A Dissertation

entitled

Challenges and Perceptions of Violence in Places of Worship

An application of the Health Belief Model

by

Sely-Ann Ayiesha Headley

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the

Doctor of Philosophy Degree in Health Education

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An Abstract of

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Background: The rates of targeted violence in places of worship have been increasing.
Methods: In study one, a literature review was conducted to determine strategies and challenges PWs face when attempting to prevent and recover from targeted violence. In study two, a Cross-sectional study was conducted among members of an online research panel (N=434) who identified as Christian, Jewish, Buddhist, Muslim, Hindu, or Sikh.
Results: There is a lack of documented violence prevention training available for PWs. Several unvalidated strategies are used among PWs with similar components (pre-attack behaviors, developing a security plan, and locking your own facility) were found. Violence mitigation challenges include using preserving space where the violent event occurred, and overcoming the belief that violence may never occur, and providing mental health services for worshipers and community members. Several trainings (Commercial tourniquet, Postvention, Self-Defense, Wound Packing, and Behavioral Threat Assessment) and demographics (worship

leader, Muslim, Female, of Hispanic origin, and increasing age) statistically significantly predicted (positive or negative) level of confidence in acting in violent situations. Leaders were more prepared to act if a violent event were to occur, and perceived threat of violence was highest among those who report being Jewish or Muslim, while the lowest rates were reported among Buddhists.

Conclusion: challenges preventing PWs from implementing violence mitigation training should be addressed on an individual level. Training for PWs should be simulation-based and should include: preattack behaviors, how to safeguard individual PWs, case studies, and commercial tourniquet application.

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To God, my savior, Provider, Sustainer, and Everything. Thank You doesn't seem enough.

To Daniel, my reason for wanting to finish this project.

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Table of Contents

Acknowledgements
Table of Contentsi
List of Tables iv
List of Figures
List of Abbreviations
Chapter One
Introduction1
History of Violence1
Training in Places of Worship3
Purpose of the Studies/ Articles7
Article 1: Challenges Preventing and Responding to Violent Events in Places of Worship7
Article 1 Research Questions7
Article 1 Intended Journal7
Article 2 Research Questions and Hypotheses8
Article 2 Intended Journal
Definition of Terms
Methodology for Article/Study One14
Methodology for Article/Study Two14
Research design14
Theoretical Foundation for Questionnaire17
Description of study variables18
Data Collection Procedures21
Data Analyses for Article/Study Two22
Delimitations
Limitations
Chapter Two
Author Page29
Abstract
Keywords
Introduction
Places of worship as Soft Targets

Violence in Places of Worship Between 2000 and 2016 in the U.S.	34
Training and Places of worship	
Materials and Methods	
Results	
Lack of Structured Training throughout the U.S.	
Discussions	44
Limitations	45
Conclusions	45
Chapter Three	46
Author Page	47
Abstract	
Key words	48
Introduction	49
Background on Violence.	49
Materials and Methods	51
Results	55
Psychometric Validation of Data Collection Tools	56
Statistical Analyses	56
Discussions	59
Limitations	61
Conclusions	62
Tables	63
Figures	77
References	80
A. Appendix	86
B. Appendix	90
C. Appendix	
Study One Research Questions and Answers	
RQ 1: What practices do places of worship currently employ to prevent targeted vic	lence?99
RQ 2: what challenges do places of worship experience when trying to protect their from active violence?	establishments 99
RQ 3: what practices do places of worship use to recover after a violent event?	
RQ 4: What structured approach to addressing violence in places of worship exists	in the U.S.? . 101

D. Appendix	103
Study Two: Research Questions, Hypothesis and Answers	

List of Tables

Table 1- PCA: KMO and Bartlett's Test	63
Table 2- Cronbach alpha of sub-scales	63
Table 3- Demographics	64
Table 4 -RQ1- Point-biserial correlation output COMBINED	65
Table 5 - RQ 2 point-biserial correlation combined	66
Table 6-RQ 1 and 2 - Strength and direction of Correlations for Dummy Variables	67
Table 7- Model Summary for Stepwise Logistic Regression to determine strength and direction of	
significant correlations from RQ1	68
Table 8-RQ 1 ANOVA for Logistic Regression	68
Table 9 RQ1 Coefficients for Logistic Regression	69
Table 10-RQ 2 Model Summary for Logistic Regression	70
Table 11- RQ 2 ANOVA Summary for Step-wise Logistic Regression	71
Table 12- RQ2 coefficients for Logistic Regression	72
Table 13- RQ 3 Frequencies for how participants perception of their preparedness to react if a violer	nt
intruder enters PW	73
Table 14- RQ 3 Frequencies for how participants perception of other MEMBERS preparedness to rea	ict if
a violent intruder enters PW	73
Table 15- RQ 3 Frequencies for how participants perception of their LEADERS preparedness to react	if a
violent intruder enters PW	74
Table 16- RQ 3 Frequencies for Participant's OWN, their MEMBERS, and their LEADERS level of	
preparedness to react if a violent intruder enters their PW.	74
Table 17- RQ 4 Descriptives of one way ANOVA Variables for Pervceived Threat	74
Table 18- One Way ANOVA Summary Table	75
Table 19- RQ 4 One-Way ANOVA Post Hoc Test Multiple Comparisons Table	76

List of Figures

Name of Figure	Page Number
Figure 1- The Health Belief Model	77
Figure 2- Health Belief Model constructs and Questionnaire Variables	
Figure 3- Qualtrics Sample Size Calculator	
Figure 4- Initial Invitation to Consider Participating in Study Two	
Figure 5- Pre-questionnaire Message for Participants to Determine if the study to	opic will
interest them	
Figure 6- Means Plot for RQ 4 One-Way ANOVA	79

List of Abbreviations

- FBI Federal Bureau of Investigation
- PWs Places of Worship

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• NIBRS - National Incident-Based Reporting System

Chapter One

Introduction to Dissertation Chapters

Introduction

History of Violence.

Death by violence has become a public health issue in the wake of several violent attacks at educational institutions, places of worship, medical facilities, businesses, and other public places. Since 2000, the overall rates of active shooter incidences have been steadily increasing (Blair & Schweit, 2013; Hoffman & Kunzmann, 2018). An active shooter is an individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms(s), and there is no pattern or method to their selection of victims (U.S. Department of Homeland Security, 2008). Additionally, in an active shooting event (incident), at least one of the victims must be unrelated to the shooter. This definition also excludes gang-related shootings (Blair & Martaindale, 2013).

According to the Federal Bureau of Investigation (FBI), between January 2000 and December 2013, there were 160 reported active shooter incidents in 40 of the 50 US states in addition to Washington DC (Blair & Schweit, 2013). The average number of active shootings per year between 2010 and 2013 was 11.4. Between 2014 and 2017, there were 20 incidents each year; in 2017, there were 30 incidents; and 27 incidents in 2018 (Blair & Schweit, 2013; Schweit, 2016; The Advanced Law Enforcement Rapid Response Training [ALERRT] Center at Texas State University & The Federal Bureau of Investigation [FBI], 2018; The Advanced Law Enforcement Rapid Response Training [ALERRT] Center at Texas State University, U.S. Department of Justice, & The Federal Bureau of Investigation [FBI], 2019). These incidents occurred in academic institutions, government properties, places of worship (PWs), and healthcare facilities, resulting in over 2,200 casualties (Blair & Schweit, 2013; Schweit, 2016; The Advanced Law Enforcement Rapid Response Training [ALERRT] Center at Texas State University & The Federal Bureau of Investigation [FBI], 2018). Because these incidents involved three or more people killed at once in a public setting, the FBI considers them mass killings (Blair & Schweit, 2013).

In addition to shootings, there is also data on deadly force incidents (DFI) that resulted in deaths at churches. DFI incidents include abductions, attacks, suspicious deaths, suicides, and deadly force interventions (Chinn, 2019; Hesterman, 2018). Chinn (2019) found that the causes of DFIs deaths were domestic violence, personal conflict, and robbery. The top weapons used were guns, knives, and explosives (Chinn, 2019).

While active shootings encompass a range of mass killings, the term is not entirely descriptive of the broad range of weapons and tactics that may be used in the act of targeted violence. As such, the term hybrid targeted violence (HTV) is used to describe the intentional use of force to cause physical injury or death to a specifically identified population using multifaceted conventional weapons and tactics (Frazzano & Snyder, 2014). These weapons include but are not limited to guns, knives, bombs, and others. The term HTV also includes tactics used to conduct the attacks, such as ambush, breaching, and barricading (Frazzano & Snyder, 2014).

Although HTV encompasses a wide range of attacks, the term targeted violence is more inclusive. Targeted violence is a term that refers to situations in which an identifiable (or potentially identifiable) perpetrator poses (or may pose) a threat of violence to a particular

2

individual or group of people (this includes stalking, terrorism, sexual assault, etc.). This targeted violence term evolved from a 5-year secret service study where the behavior of individuals who carried out or attempted lethal attacks on public officials or prominent individuals was examined (Deisinger & Scalora, 2016; Fein, Vossekuil, & Holden, 1995). Although some HTV tactics have been used during attacks on PWs, targeted violence fully encompasses all attacks on PWs.

According to Dallas Drake at the Center for Homicide Research, almost half of the incidences of gun violence in houses of worship are committed by persons affiliated with the congregation, and another quarter involves intimate partners (Post, 2019).

There are physical vulnerabilities that make soft targets more attractive (Hesterman, 2018). Dr. Martin Gill (2014) explained that criminals typically pick targets where they believe cameras are not working. One criminal stated that if he thought the incident would be caught on camera, then the severity of the crime would escalate (Gill, 2014). Dr. Gill explained that criminals are actually more concerned about being stopped by people than technology (Gill, 2014).

Training in Places of Worship.

Because targeted violence has made such a tragic impact on our country, shortly after the Sandy Hook shooting in 2012, the American College of Surgeons (ACS) in collaboration with the medical community and representatives from the federal government, the National Security Council, the U.S. military, the FBI, and governmental and nongovernmental emergency medical response organizations formed a Joint Committee (Jacobs et al., 2013). This committee was to create a National Policy to Enhance Survivability from Intentional Mass Casualty and Active Shooter Events (Jacobs et al., 2013). Since then, the recommendations from this committee are called the Hartford Consensus. The Hartford Consensus has since made several recommendations for training and strategies to help increase victims' survivability from mass casualty events, including HTV (Jacobs et al., 2013). The Hartford Consensus also described simulation-based education offered by the Hartford Hospital in Connecticut that is designed to improve the competence and skill of those working with active shooter victims (Hartford Consensus, 2015).

In 2016, the Hartford Hospital in Connecticut implemented a simulation center that is being used to train medical personnel, police, and military personnel to respond to active shooter incidents (Jacobs et al., 2013; Schweit, 2016). Simulation-Based Medical Education (SBME) is becoming a routine educational intervention to train healthcare professionals with the skills and competencies required for their discipline and maintenance of licensure (Griswold et al., 2018). Overall, SBME is a powerful educational tool that increases measurable medical learner competence during specified activities (Griswold et al., 2018). Since this type of simulation-based education has been used since the early 1990s to enhance and improve educational outcomes (Thatcher, 1990), this same approach can be used to help train the general population to act and respond to targeted violence.

Generally, simulation centers allow participants who have demonstrated competence in an individual skill to practice their specific roles in real-time as part of a team (Jacobs et al., 2013). This approach has been used with the general population. For example, a 2015 study showed that using Just-in-Time instructions for tourniquet application increases the successful placement of tourniquets in emergency scenarios among non-military volunteers (Goolsby, Branting, Chen, Mack, & Olsen, 2015).

The Hartford Consensus also maintains that as the general public is educated and trained, this training/education should be done on a continuous basis to prevent these essential skills from perishing from the minds of the trainees (Hartford Consensus, 2015). As such, places of worship should have ongoing continuous simulation-based training regarding how to prevent, respond to, and recover from HTV. Part of this general population training should include basic emergency first aid. Since first responders cannot enter the scene to help victims until after law enforcement has cleared the area, bystanders are often the first responders. As such, they ought to be trained on how to respond appropriately (U.S. Department of Homeland Security, 2008) (Security, 2008). In the case of a worship setting, it is imperative that entire congregations are taught how to use basic first aid and other lifesaving improvisational techniques, especially in a scenario-based setting.

One example of simulation-based training is 'STRIVE to Survive' created by the University of Toledo Mass Violence Collaborative in 2019. Members of the mass violence collaborative took four aspects (prevention, intervention, active response, and postvention) of a comprehensive mass violence training and combined them into a single training session designed to be 4-hours long. This comprehensive approach was based on four phases of addressing a critical incident, namely: prevention (threat assessment), intervention (individualized case management), active response (active shooter drill and evacuation), and postvention (critical incident stress management and mental health recovery). After extensive feedback, the session was further condensed into a rapid 1-hour session meant to deliver the

5

most critical information to attendees. The group termed this training session "STRIVE to survive" with the intention of modifying the training content to suit different populations with different learning abilities. For example, "STRIVE to Survive for Nurses" has added components such as administration and competency of tranexamic acid (TXA) (Pusateri et al., 2013), and use of the Iserson Method of Evacuation method (Iserson, 2013). "STRIVE to Survive for the general public" is a version suitable for people with no medical background. Another variation of this program is "churches STRIVE to Survive," designed to train churchgoers and their leaders.

