (3)
Somewhat unsafe (4)

Very unsafe (5)

Q3.6 What is the likelihood that an active shooter incident could occur on your campus?

Extremely likely (1)

Likely (2)

Unlikely (3)

Extremely unlikely (4)

Q3.7 Please rate your level of fear of being involved in an active shooter situation on campus.

Extremely fearful (1)

Fearful (2)

Slightly fearful (3)

Not fearful (4)

Q3.8 College campuses are open access environments which means that college campuses are open to the public and have many unlocked buildings and classroom doors. Knowing this, how likely are you to employ precautionary behaviors?

Extremely likely (1)

Likely (2)

Unlikely (3)

Extremely unlikely (4)
Q3.9 How much does employing precautionary behaviors affect the campus community?

  Major affect (1)
  Moderate affect (2)
  Minor affect (3)
  No affect (4)

Q3.10 In your opinion, how prepared are you to engage in active shooter situations?

  Extremely prepared (1)
  Somewhat prepared (2)
  Somewhat unprepared (3)
  Extremely unprepared (4)

Q3.11 In your opinion, how prepared are faculty members to engage in active shooter situations?

  Extremely prepared (1)
  Somewhat prepared (2)
  Somewhat unprepared (3)
  Extremely unprepared (4)

**Forethought**
Q4.1 Have you ever thought about the possibility of being involved in an active shooter situation while on campus?

  Yes (1)
  No (2)
Q4.2 Have you ever thought about the actions you would need to take if an active shooter enters your office or classroom?

Yes (1)  
No (2)

Q4.3 How concerned are you about active shooters on campus?

Extremely concerned (1)  
Moderately concerned (2)  
Somewhat concerned (3)  
Slightly concerned (4)  
Not at all concerned (5)  

Thoughts About Training

Q5.1 How important do you believe active shooter trainings are?

Extremely important (1)  
Very important (2)  
Moderately important (3)  
Slightly important (4)  
Not at all important (5)
Q5.2 What level of attention do you provide during active shooter trainings?

High (1)

Medium (2)

Low (3)

None (4)

I have not had active shooter training. (5)

Q5.3 Do you believe that you learn from watching your colleagues engage in active shooter exercises?

Yes (1)

No (2)

I have not had active shooter training. (3)

Q5.4 How useful do you find the information that is shared during active shooter training?

Extremely useful (1)

Very useful (2)

Moderately useful (3)

Slightly useful (4)

Not at all useful (5)
Behaviors

Q6.1 Does the potential threat of an active shooter motivate you to take precautionary measure while on campus?

   Yes (1)
   No (2)

Q6.2 Indicate the level of influence you believe your actions will have on an active shooter situation.

   Extremely influential (1)
   Very influential (2)
   Slightly influential (3)
   Somewhat influential (4)
   Not at all influential (5)
Q6.3 With regard to active shooters, what precautionary actions did you take to ensure campus safety before you had any type of active shooter training? Please select all that apply.

- Opted into campus safety text or email alerts (1)
- Programmed the contact number for campus police in your cellphone (2)
- Promptly report any suspicious persons, vehicles, or activity (3)
- Knowledgeable of evacuation routes (4)
- Locking office doors (5)
- Locking classroom doors (6)
- Being alert and aware of surroundings (7)
- Taking self-defense classes (8)
- Participating in active shooter training exercises (9)
- Knowledgeable of active shooter response procedures (10)
- I did not take any precautionary actions (11)
Q6.4 After receiving active shooter training, what precautionary actions do you currently take to ensure safety on campus? Please select all that apply.

- Opted into campus safety text or email alerts (1)
- Programmed the contact number for campus police in your cellphone (2)
- Promptly report any suspicious persons, vehicles, or activity (3)
- Knowledgeable of evacuation routes (4)
- Locking office doors (5)
- Locking classroom doors (6)
- Being alert and aware of surroundings (7)
- Taking self-defense classes (8)
- Participating in active shooter training exercises (9)
- Knowledgeable of active shooter response procedures (10)
- I do not take any precautionary actions (11)
- I have not received active shooter training (12)

**Self-Efficacy**
Q7.1 Prior to participating in active shooter training, how confident were you in your ability to perform the necessary actions during active shooter situations?

- Extremely confident (1)
- Moderately confident (2)
- Slightly confident (3)
- Somewhat confident (4)
- Not at all confident (5)
- I have not had active shooter training. (6)

Q7.2 Prior to participating in active shooter training, how confident were you in your ability to perform the necessary actions after an active shooter situations?

- Extremely confident (1)
- Moderately confident (2)
- Slightly confident (3)
- Somewhat confident (4)
- Not at all confident (5)
- I have not had active shooter training. (6)
Q7.3 After participating in active shooter training, how confident are you in your ability to perform the necessary actions during an active shooter situation?

   Extremely confident (1)
   Moderately confident (2)
   Slightly confident (3)
   Somewhat confident (4)
   Not at all confident (5)
   I have not had active shooter training. (6)

Q7.4 After participating in active shooter training, how confident are you in your ability to perform the necessary actions after an active shooter situation?

   Extremely confident (1)
   Moderately confident (2)
   Slightly confident (3)
   Somewhat confident (4)
   Not at all confident (5)
   I have not had active shooter training. (6)
Intent to Transfer

Q8.1 Indicate the likelihood that you would follow the procedures you learned in active shooter training during an active shooter situation.

- Extremely likely (1)
- Likely (2)
- Unlikely (3)
- Extremely unlikely (4)
- I have not had active shooter training. (5)

Q8.2 How many times do you discuss active shooter policies and procedures with your students during each academic term?

Q8.3 Do you include information regarding active shooter threats in your syllabus?

- Yes (1)
- No (2)
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