A key benefit of STRIVE to Survive is the portable nature of the training. That is, team members, travel to the place of worship for the training sessions. To date, 105 people have completed the comprehensive (4-hour) STRIVE training, and more than 100 completed the abbreviated (1-hour) training. The data indicate that the training statistically significantly increased participants' confidence in acting during a violent event and increased their knowledge in all four phases of addressing a critical incident (Sexton, 2020).

Currently, some places of worship have different approaches, if any to prevent, mitigate, and recover from violence (Baer, 2019; Childress, 2018; Hanna, 2000; Post, 2019). There is limited research on these methods and no evidence of their effectiveness. Additionally, many establishments still do not have structured training or methodologies to prevent, respond to, or recover from mass violence (Bourns & Wright, 2004). Moreover, simulation-based trainings are not widely used. There is a myriad of challenges that prevent places of worship from adopting preventative measures and strategies to mitigate and recover from targeted violence. Some of these include cost, lack of knowledge, unavailable resources, and fear that nothing can protect them from targeted violence (Hesterman, 2018).

6

Purpose of the Studies/ Articles

This dissertation will encompass two studies that address different aspects of violence PWs experience. The first study will give an overview of challenges places of worship face when preventing, responding to, and recovering from HTV. In contrast, the second study focuses on the worshipers' self-efficacy toward acting during a violent event. The purpose of studies one and two are summarized and outlined below, along with their research questions, hypotheses, intended journals, and definition of terms.

Article 1: Challenges Preventing and Responding to Violent Events in Places of Worship

The purpose of this study is to outline the strategies and challenges places of worship face when attempting to prevent active violence in their places of worship.

Article 1 Research Questions

- (1) <u>RQ 1</u>: What practices do places of worship currently employ to prevent targeted violence?
- (2) <u>RQ 2</u>: what challenges do places of worship experience when trying to protect their establishments from active violence?
- (3) RQ 3: what practices do places of worship use to recover after targeted violence?
- (4) <u>RQ 4</u>: What structured approach to addressing violence in places of worship exists in the U.S.?

Article 1 Intended Journal

Article one will be submitted to the Journal of Religion & Spirituality in Social Work: Social Thought. This journal accepts papers discussing issues of social justice and religion as they relate to the development of policy and delivery of social services, in addition to timely literature reviews, and more. Study 1 is timely, as the rates of violence in places of worship keep rising. This study also seeks to raise questions about, and challenge policies places of worship have instilled. In 2018, this journal had an impact factor of 0.814, and an H index of 18.

The shortened version of the title to serve as the running head with 55- character spaces is "Prevent and Respond to Violence in Places of Worship." Although there is no formal word count limit, a word count will be submitted with the final draft of the manuscript.

Article 2: Perceptions of Threat and Self-Efficacy toward Violent Events in Places of Worship: An application of the Health Belief Model

The purpose of this study is to measure the perceived threat of violence in places of worship, and worshipers' self-efficacy toward acting during a violent event.

Article 2 Research Questions and Hypotheses

1. <u>RQ 1</u>: Is there a statistically significant association between **prior training** (*CPR, First Aid, Tourniquet Application, wound packing, threat assessment, active response, and Postvention*) and **level of confidence**?

Statistical test: Multiple Regression

- H1o: There is no statistically significant relationship between prior training and level of confidence.
- H1a: There is a statistically significant relationship between **prior training** and **level of confidence.**

2. <u>RQ 2</u>: Is there a statistically significant association between **demographics** (*Age, gender/sex, role in church, ethnicity*) and **level of confidence**?

Statistical test: Multiple Regression Pearson correlation

- H2.10: There is no statistically significant association between Age and level of confidence.
- **H2.1a:** There is a statistically significant association between *Age* and level of confidence.
- **H2.20:** There is no statistically significant association between *gender/sex* and level of confidence.
- H2.2a: There is a statistically significant association between *gender/sex* and level of confidence.
- **H2.30:** There is no statistically significant association between *role in church* and level of confidence.
- **H2.3a:** There is a statistically significant association between *role in church* and level of confidence.
- **H2.40:** There is no statistically significant association between *race* and level of confidence.
- **H2.4a:** There is a statistically significant association between *race* and level of confidence.

- H2.50: There is no statistically significant association between *ethnicity* and level of confidence.
- **H2.5a:** There is a statistically significant association between *ethnicity* and level of confidence.
- 3. <u>RQ 3:</u> Is the **level of perceived preparedness** (for participant, other religious organization members, and religious leaders) to take some action during a violent event more than 40% for participant/ more than 50 % for other religious organization members/ and more than 60% for religious leaders?

Statistical test: Frequencies

- H3.1o µ ≤ 40%
- H3.1a: μ > 40%
- H3.2o µ ≤ 50%
- H3.2a: μ > 50%
- H3.3o μ ≤ 60%
- H3.3a: μ > 40%
- <u>RQ 4:</u> Is there a statistically significant association between religious affiliation and perceived threat of a violent event?

Statistical test: One-Way ANOVA

- H2o: There is no statistically significant association between religious affiliation and the perceived threat of a violent event.
- H2a: There is a statistically significant association between religious affiliation and the perceived threat of a violent event.

Article 2 Intended Journal

Article two will also be submitted to the Journal of Religion & Spirituality in Social Work: Social Thought. This journal accepts papers discussing issues of social justice and religion as they relate to the development of policy and delivery of social services, in addition to timely literature reviews and more. In 2018, this journal had an impact factor of 0.814.

The shortened version of the title to serve as the running head with 55- character spaces is "Perceptions of Violence in Places of Worship." Although there is no formal word count limit, a word count will be submitted with the final draft of the manuscript.

Definition of Terms

- Active Shooter- An individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms(s), and there is no pattern or method to their selection of victims (U.S. Department of Homeland Security, 2008).
- Active shooting Event- An active shooter event involves one or more persons engaged in killing or attempting to kill multiple people in an area (or areas) occupied by multiple unrelated individuals. At least one of the victims must be unrelated to the shooter (Blair & Martaindale, 2013) (This definition excludes gang-related shootings).
- Active Violence for this dissertation, the term encompasses any type of violent act where a person or people are is being physically attacked in a public place with or without the use of conventional weapons or tactics. This type of attack may or may not result in death.
- **Deadly Force Incidents (DFI)** These include abductions, attacks, suspicious deaths, suicides, and deadly force intervention/protection (Chinn, 2019; Hesterman, 2018).
- **Hybrid Targeted Violence (HTV)** An intentional use of force to cause physical injury or death to a specifically identified population using multifaceted conventional weapons and tactics (Frazzano & Snyder, 2014).
- Mass Attacks- The definition of a "mass attack," as used by the U.S. Secret Service in its Mass Attacks in Public Spaces report series, includes harm (e.g., injury or death) to three or more persons, not including the attacker (National Threat Assessment Center, 2019).
- Mass Killing A mass killing is defined by the Federal Bureau of Investigation (FBI) as three or more people being killed at once in a public place (Blair & Schweit, 2013).
- **Places of Worship** For this dissertation, places of worship are (Christian) churches, (Jewish) synagogues, (Buddhist, Hindu, or Sikh) temples, and (Muslim) mosques.
- **Soft Targets** Establishments with multiple vulnerabilities and limited security and safety resources (<u>Hesterman, 2018</u>).
- **Targeted violence** This is a term that refers to situations in which an identifiable (or potentially identifiable) perpetrator poses (or may pose) a threat of violence to a particular individual or group of people (this includes stalking, terrorism, sexual assault, etc.,). This term evolved from a 5-year secret service study where the behavior of individuals who carried out, or attempted, lethal attacks on public officials or prominent individuals was examined (Deisinger & Scalora, 2016; Fein et al., 1995; U.S. Secret Service National Threat Assessment Center (NTAC), 2019).

• **Violence**- According to the World Health Organization (WHO), Violence is the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation (Krug et al.,2002).

Methodology for Article/Study One

Due to limited scholarly material on this topic, research for this study includes journals and faith-based magazines in English that were published in the U.S. Research for this study is limited to Christian churches, Jewish synagogues, Muslim mosques, Buddhist temples, Hindu temples and Sikh temples. Newspapers articles were excluded from this study. The search is also restricted to articles published between 2000 and 2019. Only relevant articles were selected for this study.

The following guidelines were used to complete the search:

search terms: "church* or synagogue* or faith or temple* or mosque*"

- And: "shooting* or stabbing* or gun* or violence."
- And: "training."
- Not: Domestic or dating.

<u>Databases</u>: Religion and Philosophy Collection, National Criminal Justice Reference Service Abstracts, Open Dissertations, Psychology, and Behavioral Sciences Collection, SocINDEX with Full Text-, and Criminal Justice Abstracts with Full Text.

Methodology for Article/Study Two

Research design

This is a cross-sectional study with a 40 -question questionnaire that has been approved by the institution's IRB office. The questionnaire is designed to measure the participant's perceived threat of violent events at their place of worship. Cross-sectional studies are used in research to explore relationships between variables and collect information on disease prevalence, behaviors, knowledge, attitudes, and opinions (Connelly, 2016). The questionnaire design in research is typically used because it provides a quantitative description of trends, attitudes, or opinions of a population by studying a sample of that population (Creswell & Creswell, 2017).

The purpose of the cross-sectional survey is to determine the parishioners' perceived threat of violence at their PWs. Some advantages of using an online survey include the minimal cost to create and rapid turnaround time in data collection. The online questionnaire administration method will be used, where the researcher will ask a sample of participants to answer a structured sequence of questions online (Trochim, 2006). This administration method has advantages and disadvantages. Some advantages include a higher response rate, quick data collection turnaround rate, and the elimination of data entry (Trochim, 2006). Some disadvantages of using an online questionnaire include the exclusion of people without smartphones or access to the internet.

The questionnaire will be administered using Qualtrics. Qualtrics delivers questionnaires in formats suitable for mobile and computer screen resolutions (Qualtrics, 2014). To our knowledge, this data has not been previously collected. This data can help design effective violence mitigation training for PWs, and ultimately help prevent violent incidents, thus saving lives.

Study Population and Inclusion Criteria

A researcher can generalize and draw inferences to the population based on the data collected from the sample, if the sample is representative of the population (Creswell & Creswell, 2017). According to Pew Research, 70% of the US population identifies as Christian, 22% identify as being unaffiliated with any religion, 5.9 % belong to non-Christian faiths, 1.5%

identify as belonging to other faiths, and 0.6% do not know what religious organization they identify with (Pew Research Center, 2014). Among those who identify as Christian, there are Protestants, Catholics, Mormons, Orthodox Christians, and Jehovah's witnesses. Among those who identify with non-Christian faiths include Jews, Muslims, Buddhists, and Hindus (Pew Research Center, 2014). Although only 5.9 % of the US population identify with non-Christian faiths, (9 out of 29) 24% of killings in places of worship between 1936 and 2018 occurred in non-Christian faith places of worship (The Atlanta Journal-Constitution, 2019). These included a Buddhist monastery in Montana (2002), Sikh temples in Wisconsin (2012), a Jewish community center in Kansas (2014), Jewish Synagogues in California (2009), and Pittsburgh in 2018, Islamic centers in New Mexico (2014), and in California (2014)(The Atlanta Journal-Constitution, 2019).

The study population included anyone over the age of 18, a Qualtrics study panel member, who identifies as Christian, Jewish, Buddhist, Muslim, or Hindu.

Sample size

The sample size for this study was calculated using the Qualtrics Sample size calculator (Qualtrics, 2019). Since 78% of the US population is religious, the estimated population to be sampled is 256670635. In order to maintain a 95% confidence interval with a 5% margin of error, the ideal sample size is 385 participants. The summary of this calculator can be found in Figure 3- Qualtrics Sample Size Calculator.

Recruitment procedures

Qualtrics is an online market research sample aggregator that does ongoing recruitment for research participants. Qualtrics recruits people in general from multiple traditional, actively managed market research panels and social media (Qualtrics, 2014). People were recruited from social medial when they click on Qualtrics ad links (ads for Qualtrics in general, not research specific ads). Once individuals are in the Qualtrics research panel, they complete demographics questionnaires so that Qualtrics can determine what types of research projects to send to participants based on their interests and personal preferences (Qualtrics, 2014).

Qualtrics study panel recruited 400 participants (75 Christian, 65 Jewish, 65 Buddhists, 65 Muslims, 65 Hindus, and 65 Sikhs) from online research marketplaces and social media to take the 40-question online s questionnaire. Qualtrics' study panel team also incentivized each participant with \$2.50 for completing a questionnaire. At the end of each questionnaire, a unique code and closing message were generated and used to track the incentive participants received.

Theoretical Foundation for Questionnaire

This study uses the health belief model (HBM) as a theoretical framework to understand a person's belief in the threat of active violence and their belief in how to react. The HBM was developed by social scientists at the U.S. Public Health Service in the early 1950s to understand the failure of people to adopt disease prevention strategies or screening tests for the early detection of disease (Glanz, Rimer, & Viswanath, 2008). According to the HBM, a person's belief in a personal threat of an illness or disease coupled with a person's belief in the effectiveness of the recommended health behavior or action will predict the likelihood the person will adopt the behavior (Glanz et al., 2008; Wayne W. LaMorte, 2018). Moreover, for a behavior change to succeed, people must feel threatened by their current behavior patterns (perceived threat) and believe that a specific change will result in a valued outcome at an acceptable cost (perceived benefit). They must also feel competent (self-efficacious) to overcome perceived barriers to take action (Glanz et al., 2008).

The perceived threat construct is a combination of perceived susceptibility and perceived severity (Glanz et al., 2008). Perceived susceptibility refers to an individual's beliefs about the likelihood of an event (mass violence attacks) happening (Glanz et al., 2008). Perceived severity refers to an individual's feelings about the seriousness of an event (mass violence attack at a place of worship) and involves the evaluation of the medical and clinical consequences of the event (Glanz et al., 2008). Self-efficacy is also an important construct in the HBM. According to Bandura (1977), self-efficacy is defined as the "conviction that one can successfully execute the behavior required to produce outcomes" (Bandura, 1977).

Although the HBM was originally designed to study health-promoting behaviors but has been adapted to study violence in intimate partner relationships (Lynch & Jackson, 2019). This dissertation is another adaptation of the HMB to study violence on a community level. Specifically, this study will explore the violence faced by places of worship using two constructs of the HBM, namely perceived threat and self-efficacy.

Description of study variables

Explanatory Variables – IVs

- 1. Demographics
 - 1) Gender/ sex
 - 2) Race
 - 3) Ethnicity

4) Age

- 5) Religious Affiliation
- 6) Role in Church
- 2. Prior Training
 - 1) Self- defense
 - 2) CPR training
 - 3) First Aid Training
 - 4) (Prevention) Threat assessment: Identifying behaviors of concern
 - 5) (Active Response) ALICE / Another active shooter training
 - 6) (Active Response) Wound packing training
 - 7) (Active Response) Improvisational Tourniquets application
 - 8) (Active Response) Commercial Tourniquets application
 - 9) (Postvention Debriefing, diffusing) Training about what type of follow up should

be done after a violent event to protect the mental health of witnesses?

10) I am a certified ______trainer (please specify)

Outcome Variables (3) DVs- Predictor variables

Perceived Threat: The perceived threat of a violent event occurring – scale variable
 The perceived threat of a violent event is calculated by summing questionnaire items 11
 through 22. This section of the questionnaire asks participants about their perceived threat.
 Questions 10 through 15 measure perceived likelihood while questions 16 through 21
 measures perceived severity of:

11) Having an active shooter invade my place of worship.

- 12) Having someone get shot in my place of worship.
- 13) Having an intruder with a knife/machete/large blade invade my place of worship.
- 14) Having someone get stabbed by a knife/machete/large blade in my place of worship.
- 15) Having a violent intruder with a weapon (bat, others) invade my place of worship.
- 16) Having someone in my place of worship with a deep wound or heavy bleeding.
- 17) Having an active shooter invade my place of worship.
- 18) Having someone get shot in my place of worship.
- 19) Having an intruder with a knife/machete/large blade invade my place of worship.
- 20) Having someone get stabbed by a knife/machete/large blade in my place of worship.
- 21) Having a violent intruder with a weapon (bat, others) invade my place of worship
- 22) Having someone in my place of worship with a deep wound or heavy bleeding
- Level of Confidence: Level of confidence in one's ability to perform some action during a violent event– Scale variable

The level of confidence is calculated by summing questionnaire items 26 through 35. This section of the questionnaire asked participants to rate their level of confidence in responder's ability to:

- 26) Identify behaviors of concern in a person.
- 27) Apply a commercial tourniquet.

- 28) Apply improvisational tourniquets.
- 29) Pack a wound.
- 30) Identify behaviors to indicate an individual needs further assistance/counseling.
- 31) Run during a violent event at your place of worship.
- 32) Hide during a violent event at your place of worship.
- 33) Fight during a violent event at your place of worship.
- 34) Identify indicators of maladaptive post-incident stress response.
- 35) Identify appropriate resources for follow-up care.
- 36) Identify coping methods to share with affected individuals.
- Perceived Preparedness: Level of perceived preparedness to take some action during a violent event.

The level of perceived preparedness will be measured on three levels based on

questionnaire questions 23 through 25:

- 23) Level of perceived preparedness of participant.
- 24) level of perceived preparedness of other religious organization members.
- 25) level of perceived preparedness of religious leaders.

Data Collection Procedures

The questionnaire will be administered online via Qualtrics. Participants will receive an invitation on their dashboard (Figure 4- Initial Invitation to Consider Participating in Study Two) if they are either Christian, Jewish, Hindu, Muslim, or Buddhist. After clicking on the initial

message, participants will be taken to the Pre- questionnaire page where they can determine if the study topic is of interest to them (<u>Figure 5- Pre-questionnaire Message for Participants to</u> <u>Determine if the study topic will interest them</u>). The questionnaire will be open for seven days. Once data collection has ceased, the data will be downloaded for analyses.

Data Analyses for Article/Study Two

Data will be analyzed using the latest version of SPSS. The statistical tests to be used to answer the research questions are summarized below:

- Multiple Regression will be used to determine if there is a statistically significant association between prior trainings (questionnaire items1 through 9) and level of confidence?
- 2. Multiple Regression will be used to determine if there is a statistically significant association between demographics (*questionnaire items 40 through 45*) and level of confidence?
- 3. Frequencies will be used to determine if the level of perceived preparedness (for participant, other religious organization members, and religious leaders) to take some action during a violent event more than 40% for participant/ more than 50% for other religious organization members/ and more than 60% for religious leaders.
- 4. A One-way ANOVA will be used to determine if there a statistically significant association between religious affiliation and the perceived threat of a violent event?

Statistical test to be used and their assumptions

The latest version of SPSS available will be used to conduct all statistical analyses. Multiple regression will be conducted to answer research question 1 (Is there a statistically significant **association** between **prior training** [*self-defense, CPR, First Aid, Preventions, Active Response, and Postvention*] and **level of confidence**], and research question 2 (Is there a statistically significant **association** between demographics [*Age, gender/sex, ethnicity, race, role in church*] and **level of confidence**].

Multiple regression is used when we want to predict the value of a predictor/outcome variable (Level of confidence), based on the values of the independent variables (prior training). For this study, multiple regression is being used to determine whether the level of confidence can be predicted based on prior training, and demographics. Multiple regressions also allow us to determine the overall fit (variance explained) of the model and the relative contribution of each variable to the total variance explained. In order to conduct a multiple regression, the following assumptions must be met.

- The dependent variable must be measured on a continuous scale (interval or ratio variable). The level of confidence is a scaled variable calculated by adding the sum of responses of questions in the level of confidence section (questions 25 to 32) of the questionnaire. Level of confidence is an interval variable (there is a difference between measurements but no true zero).
- There are two or more independent variables that are categorical or continuous. The (6) demographic and (9) prior training variables are all categorical.

- There should be independence of observations. This assumption can be checked once data has been collected. This can be checked by using a Durbin-Watson statistic test in SPSS.
- 4. A linear relationship must exist between the dependent variable and each independent variable (collectively and independently). This assumption will be checked once data has been collected. This assumption can be checked by conducting a scatterplot or partial regression plots.
- 5. The data should show **homoscedasticity**, which is where the variances along the line of best fit remain similar as you move along the line. A test for homoscedasticity can be conducted in SPSS once data has been collected.
- 6. The data must show multicollinearity, which happens when there are two or more independent variables that are highly correlated with each other. This can be a problem when trying to understand which independent variable contributes to the variance explained in the dependent variables. SPSS can be used to detect multicollinearity through an inspection of correlation coefficients and Tolerance/VIF values after data collection.
- 7. There should be **no significant outliers**, high leverage points or highly influential points. These can be checked for using SPSS after data collection.

 The residuals (errors) should be approximately normally distributed. A histogram, Normal P-P plot, and Normal Q-Q plots can be conducted after data collection.

One-way ANOVA will be used to answer research question 4 (**Is there a statistically significant association between religious affiliation and** the perceived threat of a violent event?). One-way ANOVA is used to determine whether there is any statistically significant difference between the means of two or more independent groups (in one variable). In order to use a one-way ANOVA, the following assumptions must be met.

- 1. The **dependent variable** must be a continuous variable measured at the interval or ratio level. The level of perceived preparedness is a scaled variable calculated by summing the responses from the questions in the perceived preparedness section (questions 22 to 24). The level of perceived preparedness is an interval variable (the difference between measurements but no true zero exists).
- The independent variable must have two or more categorical variables with independent groups. The religious affiliation groups are independent groups (people from one group do not belong to any of the other groups).
- 3. There is independence of observations, meaning that there is no relationship between the observations in each group or between the groups themselves, which means that participants only belong to one of the groups.
- There should be **no significant outliers**. Outliers reduce the validity of one-way ANOVA. Outliers can be checked using SPSS after data has neem collected. When conducting one-way ANOVA, outliers can be identified.
- 5. The **dependent variable should be approximately normally distributed** for each category of the independent variable. A Shapiro-Wilk test of normality can be conducted after data collection.
- There should be homogeneity of variances. Lavene's test for homogeneity of variances can be conducted using SPSS after data collection.

Delimitations

Delimitations for Article/Study 1. This study only focused on the experiences of Christian churches, Jewish Synagogues, Hindu Temples, Muslim Mosques, Buddhist temples, and Sikh temples. Perspectives from other religious sects were not considered. As such, these responses cannot be generalizable to all places of worship.

Delimitations for Article/Study 2. This study only focused on the perceptions of the participants who belong to the Qualtrics study panels and have access to the internet, and as such, may not represent the views of people who do not have access to the internet.

Limitations

Article/Study 1. There are several limitations for study one, including the fact that limited data is available on this subject matter. Therefore, a significant portion of information came from gray literature (newspapers and major religious magazines).

Article/Study 2. There are several limitations for study two, including the fact that data collected from participants were all self-reported. Additionally, the data was only collected from 119 Christians, 73 Jews, 71 Muslims, 66 Hindus, and 63 Buddhists, and 19 Sikhs, making this difficult to generalize to the entire population. Moreover, this study sample only includes

people that belong to the Qualtrics study panels and have access to the internet. Therefore, the views of people who do not have internet access were not represented.

Chapter Two

Challenges Preventing and Recovering from Violence in Places of Worship

Author Page

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Abstract

100-word abstract

Background: The rates of targeted violence in places of worship have been increasing.

Methods: A literature review was conducted to determine strategies and challenges PWs face when attempting to prevent and recover from targeted violence.

Results: There is a lack of documented violence prevention training available for PWs. Several unvalidated strategies used among PWs with similar components (pre-attack behaviors, developing a security plan, and locking your own facility) were found. Violence recovery challenges include using preserving space where the violent event occurred, overcoming the belief that violence may never occur, and providing mental health services for worshipers and community members.

Keywords: Targeted Violence, Places of Worship, Mental Health

Introduction

Death by violence has become a public health issue in the wake of several violent attacks at educational institutions, places of worship (PWs), medical facilities, businesses, and other public places. Since 2000, the overall rates of active shooter incidents have been steadily increasing (Blair & Schweit, 2013; Hoffman & Kunzmann, 2018). An active shooter is 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 (U.S. Department of Homeland Security, 2008). Additionally, in an active shooting event (or incident), at least one of the victims must be unrelated to the shooter. This definition also excludes gang-related shootings (Blair & Martaindale, 2013). These situations are typically unpredictable and evolve very quickly.

According to the Federal Bureau of Investigation (FBI), between January 2000 and December 2013, there were 160 reported active shooter incidents in 40 of the 50 U.S. states in addition to Washington DC (Blair & Schweit, 2013). The average number of active shootings per year between 2010 and 2013 was 11.4. Between 2014 and 2017, there were 20 incidents each year; in 2017, there were 30 incidents; and 27 incidents in 2018 (Blair & Schweit, 2013; Schweit, 2016; The Advanced Law Enforcement Rapid Response Training [ALERRT] Center at Texas State University & The Federal Bureau of Investigation [FBI], 2018; The Advanced Law Enforcement Rapid Response Training [ALERRT] Center at Texas State University et al., 2019). These incidents occurred in academic institutions, government properties, PWs and healthcare facilities, resulting in over 2,200 casualties (Blair & Schweit, 2013; Schweit, 2016; The Advanced Law Enforcement Rapid Response Training [ALERRT] Center at Texas State University & The Federal Bureau of Investigation [FBI], 2018). Because these incidents involved three or more people being killed at once in a public setting, the FBI considers them mass killings (Blair & Schweit, 2013).

In addition to shootings, there are also data on deadly force incidents (DFI) that resulted in deaths at churches. DFI incidents include abductions, attacks, suspicious deaths, suicides, and deadly force interventions (Chinn, 2019; Hesterman, 2018). A 2019 study found that causes for DFIs deaths were domestic violence, personal conflict, and robbery. The top weapons used were guns, knives, and explosives (Chinn, 2019).

While active shootings and DFIs encompass a range of killings, the terms are not entirely descriptive of the broad range of weapons and tactics that may be used in the act of targeted violence. As such, the term hybrid targeted violence (HTV) is used to describe the intentional use of force to cause physical injury or death to a specifically identified population using multifaceted conventional weapons and tactics (Frazzano & Snyder, 2014). These weapons include but are not limited to guns, knives, bombs, and others. The term HTV also includes tactics used to conduct the attacks, such as ambush, breaching, and barricading (Frazzano & Snyder, 2014). Although HTV encompasses a wide range of attacks, the term targeted violence is more inclusive.

It is important to operationalize the terms being used throughout this study to describe violence. Targeted violence is a term that refers to situations in which an identifiable (or potentially identifiable) perpetrator poses (or may pose) a threat of violence to a particular individual or group of people (this includes stalking, terrorism, sexual assault, etc.). This term evolved from a five year Secret Service study where the behavior of individuals who carried out or attempted lethal attacks on public officials or prominent individuals was examined (Deisinger & Scalora, 2016; Fein et al., 1995; U.S. Secret Service National Threat Assessment Center (NTAC), 2019).

Targeted violence fully encompasses all attacks on PWs as these incidents target individuals of a particular faith and belief systems. Due to the increase of targeted violence in PWs, this current study seeks to outline the strategies and challenges places of worship face when attempting to prevent and recover from targeted violence.

Places of worship as Soft Targets

Everyone has a right to learn, worship, and receive medical care in a safe environment (Hesterman, 2018). In these facilities, people tend to get lulled into a false sense of security and often become complacent about their safety even though security is not the primary goal of these institutions (Hesterman, 2018). PWs are also traditionally "gun-free" zones with unarmed security guards, which makes them vulnerable to acts of targeted violence (Hesterman, 2018). Additionally, in the case of churches, resources are often constrained, and money is often not available for extra security measures or guards (Hesterman, 2018). This lack of resources typically makes churches more vulnerable to attacks and deemed "soft targets." Attacking hard targets such as government buildings and military bases brings credibility to terror groups, but attacks on soft targets damage the national psyche and discredit the government's ability to protect its people (Hesterman, 2018). Perhaps the most salient factor that makes places of worship a target is the resurgence of domestic terrorist organizations (Pescara-Kovach, Van Brunt and Murphy, 2020).

Violence in Places of Worship Between 2000 and 2016 in the U.S.

Every year the FBI gathers detailed data on a sample of crimes reported to local police through the National Incident-Based Reporting System (NIBRS) (NIBRS, 2019). NIBRS data is reported by approximately 5,300 local, county, and state law enforcement agencies across 32 states about 49 different types of criminal offenses (FBI,2018; Johnson, 2019). Although only about 31% of the law enforcement agencies in the U.S. report data to NIBRS, this is the most comprehensive historical data on crimes in places of worship in the U.S. (FBI, 2018). This data includes a sample of incidents of armed robberies, aggravated assaults, shootings, stabbings, or bombings in places of worship between 2000 and 2016 (Johnson, 2019; FBI, 2018). Between 2000 and 2016, there were 1,652 such incidents in PWs, resulting in 155 deaths and 742 injuries (Federal Bureau of Investigation, 2018; Johnson, 2019). The actual number of incidents is obviously higher as this data only reports on 20% of the U.S. population (FBI, 2018; Johnson, 2019). This data does reveal that the overall number of violent incidents in places of worship has been increasing since 2000.

According to a summary from the Dolan Consulting Group, 94% of the incidents in PWs reported to NIBRS, occurred in churches (Johnson, 2019; FBI, 2018). This is not surprising because according to Pew Research, 70% of the US population identifies as Christian, 22% identify as being unaffiliated with any religion, 5.9 % belong to non-Christian faiths, 1.5% identify as belonging to other faiths, and 0.6% do not know what religious organization they identify with (Pew Research Center, 2014). Among those who identify as Christian, there are protestants, Catholics, Mormons, Orthodox Christians, and Jehovah's witnesses. Among those who identify with non-Christian faiths, there are Jews, Muslims, Buddhists, and Hindus (Pew

Research Center, 2014). According to the Dolan Consulting Group, Violence reported in PWs were proportionate to the religious population in the U.S. with the exception of Islamic mosques and Sikh temples (FBI, 2018; Johnson, 2019). Although Islamic mosques make up less than 1% of the places of worship in the U.S., 2% of the violent incidents reported to NIBRS occurred at mosques (FBI, 2018; Johnson, 2019). Similarly, Sikh temples make up less than 0.1% of places of worship in the U.S., 1% of all violent offenses occurred at Sikh temples (FBI, 2018; Johnson, 2019).

The motive for violence at Islamic mosques and Sikh temples were religious / ethnic-bias hate crimes, personal disputes between members of the place of worship or people from the surrounding neighborhood, and neighborhood crime that spilled over onto the property of the place of worship due to the location being in a high crime area (FBI, Federal Bureau of Investigation, 2018; Johnson, 2019).

The motive for all violent incidents in PWs reported to NIBRS that occurred in PWs were also documented. Some motives were linked to others; for example, a mentally ill person may have been targeting a family member as a part of an act of domestic violence or due to being inebriated. As such, there is a maximum of three motives identified for each incident. The primary motives were mental illness/derangement (28%), robbery (26%), family dispute / domestic violence (17%), personal dispute (14%), ethnic, racial, or religious hate crime (6%), and 9% were undetermined (FBI, 2018; Johnson, 2019).

Weapons used included firearms (57%), bladed weapons such as knives (14%), clubs or blunt objects (11%), motor vehicles (3%), and explosive or incendiary devices (2%) (FBI, 2018; Johnson, 2019). This aligns with studies showing that more than 60% of attacks on PWs involve guns (Baer, 2019). NIBRS data also reveals that the majority (58%) of incidents also occurred immediately before, during, or after an event or meeting (e.g., prayer or worship service, youth events). Other incidents (28%) occurred after hours when the building was closed, and during weekday office hours (14%) (FBI, 2018; Johnson, 2019).

Given the rise in violence in PWs, it is imperative that worshipers are prepared for how to respond during a violent act. Training can help guide worshipers, security teams, and leaders about how to act during and how to recover after violent events.

Training and Places of worship

Because targeted violence has made such a tragic impact on our country, shortly after the Sandy Hook shooting in 2012, the American College of Surgeons (ACS) in collaboration with the medical community and representatives from the federal government, the National Security Council, the U.S. military, the FBI, and other medical response organizations formed a Joint Committee to address this growing concern (Jacobs et al., 2013). This committee was to create a national policy to enhance survivability from intentional mass casualty and active shooter events (Jacobs et al., 2013). The recommendations from this committee are deemed the Hartford Consensus. The Hartford Consensus has since made several recommendations for training and strategies to help increase victims' survivability from mass casualty events and other targeted violence (Jacobs et al., 2013). The Hartford Consensus also described simulationbased education offered by the Hartford Hospital in Connecticut that is designed to improve the competence and skill of those responding to active shootings (Hartford Consensus, 2015).

Types of Violence Prevention and Response Training around the U.S.

Currently, some PWs have different approaches, if any to prevent, mitigate, and recover from violence (Baer, 2019; Childress, 2018; Hanna, 2000; Post, 2019). There is limited research on these methods and no evidence of their effectiveness. Additionally, many establishments still do not have structured training or methodologies to prevent, respond to, or recover from mass violence (Bourns & Wright, 2004). Moreover, simulation-based training is not widely used. There is a myriad of challenges that prevent PWs from adopting preventative measures and strategies to mitigate and recover from targeted violence. Some of these include cost, lack of knowledge, unavailable resources, and fear that nothing can protect them from targeted violence (Hesterman, 2018).

The purpose of this study is to outline the strategies and challenges PWs face when attempting to prevent and recover from targeted violence in places of worship. These challenges are detailed in the results section.

Materials and Methods

Due to limited scholarly material on this topic, research for this study includes journals and faith-based magazines in English that were published in the U.S. Research for this study is limited to Christian churches, Jewish synagogues, Muslim mosques, Buddhist temples, Sikh temples, and Hindu temples. Newspapers articles were excluded from this study.

The following guidelines were used to complete the search: search terms: "church* or synagogue* or faith or temple* or mosque*"

• And: "shooting* or stabbing* or gun* or violence."

- And: "training"
- Not: Domestic or dating

<u>Databases</u>: Religion and Philosophy Collection, National Criminal Justice Reference Service Abstracts, Open Dissertations, Psychology, and Behavioral Sciences Collection, SocINDEX with Full Text-, and Criminal Justice Abstracts with Full Text.

The search was restricted to materials published between 2000 and 2019. Only relevant articles were selected for this study. Eleven relevant articles were selected from journals and major religious magazines. The relevant quotes and information were extracted and colorcoded in a word document listed in appendix A. These results are further summarized in the subsequent sections.

Results

Nine articles and religious magazine articles where places of worship discussed challenges they face when preventing violence. The major findings from these articles were (1) the description of challenges PWs faced when preventing violence; and (2) a description of psychological and mental health aspects of dealing with and worshiping in PWs after targeted violence.

Lack of Structured Training throughout the U.S.

Several organizations and states have their own forms of training using different components of different trainings around the country. Overall, several structured trainings with different components were found. Some notable trainings include "Safe Places: Protecting Places of Worship from Violence and Crime" offered by Dolan consulting Group, "Worshipers STRIVE to Survive" offered by STRIVE to Survive (from the University of Toledo) and "Active Shooter Response Training for the Faith-Based Community" offered by Serve DC - The Mayor's Office on Volunteerism and Partnerships.

The Active Shooter Response Training for the Faith-Based Community offered by Serve DC - The Mayor's Office on Volunteerism and Partnerships, is a free 2-hour training program designed for all faith-based communities. As part of this training, attendees receive education on history and demographics of active shooter events and church shootings; PWs lock-down protocols and principles; how to recognize pre-attack indicators; First Aid education; keys to developing a strong security plan; and the 5 O's to survival (Serve DC, 2020).

Safe Places: Protecting Places of Worship from Violence and Crime" offered by the Dolan consulting Group is a paid training that addresses several components of violence prevention in PWs. Some of these include the nature and motives for offending PW; proven techniques for protecting building structures and reducing the likelihood of victimization; strategies for protecting staff, volunteers, attendees, and children that help develop a culture of safety; how to handle critical incidents (active shooter, mental health crisis, fire, etc.); and case study examples (Johnson, 2020). The training also gives attendees tools to help them assess their own safety issues at their establishments and train their own staff and volunteers in light of their unique security needs (Johnson, 2020).

"Worshipers STRIVE to Survive" is based on a comprehensive simulation-based training ("STRIVE to Survive") designed by several members of the mass violence collaborative at the University of Toledo. STRIVE is free a 4-hour long simulation-based training session designed based on the four phases of addressing a critical incident, namely: prevention (threat

assessment), intervention (individualized case management), active response (active shooter drill, evacuation, tourniquets application, wound packing), and postvention (critical incident stress management and mental health recovery) (Sexton et al., 2019). To date 105 people have completed the comprehensive (4-hour) STRIVE training and at least 100 completed the abbreviated (1-hour) training. The preliminary data indicate that the training statistically significantly increased participants' confidence in acting during a violent event. The training also statistically significantly increased and increased their knowledge in all four phases of addressing a critical incident (Sexton, 2020).

Strategies to Prevent and Mitigate Targeted Violence

Currently, some places of worship have different approaches, if any, to prevent, mitigate, and recover from violence (Baer, 2019; Childress, 2018; Hanna, 2000; Post, 2019). No standardized practices were documented in the selected articles. Some PWs have motionactivated cameras, and some ushers have walkie talkies or two-way radios (Baer, 2019; Post, 2019). Some PWs also have a designated "walk-around" person who is searching for signs of trouble during worship services (Post, 2019), or established security teams with people equipped to seek out suspicious behavior (Hanna, 2000), security teams composed of senior citizens who volunteer to help maintain order and structure (Bourns & Wright, 2004), or uniformed guards (Banks, 2017).

Some other practices include parking vehicles that mimic security vehicles in front of PWs. Several PWs mention having some form of training, but no information on the type of training was documented (Post, 2019). Other strategies include locking doors to create a single entry point during Sunday services while pointing out the exits to worshipers (Baer, 2019)

Several PWs had no plan of action to prevent a violent event (Bourns & Wright, 2004); some were arming usher with weapons (Childress, 2018).

Challenges Preventing and Planning for Targeted Violence

A major challenge to protecting PWs from targeted violence is a lack of a plan to protect PWs. A 2004 study about perceived church vulnerability sought to determine whether pastors/ministers believed violence was increasing in churches, whether church clergy were fearful, and whether the churches had become more security conscious due to violence (Bourns & Wright, 2004). 51 of the 175 churches responded to the questionnaire revealing that churches had no plan of action if a violent act occurred; moreover, the churches did not expect such an act to happen (Bourns & Wright, 2004). More specifically, with the exclusion of a fire, tornado, or earthquake plan, churches had no plan of response against person-on-person violence (Bourns & Wright, 2004).

In 2004, churches reported low levels of violence, but the clergy thought violence and anger were slowly increasing (Bourns & Wright, 2004). At the time of the study, Vandalism and stealing were the major forms of violence reported (Bourns & Wright, 2004). However, by 2018, many PWs had to have safety talks with their leadership teams due to rising rates of violence in PWs. For example, Kyle Childress, a pastor of Austin Heights Baptist Church in Nacogdoches, Texas, discussed some of the conversations his congregation had about church safety after major shootings in places of worship in a 2018 edition of Christian Century (Childress, 2018).

When safeguarding PWs, several safety concerns were identified in 2004 and 2018, such as having an unknown number of people with keys to the church buildings (Bourns & Wright, 2004). Others include the fact that only a few churches (5%) had safety teams that were mostly comprised of retired senior citizens that functioned like school crossing guards at traffic control points (Bourns & Wright, 2004). Other facilities worried about how many doors should be open during services and how many ushers and greeters should be serving during each service, and whether or not they needed to be armed with weapons and clip-on walkie-talkies and earpieces (Childress, 2018). Others were trying to figure out how and where to perform "enhanced hospitality" and "extreme welcoming" techniques that involve giving visitors a "holy hug" while simultaneously patting them down (Childress, 2018). Another major safety concern was protection for the nursery and whether adding more locks and adult volunteers would address the safety concerns (Childress, 2018).

Psychological and Mental Impacts of Targeted Violence

A major theme emerging from the articles was the psychological and mental impacts targeted violence had on worshipers who fellowshipped in the buildings affected by the violence. It has been well established that mass shootings have psychological effects that affect several people, not just the victims (San Roman et al., 2019). Studies show that Individuals who witness the crime, first responders, victims' family, and friends, and entire communities are known to experience feelings of horror, fear, and disbelief (San Roman et al., 2019). Some evidence suggests that religious support can help mitigate the psychological impact targeted violence has on these groups of people.

For example, after the 2015 mass shooting on the Umpqua Community College, researchers found that religious support *(particularly, a sense of comfort and support from religious leaders or parishioners*) may be an important factor that helps religious-affiliated individuals cope with, and help buffer against the negative psychological symptoms (such as spiritual struggle, depression, anxiety, posttraumatic stress disorder) and resource loss that typically happens after shootings (San Roman et al., 2019). One practical example of religious support that helped members cope was the preservation of the physical building where the violent incident transpired.

Schools and other sites of mass shootings have been destroyed and rebuilt, but in the case of religious buildings, worshipers sometimes reclaim their sacred space (Gass, 2017). For instance, after the shooting during a children's play at Knoxville Unitarian Universalist Church in July of 2008, pews were realigned, walls repainted, and a curtain filled with bullet holes was taken down but saved (Gass, 2017). After the shooting at the Sikh temple in Oak Creek, Wisconsin, in 2012, instead of abandoning the sanctuary, worshipers preserved some of the bullet holes in the walls (Gass, 2017). In addition to the preservation of the physical buildings, some congregations hold memorial services.

For those who could not set foot into the buildings again, outside memorials were erected. For example, after the shooting at First Baptist Church of Sutherland Springs in November of 2017, an outside memorial with an emotional memorial service was held because some members expressed that they could never enter the building again (Gass, 2017). Survivors and the general public were invited to view the memorial of chairs, one for each of the 26 victims, bearing the person's name painted in gold with a red rose. One chair had a pink rose for the baby of a woman who was eight months pregnant when she died (Gass, 2017).

Although memorials can help initial healing, the psychological wellbeing of survivors, victims, and their parents, friends, and families, needs to be directly addressed. This is precisely what Emmanuel African Methodist Episcopal church did after the shooting in June of 2015.

Thanks to a partnership with the Medical University of South Carolina in Charleston, the church's new Empowerment Center is staffed by clinicians offering therapy and other care (Banks, 2017).

Discussions

Studies have shown that targeted violence may pose a unique threat to perceived safety and psychological well-being because these incidents are often unpredictable and premeditated (San Roman et al., 2019). Based on the increasing prevalence of mass shootings, it is crucial to understand the psychological impact such events have on survivors, their family members, friends, and community (San Roman et al., 2019), and find ways to offer postvention training that encompasses mental health recovery. These mental health services should be preferably offered for free to prevent lack of participation due to financial inability.

When possible, simulation-based training should be offered. Typically, simulation centers allow participants to practice their specific roles in real-time as part of a team (Jacobs et al., 2013). This type of training has been effective in increasing the successful placement of tourniquets in emergency scenarios among non-military volunteers (Goolsby et al., 2015), and should be used for training PWs. This recommendation is supported by the Hartford Consensus, which suggests that the general public should receive violence prevention, response, and recovery education regularly (Hartford Consensus, 2015).

Since first responders cannot enter the scene to help victims until after law enforcement has cleared the area, bystanders are often the first responders. As a result, they should be trained on basic emergency first aid, and basic lifesaving improvisational techniques, in addition to the recommended appropriate response to targeted violence (Security, 2008). In the case of a worship setting, it is imperative that entire congregations are taught in a scenario-based setting where these skills can be practiced and improved to help increase confidence.

All three pieces of training highlighted in this study include similar components, namely; identifying pre-attack behaviors, developing a security plan, and locking your own facility. However, only one training includes case study examples and one training included an actual active intruder drill/simulation.

The authors recommend that a comprehensive plan, including all components of the three notable plans identified in the results section, should be included to give PWs the most comprehensive education possible. This comprehensive information will also help PWs to be safe and secure while remaining open and inviting (Hanna, 2000). It is also important to consider where to publish reliable and efficacious violence prevention training that PWs can easily access.

Limitations

There is limited academic research on what PWs do to mitigate violence. Questions about the practicality of publishing such details exist as this could become a source of vulnerability for PWs as criminals and perpetrators can also access this information (Baer, 2019). This type of concern presents serious security challenges for PWs seeking to implement monetarily feasible changes to protect their establishment and worshipers.

Conclusions

The psychological impacts of targeted violence are long-lasting, and its effects are not limited to the victims and witnesses. PWs should have plans in place to help mitigate violence. Special consideration needs to be given to where and how training should be conducted.

Chapter Three

Perceptions of Threat and Self-Efficacy toward Violent Events in Places of Worship: An application of the Health Belief Model

Author Page

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Abstract

100-word abstract

Background: Rates of targeted violence in places of worship (PWs) are increasing, and several PWs have no established or standardized violence mitigation plan.

Methods: Researhers conducted cross-sectional study among online research panel members (N=434) identifying as Christian, Jewish, Buddhist, Muslim, Hindu, or Sikh.

Results: Perceived threat of violence was highest among those identifying as Muslims and Jews, and lowest among Buddhists. Having prior (Commercial tourniquet, Postvention, Self-Defense, Wound Packing, and Behavioral Threat Assessment) training and identifying as (worship leader, Muslim, Female, of Hispanic origin, and increasing age) statistically significantly predicted (positive or negative) perceived confidence in acting during violent situations.

Key words: Targeted Violence, Places of Worship, Self-Efficacy, Responding to Violence, and Targeted Violence

Introduction

Background on Violence.

Death by violence has become a public health issue in the wake of several violent attacks at educational institutions, places of worship (PWs), medical facilities, businesses, and other public places. Since 2000, the overall rates of targeted violence incidents have been steadily increasing (Blair & Schweit, 2013; Hoffman & Kunzmann, 2018). Targeted violence is a term that refers to situations in which an identifiable (or potentially identifiable) perpetrator poses (or may pose) a threat of violence to a particular individual or group of people (this includes stalking, terrorism, sexual assault, etc.). This term evolved from a five-year Secret Service study where the behavior of individuals who carried out or attempted lethal attacks on public officials or prominent individuals was examined (Deisinger & Scalora, 2016; Fein et al., 1995; U.S. Secret Service National Threat Assessment Center (NTAC), 2019). These targeted violence incidents (including active shootings) occurred in academic institutions, government properties, PWs, and healthcare facilities, resulting in thousands of casualties (Blair & Schweit, 2013; Schweit, 2016; The Advanced Law Enforcement Rapid Response Training [ALERRT] Center at Texas State University & The Federal Bureau of Investigation [FBI], 2018).

Every year the FBI gathers detailed data on a sample of crimes reported to local police through the National Incident-Based Reporting System (NIBRS) (NIBRS, 2019). NIBRS data are reported by approximately 5,300 local, county, and state law enforcement agencies across 32 states about 49 different types of criminal offenses (Johnson, 2019; NIBRS, 2019). Although only about 31% of the law enforcement agencies in the U.S. report data to NIBRS, this is the most comprehensive historical data on crimes in places of worship in the U.S. (NIBRS, 2019). To our knowledge, this data represents a sample of incidents of armed robberies, aggravated assaults, shootings, stabbings, or bombings in places of worship between 2000 and 2016 (Johnson, 2019; FBI, 2018). Between 2000 and 2016, there were 1,652 such incidents in PWs, resulting in 155 deaths and 742 injuries (Johnson, 2019; FBI, 2018). The actual number of incidents is obviously higher as this data only reports on 20% of the U.S. population (Johnson, 2019; FBI, 2018). Overall, the number of violent incidents in places of worship has been increasing since 2000.

Targeted violence fully encompasses all attacks on PWs as these incidents target individuals of particular faiths and belief systems. The purpose of this study is to measure the perceived threat of violence in PWs, and worshipers' self-efficacy toward acting during a violent event.

Religious affiliations in the U.S.

According to a summary from the Dolan Consulting Group, 94% of the incidents in places of worship reported to NIBRS, occurred in churches (Johnson, 2019; FBI, 2018). This is not surprising because according to Pew Research, 70% of the US population identifies as Christian, 22% identify as being unaffiliated with any religion, 5.9 % belong to non-Christian faiths, 1.5% identify as belonging to other faiths, and 0.6% do not know what religious organization they identify with (Pew Research Center, 2014). Among those who identify as Christian, there are protestants, Catholics, Mormons, Orthodox Christians, and Jehovah's witnesses. Among those who identify with non-Christian faiths, there are Jews, Muslims, Buddhists, and Hindus (Pew Research Center, 2014). According to the Dolan Consulting Group, Violence reported in PWs were proportionate to the religious population in the U.S. with the

exception of Islamic mosques and Sikh temples (Johnson, 2019; FBI, 2018). Although Islamic mosques make up less than 1% of the places of worship in the U.S., 2% of the violent incidents reported to NIBRS occurred at mosques (Johnson, 2019; FBI, 2018). Similarly, Sikh temples make up less than 0.1% of places of worship in the U.S., 1% of all violent offenses occurred at Sikh temples (FBI, 2018; Johnson, 2019).

Because there has been a significant amount of attacks on non-Christian faith places of worship when compared to the small proportion of the population non-Christian faiths represent, it is important to determine all worshipers' perceptions of violence. The purpose of this study is to measure the perceived threat of violence in PWs, and worshipers' self-efficacy toward acting during a violent event. To our knowledge, this data has not been previously collected. This data can help design effective violence mitigation training for PWs, and ultimately help prevent violent incidents, thus saving lives.

Materials and Methods

Research design

This was a cross-sectional study with a 40 -question questionnaire that was approved by the University's Institutional Review Board. The questionnaire was designed to measure the participant's perceived threat of violent events at their place of worship. The online questionnaire administration method was used, where participants were asked to answer a structured sequence of questions online (Trochim, 2006). The questionnaire was administered using Qualtrics. Qualtrics delivers questionnaires in formats suitable for mobile and computer screen resolutions.

Theoretical Foundation

This theory-based questionnaire was designed using two constructs (perceived threat and self-efficacy) of the health belief model (HBM). The HBM was developed by social scientists at the U.S. Public Health Service in the early 1950s in order to understand the failure of people to adopt disease prevention strategies or screening tests for the early detection of disease (Glanz et al., 2008). The HBM was originally designed to study health-promoting behaviors but has been adapted to study violence in intimate partner relationships (Lynch & Jackson, 2019). This study is another adaptation of the HBM to study violence on a community level. Specifically, this study will explore aspects of violence in PWs.

Instrument

The 40-item questionnaire has four sections, namely Demographics, Prior training, Perceived Threat, and level of preparedness and self-confidence (self-efficacy). The demographics section includes questions about age (what is your age?), gender identity (I identify with the following pronouns: "he," "she," "they," or "other"), ethnic and racial association (how would you describe yourself?), religious affiliation (what is your religious affiliation?) and description of roles at participant's place of worship (which of the following best describes our roles at your place of worship?: Leadership, Staff, Visitor, General Member, Other).

The Prior training section included nine questions asking the participant what type of training they ever had regarding responding to violence. The nine options are 1- Self- defense, 2- CPR training, 3- First Aid Training 4- (Prevention) Threat assessment: Identifying behaviors of concern, 5- (Active Response) ALICE / Another active shooter training, 6- (Active Response) Wound packing training, 7- (Active Response) Improvisational Tourniquets application, 8-

(Active Response) Commercial Tourniquets application. And 9-(Postvention: Debriefing, diffusing) Training about what type of follow up should be done after a violent event to protect the mental health of witnesses and victims.

The perceived threat section contains questions about what the participants believe is the likelihood and seriousness of the following events happening: 1) Having an active shooter invade my place of worship, 2) Having someone get shot in my place of worship, 3) Having an intruder with a knife/machete/large blade invade my place of worship, 4) Having someone get stabbed by a knife/machete/large blade in my place of worship, 5) Having a violent intruder with a weapon (bat, others) invade my place of worship, 6) Having someone in my place of worship with a deep wound or heavy bleeding. The four options available for each likelihood of these events happening are Extremely unlikely to happen, Unlikely to happen, Likely to happen, and Extremely likely to happen. The four options for the questions about the perceived seriousness of these events are Not very Serious, Not Serious, Serious, and Very serious.

The level of preparedness and self-efficacy section of the questionnaire contains three questions about preparedness to act during a violent event. Namely, how prepared are you/ other members of your congregation/ majority of your congregation leaders to react if there is a violent event (violent intruder) in your place of worship? The self-efficacy questions ask participants how confident they feel in their own ability to respond in various portions of a violent attack. Namely how confident they are in their ability to do the following: 1)identify behaviors of concern in a person, 2) Apply a commercial tourniquet, 3) Apply improvisational tourniquets, 4) Pack a wound, 5) Identify behaviors to indicate an individual needs further assistance /counseling, 6) Run during a violent event at your place of worship, 7) Hide during a violent event at your place of worship, 8) Fight during a violent event at your place of worship,

9) Identify indicators of maladaptive post-incident stress response, 10) Identify appropriate resources for follow-up care, and 11) Identify coping methods to share with affected individuals.

Sample Size and Inclusion Criteria

The sample size for this study was calculated using the Qualtrics Sample size calculator (Qualtrics, 2019). Since 78% of the US population is religious, the estimated population to be sampled is 256,670,635. To maintain a 95% confidence interval with a 5% margin of error, the ideal sample size is 385 participants. The summary of this calculation can be found in figure 3 (Figure 3- Qualtrics Sample Size Calculator). To ensure we captured the entire sample size, we aimed for 400 participants. The study population included anyone over the age of 18, who was a member of Qualtrics study panels who identified as either Christian, Jewish, Buddhist, Muslim, Hindu, or Sikh.

Recruitment and Questionnaire Administration

Qualtrics study panel was hired to recruit 400 participants (75 Christian, 65 Jewish, 65 Buddhists, 65 Muslims, 65 Hindus, and 65 Sikhs) from online research marketplaces and social media to take the 40-question online questionnaire. Qualtrics is also an online market research sample aggregator that does ongoing recruitment for research participants. Qualtrics recruits people in general from multiple traditional, actively managed market research panels and social media (Qualtrics, 2014). People recruited from social medial are recruited when they click on Qualtrics ad links (ads for Qualtrics in general, not research specific ads). Once individuals are in the Qualtrics research panel, they complete demographics questionnaires so that Qualtrics can determine what types of research questionnaires to send to participants based on their interests and personal preferences (Qualtrics, 2014).

Eligible participants (over the age of 18 who identify as either Christian, Jewish, Hindu, Muslim, Buddhist, or Sikh) received an invitation on their dashboard <u>(Figure 4- Initial Invitation</u> <u>to Consider Participating in Study Two</u>). After clicking on the initial message, participants were taken to the Pre- questionnaire page where they determined whether the study topic was of interest to them (<u>Figure 5- Pre-questionnaire Message for Participants to Determine if the study</u> <u>topic will interest them</u>). The questionnaire was available for 12 days.

Qualtrics study panel team also incentivized each participant with \$2.50 for completing the questionnaire. At the end of each questionnaire, a unique code and closing message were generated to help track the incentive participants received.

Results

A total of 652 people attempted the questionnaire. A total of 450 participants answered the majority of questions; of those, 411 answered all questions. Questionnaires with a progress of 33% or more (N=434) were retained in this study. Participants (202) were automatically screened out by Qualtrics because they either did not affiliate with a religion (160) or selected "other" (42) as their religious affiliation. Of those who selected "other," the following were listed Agnostic (1), Baptist (4), Catholic (7), Christian (2), Demonologist (1), Dudeist (1), Hermetic (1), LDS (1), Methodist (2), New age Spiritualist (1), none or no answer (6), Pagan (3), Rastafarian (1), Pentecostal (2), Satanist (2), Spiritual (1), Wiccan (5), and one individual was raised Muslim but believes in Buddhism, and Christianity.

Psychometric Validation of Data Collection Tools

The face validity of the initial questionnaire was conducted by five members of the University of Toledo Mass Violence Coalition. Internal reliability was established by calculating inter-item correlations, calculated as Cronbach alpha. All of the six subscales (training, perceived susceptibility, perceived seriousness, preparedness, confidence, and the likelihood of acting) fulfilled the recommended range for psychometric quality having Cronbach alphas between 0.70 and 0.95 (Tavakol & Dennick, 2011). A summary of the Cronbach alphas for the subgroups is summarized in tables (<u>Table 2- Cronbach alpha of sub-scales</u>)

A principal component analysis with varimax rotation was used to test for construct validity. The Kaiser-Meyer-Olkin criterion reached 0.916 and confirmed that the sample had a high statistical fit for factor analysis (<u>Table 1- PCA: KMO and Bartlett's Test</u>).

Statistical Analyses

Association between prior training (CPR, First Aid, Tourniquet Application, wound packing, threat assessment, active response, and Postvention) and level of confidence

A point-biserial correlation was run to determine the relationship between the level of confidence and prior training. Dummy variables were created for each category of prior training (namely, yes, no, not sure). All the statistically significant correlations were positive and had strengths ranging from weak to moderate. These have been summarized in the tables section Table 4 -RQ1- Point-biserial correlation output COMBINED.

A stepwise logistic regression was run to predict the level of confidence (DV) from prior training variables (IVs). Five pieces of training (Commercial tourniquet, Postvention, Self-Defense, Wound Packing, and Behavioral Threat Assessment), statistically significantly predicted the level of confidence in acting in a violent situation F(5,404), =44.253, p<0.01, R^2 =.346). Having commercial tourniquet training alone accounts for 24% of the variance in the level of confidence.

Association between demographics (Age, gender/sex, role in church, ethnicity) and level of confidence

A *Pearson product-moment correlation* was run to determine the relationship between the level of confidence in acting during a violent event and age. A *point-biserial correlation* was run to determine the relationship between the level of confidence in acting during a violent event and remaining demographic variables (gender, ethnicity, role in PW, and religious affiliation). Dummy variables were created for each categorical demographic variable. All of the statistically significant correlations were either negative or positive and had strength of associations ranging from very weak to weak. These have been summarized in <u>Table 5 - RQ 2</u> <u>point-biserial correlation combined</u>.

A stepwise logistic regression was run to predict the level of confidence from the (IV) variables (namely: Visitors, PW Leadership, General Members, Buddhists, Muslims, Jewish, Genders/He, Genders/ She, Age (in years)?, and being Hispanic, Latino, or of Spanish Origin). Five demographic variables were statistically significant predictors of level of confidence (namely, PW Leadership, Muslims, Age in years, Genders/She, being Hispanic, Latino, or of Spanish Origin) F(5, 387) = 30.669, p<0.01, R² = .275.

Level of perceived preparedness (for the participant, other PWs members, and PWs leaders) to take some action during a violent event

More than 40% (43%) of participants felt prepared to take some action if a violent event occurred at their place of worship. Overall, participants thought less than 50% (41.3%) of their PWs members and less than 60% (45.1%) of their PWs leaders were prepared to act if a violent event occurred in their PW. Overall, participants thought their leaders (45.1%) were more prepared to react if a violent intruder entered their PWs. The majority of leaders (78%) who answered the questionnaire thought they were prepared to act during a violent event, and only 12% of leaders were unsure of their preparation level.

Association between religious affiliation and the perceived threat of a violent event

There is a statistically significant difference between religious groups as determined by one-way ANOVA (F (5,405) = (4.018), P = 0.001). The highest mean perceived threats were reported for Muslims (35.4789), Jews (35.0548), and Sikhs (35.0000). However, a Tukey post hoc test revealed that the Perceived threat of violence was significantly higher among Muslims (*35.4789* \pm *7.57224 units*, *P* = *.005*) and Jews (*35.0548* \pm *5.59238 units*, *P* = *0.015*) when compared to Buddhists (*31.0000* \pm *7.02071 units*), but there was no statistically significant difference between Buddhists (*31.0000* \pm *7.0207*) and Sikhs (35.0000 \pm 8.82547 units, P = 0.284). Although Sikhs had the lowest number of questionnaire responders, they reported the third-highest mean perceived threat of violence. The mean perceived threat of violence for Sikhs was .050 less than the reported mean threat of violence reported by Jews (35.05) and .048 less than the mean threat reported by Muslims (35.47). This is summarized in table 18 (Table 18- One Way ANOVA Summary Table).

Discussions

Although having CPR and First aid training were correlated with a higher level of confidence, these were not significant predictors for acting during a violent event in the regression model. Due to the boost in confidence, the authors suggest CPR and First Aid training be given during comprehensive trainings if permitted by time but not in abbreviated training sessions.

Although improvisational tourniquet training is intuitively practical, it was not a significant predictor of the level of confidence in acting in a violent event. Instead, having commercial tourniquet training was a significant predictor of the level of confidence in acting during a violent event.

It is possible that having commercial tourniquet training means that an individual is more likely to know how to improvise during various settings (including a violent scenario). The authors recommend that situational commercial tourniquet training be included in all violence response trainings. This suggestion is in line with recommendations from the Hartford Consensus, which stated that simulation-based training in simulation centers allows participants to practice their specific roles in relation to a specific in real-time as part of a team (Jacobs et al., 2013).

Programs designed to train people to respond during a violent attack should include training sessions that involve mental health options, wound packing, behavioral threat assessment, self-defense, commercial tourniquet application. To date, at least 105 people have completed the comprehensive (4-hour) STRIVE to Survive training and completed the exit questionnaire. The initial data indicate that the training statistically significantly increased

participants' confidence in acting during a violent event and increased their knowledge in all four phases of addressing a critical incident (Sexton, 2020). Further research is needed to test the effectiveness of combining all of these sub-trainings into a scenario-based situation. Simulation-based programs such as STRIVE to Survive may be vital in generating data on the efficacy of including these trainings in a scenario-based overall training program.

Since there was a weak negative association between people who identify as she and level of confidence in acting during a violent event, future training programs should be aimed at increasing women's confidence in their ability to act during a violent event in their PW. Given participant's and leader's confidence in PWs leader's ability to act during a violent event, trainings should continue to enforce PWs leaders' level of confidence in acting during a violent event.

Because first responders cannot enter the scene to help victims until after law enforcement has cleared the area, congregation members are often the first responders. As a result, they should be trained on how to respond appropriately (U.S. Department of Homeland Security, 2008). This response should include lifesaving improvisational techniques, especially in a scenario-based setting where these skills can be practiced and improved (Jacobs et al., 2013).

Although being Muslim was the only religious affiliation that statistically significantly predicted responder's level of confidence in acting during a violent event, Buddhists, Jews, and Sikhs reported a high average level of threat of violence. Specifically, only 20 Sikhs took this questionnaire, and the average level of perceived threat was the third-highest. Therefore, it could be extrapolated to mean that the estimated level of perceived threat among Sikhs may be higher than recorded in the questionnaire due to the under-sampling of the Sikh population. Future trainings should be aimed at increasing the confidence of religious minorities that have

been targets of violence in the last 20 years, as indicated by the National Incident-Based Reporting System (NIBRS) gathered by the FBI (FBI,2018).

Limitations

Several limitations were identified. One noteworthy limitation was the fact that inclusion criteria were limited to people who were a part of Qualtrics study panels. This automatically excluded people who do not have access to reliable internet, those who are not comfortable with technology, and those who are not active on social media platforms.

Additionally, only 434 participants were included in the study, with only 20 participants who identify as Sikhs. It was extremely difficult to reach responders who identify as Hindus, Jewish, Buddhists, and Sikhs. The quota for Christians was reached and surpassed within a few hours of opening the questionnaire. The Qualtrics research team sent out several waves of questionnaire invitations to the entire country and specific geographic metropolitan areas where higher rates of minority religious affiliations are known to congregate. Even with the constant efforts, we were unable to reach the desired quotas for Buddhists and Sikhs after 12 consecutive days.

Another limitation is the geographic region of participants was not collected in the questionnaire. It would be meaningful to find out if the perceived level of preparedness and level of threat is higher in rural or urban areas or if it differs by geographic regions in the US.

Although 434 is an adequate sample size for generalizability. However, because this questionnaire was seeking responses from five different religious groups, a larger sample size may have been more representative of views of different religious groups, particularly the minority religious groups in the US. Future studies should aim for a larger number of
participants from each religious affiliation in different geographic locations for a more comprehensive perception of threat and level of preparedness of each religious affiliation.

Future research needs to be done to determine the role of exposure to different religions in the educational system on the level of violence towards minority religions. It is also important to compare strategies other countries use to mitigate violence in PWs.

Conclusions

The results showed that the perceived threat of violence was highest among those identifying as Muslims and Jews, and lowest among Buddhists. Having prior (Commercial tourniquet, Postvention, Self-Defense, Wound Packing, and Behavioral Threat Assessment) training and identifying as (worship leader, Muslim, Female, of Hispanic origin, and increasing age) statistically significantly predicted (positive or negative) perceived confidence in acting during violent situations. The researchers recommend that comprehensive PWs violence mitigation training should be simulation-based to allow participants to practice skills to help increase confidence.

These trainings should include mental health options, wound packing, behavioral threat assessment, self-defense, commercial tourniquet application. An effort should also be made to increase the confidence of women and people who belong to minority religious organizations. Future studies should focus on understanding the perceptions of violence as experienced by non-Christian based religions in the U.S.

62

Tables

Table 1- PCA: KMO and Bartlett's Test

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy91					
Bartlett's Test of Sphericity Approx. Chi-Square		12029.552			
	df	780			
	Sig.	.000			

Table 2- Cronbach alpha of sub-scales

Reliability Statistics						
Subscales	Training	Likelihood /Perceived Susceptibility	Perceived Seriousness	Preparedness and self- efficacy	Confidence in doing specific behaviors	Likelihood of acting during a violent event
Cronbach alpha	0.866	0.948	0.953	0.832	0.946	0.825
# of items	10	6	6	3	11	4

Table 3- Demographics

	Demographics	Ν	Percent	
Gender/sex	He/His	186	42.9	
	She/Hers	200	46.1	
	They/Theirs Others (I, The Person)	26	5.9	
	Missing/ No Answer	22	5.1	
	Total Gender/Sex	434	100	
	White	232	53.5	
	Black or African American	35	8.1	
	American Indian or Alaska Native	5	1.2	
Race	Asian	117	27	
	Native Hawaiian or Pacific Islander	2	0.5	
	Two or more races	10	2.3	
	Other(s) (Hispanic, Middle Eastern, Mexican, Human)	8	1.8	
	I prefer not to answer/ I am unsure/ Missing Answers	25	5.8	
	Total Race	434	100	
	Buddhist	64	14.7	
	Hindu	69	15.9	
Poligious	Muslim	76	17.5	
Affiliation	Christian (please specify denomination):	132	30.4	
	Jewish	73	16.8	
	Sikh	20	4.6	
	Total Religious Affiliation	434	100	
	Visitor	220	50.7	
Dele in	Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,)	42	9.7	
Role In Place of	General Member	127	29.3	
Worship	Staff/Volunteer (Musician/Choir member, Usher/Greeter, security team member, etc.,) (<i>Primary teacher, youth</i>)	32	7.4	
	Other (Please specify): (Do not attend services, Parishioner, no role)	13	3	
	Total Role in Place of Worship	434	100	

Correlations	Correlations						
Variables	Level	of CONFIDEN	CE				
	Pearson Correlation	Sig. (2- tailed)	N				
Level of CONFIDENCE	1		411				
Had self-defense training	.439**	0	411				
Had no self-defense training	443**	0	411				
Unsure of self-defense training history	0.022	0.653	411				
Had First Aid training	.301**	0	411				
Had no First Aid training	326**	0	411				
Unsure of First Aid training history	0.057	0.246	411				
Had CPR training =yes	.255**	0	411				
Has no CPR training =no	266**	0	411				
Has had CPR training =i do not know	0.029	0.559	411				
Had behavioral threat assessment training =yes	.407**	0	411				
Had no behavioral threat assessment training =no	396**	0	411				
Unsure of behavioral threat assessment training history	0	0.997	411				
Had active shooter training=yes	.388**	0	411				
Had no active shooter training =no	384**	0	411				
Had Active Shooter Training =I Do Not Know	0.02	0.687	411				
Had wound packing training =yes	.489**	0	411				
Had no wound packing training =no	475**	0	411				
Had wound packing training =i do not know	0.006	0.911	411				
Had Improvisational Tourniquet Training =Yes	.415**	0	411				
Had Improvisational Tourniquet Training =No	418**	0	411				
Had Improvisational Tourniquet Training =I Do Not Know	0.045	0.358	411				
Had Commercial Tourniquet Training =Yes	.495**	0	411				
Had Commercial Tourniquet Training =No	486**	0	411				
Had Commercial Tourniquet Training =I Do Not Know	0.024	0.629	411				
Had Mental Health Training =Yes	.482**	0	411				
Had Mental Health Training =No	472**	0	411				
Had Mental Health Training =I Do Not Know	0.011	0.817	411				
Certified trainer =Yes	.332**	0	410				
Certified trainer =No	356**	0	410				
Certified trainer =I Do Not Know	.105*	0.034	410				

Table 4 -RQ1- Point-biserial correlation output COMBINED

**. Correlation is significant at the 0.01 level (2-tailed).

- *. Correlation is significant at the 0.05 level (2-tailed).
 - There was a moderate positive correlation between level of confidence and having selfdefense training that was statistically significant (r_{pb} = .439, n= 411, p<0.01).
 - There was a **weak positive correlation between level of confidence and being trained in Frist Aid** that was statistically significant ($r_{pb} = .301$, n=411, p<0.01).
 - There was a **weak positive correlation between level of confidence and having CPR training** that was statistically significant (r_{pb} = .255, n=411, p<0.01).
 - There was a moderate positive correlation between the level of confidence and having Behavioral Threat Assessment training that was statistically significant ((r_{pb} =.407, n=411, p<0.01).
 - There was a weak positive correlation between level of training and having active shooter training that was statistically significant (r_{pb} =.388, n=411, p<0.01).
 - There was a moderate positive correlation between the level of confidence and having wound packing training that was statistically significant (r_{pb} =.489, n=411, p<0.01).
 - There was a moderate positive correlation between level of confidence and having improvisational tourniquet training that was statistically significant (r_{pb} =.418, n=411, p<0.01).
 - There was a moderate positive correlation between level of confidence and having commercial tourniquet training that was statistically significant (r_{pb} =.495, n=411, p<0.01).
 - There was a moderate positive correlation between level of confidence and having mental health training that was statistically significant (r_{pb} = .489, m=411, p<0.01).
 - There was a weak positive correlation between level of confidence and being a certified trainer that was statistically significant (r_{pb} =.332, n=410, p<.01).

		Level	of Confidence	
	Variables	Pearson Correlation	Sig. (2- tailed)	Ν
	Level of Confidence	1		411
	Visitor	109*	0.028	411
ace of iip	Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,)	.325**	0	411
n Pla orsh	General Member	119*	0.016	411
Role ii Wo	Staff/Volunteer (Musician/Choir member, Usher/Greeter, security team member, etc.,)	0.073	0.14	411
	Other (Please specify)	-0.044	0.375	411
er tif	Не	.296**	0	411
end	She	300**	0	411
,ic Ge	They/Others	0.011	0.82	411
	Age in years	294**	0	393
	Ethnicity (of Hispanic, Latino, or of Spanish Origin)	.153**	0.002	411

Table 5 - RQ 2 point-biserial correlation combined

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

			Corr	elations between varia Confidence	ibles and	Level of	Regress	sion
RQ	Variable Grouping	Dummy Variable	r or rpb	Strength and Direction	N	Ρ	Sig Predictor of DV	Ρ
		Had Self Defense Training	.439**	Moderate Positive	411	0.000	YES	0.001
-		Had First Aid Training	.301**	Weak Positive	411	0.000	NO	
ode		Had CPR Training	.255**	Weak Positive	411	0.000	NO	
Σ		Train.BehThreat.Ass=Yes	.407**	Moderate Positive	411	0.000	YES	0.047
RQ1 Regressio	Prior	Train.ActiveShooter=Yes	.388**	Weak Positive	411	0.000	NO	
	Training	Train.WoundPack=Yes	.489**	A moderate Positive	411	0.000	YES	0.009
		Train.Improv.Tourniq=Yes	.415**	Moderate Positive	411	0.000	NO	
		Train.Commer.Tourniq=Yes		Moderate Positive	411	0.000	YES	0.002
		Train.MentalHealth=Y	.482**	Moderate Positive	411	0.000	YES	0.002
		Train.CERT1= Yes	.332**	Weak Positive	410	0.000	NO	
		Visitor	109*	Very Weak Negative	411	0.028	NO	
	Role	Leadership	.325**	Weak Positive	411	0.000	YES	0. 000
ode		General Member	119*	Very Weak <mark>Negative</mark>	411	0.016	NO	
Š	Poligious	Buddhist	101*	Very Weak Negative	411	0.041	NO	
ion	Affiliation	Muslim	.295**	Weak Positive	411	0.000	YES	0.000
ess.	Anniacion	Jewish	-0.107	Weak Negative	411	0.031	NO	
lgə	Condor	Не	.296**	Weak Positive	411	0.000	NO	
2 R	Gender	She	300**	Weak Negative	411	0.000	YES	0.000
RC	Age	Age in years	294**	Weak Negative	393	0.000	YES	0.000
_	Ethnicity	ls Hispanic, Latino, or of Spanish Origin	.153**	Very Weak Positive	411	0.002	YES	0.022
		*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).						

Table 6-RQ 1 and 2 - Strength and direction of Correlations for Dummy Variables

Table 7- Model Summary for Stepwise Logistic Regression to determine strength and direction of significant correlations from RQ1

				Std. Error	Change Statistics					
		R	Adjusted R	of the	R Square	F			Sig. F	Durbin-
Model	R	Square	Square	Estimate	Change	Change	df1	df2	Change	Watson
1	.496ª	.246	.244	7.90026	.246	132.994	1	408	.000	
2	.552 ^b	.305	.302	7.59344	.059	34.637	1	407	.000	
3	.578 ^c	.334	.329	7.44407	.029	17.497	1	406	.000	
4	.590 ^d	.348	.341	7.37540	.014	8.596	1	405	.004	
5	.595 ^e	.354	.346	7.34863	.006	3.957	1	404	.047	1.912

Model Summary ^f

a. Predictors: (Constant), Train.Commer.Tourniq=Yes

b. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes

c. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes, Train.Self.Def=Yes

d. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes, Train.Self.Def=Yes, Train.WoundPack=Yes

e. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes, Train.Self.Def=Yes, Train.WoundPack=Yes, Train.BehThreat.Ass=Yes

f. Dependent Variable: Level.of.CONFIDENCE

Table 8-RQ 1 ANOVA for Logistic Regression

	ANOVAª						
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	8300.675	1	8300.675	132.994	.000 ^b	
	Residual	25464.947	408	62.414			
	Total	33765.622	409				
2	Regression	10297.876	2	5148.938	89.298	.000 ^c	
	Residual	23467.745	407	57.660			
	Total	33765.622	409				
3	Regression	11267.443	3	3755.814	67.777	.000 ^d	
	Residual	22498.179	406	55.414			
	Total	33765.622	409				
4	Regression	11735.020	4	2933.755	53.933	.000 ^e	
	Residual	22030.602	405	54.397			
	Total	33765.622	409				
5	Regression	11948.696	5	2389.739	44.253	.000 ^f	
	Residual	21816.926	404	54.002			
	Total	33765.622	409				

a. Dependent Variable: Level.of.CONFIDENCE

b. Predictors: (Constant), Train.Commer.Tourniq=Yes

c. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes

d. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes, Train.Self.Def=Yes

e. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes, Train.Self.Def=Yes,

Train.WoundPack=Yes

f. Predictors: (Constant), Train.Commer.Tourniq=Yes, Train.MentalHealth=Yes, Train.Self.Def=Yes,

 $Train. Wo und {\tt Pack=Yes}, Train. {\tt BehThreat}. {\tt Ass=Yes}$

Table 9- - RQ1 Coefficients for Logistic Regression

	C	oefficien	ts ^a			
				Standardize		
		Unsta	andardized	d		
		Coe	efficients	Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	23.361	.447		52.315	.000
	Has Commercial Tourniquet Training	10.587	.918	.496	11.532	.000
2	(Constant)	22.476	.455		49.421	.000
	Has Commercial Tourniquet Training	6.976	1.075	.327	6.490	.000
	Has Mental Health Training	5.894	1.001	.296	5.885	.000
3	(Constant)	21.544	.498		43.226	.000
	Has Commercial Tourniquet Training	5.387	1.120	.252	4.810	.000
	Has Mental Health Training	4.965	1.007	.250	4.933	.000
	Has Self Defense Training	3.685	.881	.201	4.183	.000
4	(Constant)	21.438	.495		43.297	.000
	Has Commercial Tourniquet Training	3.978	1.209	.186	3.289	.001
	Has Mental Health Training	3.887	1.063	.195	3.656	.000
	Has Self Defense Training	3.289	.883	.179	3.724	.000
	Has Wound Packing Training	3.428	1.169	.168	2.932	.004
5	(Constant)	21.273	.500		42.525	.000
	Has Commercial Tourniquet Training	3.745	1.211	.175	3.094	.002
	Has Mental Health Training	3.342	1.094	.168	3.055	.002
	Has Self Defense Training	2.995	.892	.163	3.356	.001
	Has Wound Packing Training	3.096	1.177	.152	2.631	.009
	Has Behavioral Threat Assessment Training	1.926	.968	.098	1.989	.047

a. Dependent Variable: Level.of.CONFIDENCE

Table 10-RQ 2 Model Summary for Logistic Regression

				Std. Error	Std. Error Change Statistics					
		R	Adjusted R	of the	R Square	F			Sig. F	Durbin-
Model	R	Square	Square	Estimate	Change	Change	df1	df2	Change	Watson
1	.314ª	.099	.097	8.61059	.099	42.871	1	391	.000	
2	.417 ^b	.174	.170	8.25288	.075	35.629	1	390	.000	
3	.469 ^c	.220	.214	8.03227	.046	22.717	1	389	.000	
4	.523 ^d	.274	.266	7.75862	.054	28.924	1	388	.000	
5	.533 ^e	.284	.275	7.71575	.010	5.324	1	387	.022	1.865

Model Summary^f

a. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,)

b. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,), Religious.Affiliation=Muslim

c. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,), Religious.Affiliation=Muslim, What is your age (in years)?

d. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,), Religious.Affiliation=Muslim, What is your age (in years)?, Genders=2.0 She

e. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,),

Religious.Affiliation=Muslim, What is your age (in years)?, Genders=2.0 She, Ethnicity=Yes - Hispanic, Latino, or of Spanish Origin

f. Dependent Variable: Level.of.CONFIDENCE

Table 11- RQ 2 ANOVA	Summary for	Step-wise Lo	gistic Regression

			ANOVA			
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3178.571	1	3178.571	42.871	.000 ^b
	Residual	28989.597	391	74.142		
	Total	32168.168	392			
2	Regression	5605.287	2	2802.643	41.149	.000 ^c
	Residual	26562.881	390	68.110		
	Total	32168.168	392			
3	Regression	7070.914	3	2356.971	36.532	.000 ^d
	Residual	25097.254	389	64.517		
	Total	32168.168	392			
4	Regression	8812.033	4	2203.008	36.597	.000 ^e
	Residual	23356.135	388	60.196		
	Total	32168.168	392			
5	Regression	9128.968	5	1825.794	30.669	.000 ^f
-	Residual	23039.200	387	59.533		
	Total	32168.168	392			

ANOVA^a

a. Dependent Variable: Level.of.CONFIDENCE

b. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,)

c. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,), Religious.Affiliation=Muslim

d. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,), Religious.Affiliation=Muslim, What is your age (in years)?

e. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,), Religious.Affiliation=Muslim, What is your age (in years)?, Genders=2.0 She

f. Predictors: (Constant), Role.All=Leadership (Pundit, Rabbi, Elder, Bishop, Pastor, Deacon, Apostle, Usher, etc.,), Religious.Affiliation=Muslim, What is your age (in years)?, Genders=2.0 She, Ethnicity=Yes - Hispanic, Latino, or of Spanish Origin

Coefficients^a

							95.	0%		
		Unstanc	lardized	Standardized			Confi	dence	Collinea	rity
		Coeffi	cients	Coefficients			Interva	al for B	Statistics	
			Std.				Lower	Upper		
Μ	odel	В	Error	Beta	t	Sig.	Bound	Bound	Tolerance	VIF
1	(Constant)	24.772	.457		54.205	.000	23.873	25.670		
	Leadership	9.623	1.470	.314	6.548	.000	6.733	12.512	1.000	1.000
2	(Constant)	23.695	.474		50.022	.000	22.764	24.627		
	Leadership	8.965	1.413	.293	6.345	.000	6.188	11.743	.994	1.006
	Religious Affiliation=Muslim	6.589	1.104	.275	5.969	.000	4.419	8.760	.994	1.006
3	(Constant)	29.092	1.223		23.796	.000	26.688	31.496		
	Role=Leadership	8.351	1.381	.273	6.046	.000	5.636	11.067	.985	1.015
	Religious Affiliation=Muslim	5.592	1.095	.234	5.109	.000	3.440	7.744	.958	1.044
	Age in years	122	.026	219	-4.766	.000	172	072	.952	1.050
4	(Constant)	31.977	1.297		24.654	.000	29.427	34.527		
	Leadership	7.417	1.345	.242	5.513	.000	4.772	10.062	.969	1.032
	Religious Affiliation=Muslim	4.596	1.073	.192	4.282	.000	2.486	6.707	.929	1.076
	Age in years	134	.025	240	-5.392	.000	183	085	.945	1.058
	Genders=2.0 She	-4.319	.803	239	-5.378	.000	-5.898	-2.740	.950	1.052
5	(Constant)	31.122	1.342		23.189	.000	28.483	33.761		
	Leadership	7.559	1.339	.247	5.644	.000	4.926	10.192	.967	1.034
	Religious Affiliation=Muslim	4.568	1.068	.191	4.279	.000	2.469	6.667	.929	1.076
	Age in years	121	.025	216	-4.765	.000	171	071	.897	1.115
	Gender=(2.0) She	-4.352	.799	240	-5.449	.000	-5.922	-2.782	.950	1.053
	Ethnicity=Yes, of Hispanic, Latino, or	3.090	1.339	.102	2.307	.022	.457	5.723	.945	1.058
	of Spanish Origin									

a. Dependent Variable: Level.of.CONFIDENCE

Table 13- RQ 3 Frequencies for how participants perception of their preparedness to react if a violent intruder enters PW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unprepared	187	43.1	44.4	44.4
	Prepared	181	41.7	43.0	87.4
	I am Unsure	53	12.2	12.6	100.0
	Total	421	97.0	100.0	
Missing	System	13	3.0		
Total		434	100.0		

Question : In your opinion - How prepared are YOU to react if there is a violent event (or violent intruder) in your place of worship?

H3.10 $\mu \le 50\%$ H3.2a: $\mu > 50\%$

Table 14- RQ 3 Frequencies for how participants perception of other MEMBERS preparedness to react if a violent intruder enters PW

Question : In your opinion - How PREPARED are other MEMBERS of your congregation to react if there is a violent event (violent intruder) in your place of worship?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unprepared	174	40.1	41.3	41.3
	Prepared	174	40.1	41.3	82.7
	I am Unsure	73	16.8	17.3	100.0
	Total	421	97.0	100.0	
Missing	System	13	3.0		
Total		434	100.0		

H3.1o µ ≤ 60% H3.3a: µ > 60% Table 15- RQ 3 Frequencies for how participants perception of their LEADERS preparedness to react if a violent intruder enters PW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unprepared	156	35.9	37.1	37.1
	Prepared	190	43.8	45.1	82.2
	I am Unsure	75	17.3	17.8	100.0
	Total	421	97.0	100.0	
Missing	System	13	3.0		
Total		434	100.0		

Question : How PREPARED are the majority of your congregation LEADERS to react if there is a violent event (violent intruder) in your place of worship?

Table 16- RQ 3 Frequencies for Participant's OWN, their MEMBERS, and their LEADERS level of preparedness to react if a violent intruder enters their PW.

Likert Scale Option	You (Parti	cipant)	Other PWs I	Vembers	PWs Lea	aders	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	
Unprepared	187	44.4	174	41.3	156	37.1	
Prepared	181	43	174	41.3	190	45.1	
I am Unsure	53	12.6	73	17.3	75	17.8	
Total	421	100	421	100	421	100	

Table 17- RQ 4 Descriptives of one way ANOVA Variables for Pervceived Threat

Descriptives

Perceived THREAT								
					95% Confidence Interval for			
					М	ean	Minimum	Maximum
					Lower			
	Ν	Mean	Std. Deviation	Std. Error	Bound	Upper Bound		
Buddhist	63	31.0000	7.02071	.88453	29.2319	32.7681	12.00	44.00
Hindu	66	32.2273	7.30605	.89931	30.4312	34.0233	12.00	48.00
Muslim	71	35.4789	7.57224	.89866	33.6866	37.2712	14.00	48.00
Christian	119	32.7815	7.73848	.70939	31.3767	34.1863	12.00	48.00
Jewish	73	35.0548	5.59238	.65454	33.7500	36.3596	18.00	48.00
Sikh	19	35.0000	8.82547	2.02470	30.7463	39.2537	18.00	48.00
Total	411	33.3917	7.37728	.36389	32.6764	34.1071	12.00	48.00

Table 18- One Way ANOVA Summary Table

Perceived THREAT					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1054.523	5	210.905	4.018	.001
Within Groups	21259.409	405	52.492		
Total	22313.932	410		S	

ANOVA

Table 19- RQ 4 One-Way ANOVA Post Hoc Test Multiple Comparisons Table

Multiple Comparisons

Dependent Variable: Perceived THREAT

Tukey HSD						
religious	(J) What is your religious	Mean			95% Confid	ence Interval
affiliation? -	affiliation? - Selected Choice	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
<mark>Buddhist</mark>	Hindu	-1.22727	1.27615	.930	-4.8814	2.4269
	Muslim	-4.47887*	1.25401	.005	-8.0696	8881
	Christian (please specify):	-1.78151	1.12886	.613	-5.0139	1.4509
	Jewish	-4.05479*	1.24591	.015	-7.6223	4872
	Sikh	-4.00000	1.89630	.284	-9.4299	1.4299
Hindu	Buddhist	1.22727	1.27615	.930	-2.4269	4.8814
	Muslim	-3.25160	1.23882	.094	-6.7989	.2957
	Christian (please specify	55424	1.11196	.996	-3.7382	2.6298
	denomination):					
	Jewish	-2.82752	1.23061	.197	-6.3513	.6962
	Sikh	-2.77273	1.88629	.684	-8.1740	2.6285
Muslim	Buddhist	4.47887*	1.25401	.005	.8881	8.0696
	Hindu	3.25160	1.23882	.094	2957	6.7989
	Christian (please specify):	2.69736	1.086548	.132	4137	5.8084
	Jewish	.42408	1.20764	.999	-3.0339	3.8821
	Sikh	.47887	1.87139	1.000	-4.8797	5.8374
Christian	Buddhist	1.78151	1.12886	.613	-1.4509	5.0139
(please	Hindu	.55424	1.11196	.996	-2.6298	3.7382
specify	Muslim	-2.69736	1.08648	.132	-5.8084	.4137
denomination	Jewish	-2.27328	1.07712	.284	-5.3575	.8110
):	Sikh	-2.21849	1.78994	.817	-7.3438	2.9068
Jewish	Buddhist	4.05479 [*]	1.24591	.015	.4872	7.6223
	Hindu	2.82752	1.23061	.197	6962	6.3513
	Muslim	42408	1.20764	.999	-3.8821	3.0339
	Christian (please specify):	2.27328	1.07712	.284	8110	5.3575
	Sikh	.05479	1.86597	1.000	-5.2882	5.3978
Sikh	Buddhist	4.00000	1.89630	.284	-1.4299	9.4299
	Hindu	2.77273	1.88629	.684	-2.6285	8.1740
	Muslim	47887	1.87139	1.000	-5.8374	4.8797
	Christian (please specify):	2.21849	1.78994	.817	-2.9068	7.3438
	Jewish	05479	1.86597	1.000	-5.3978	5.2882

*. The mean difference is significant at the 0.05 level.

Figures



Figure 1- The Health Belief Model



Figure 2- Health Belief Model constructs and Questionnaire Variables

Ja	
Qual	trics offers a sample size calculator online that can help you determine your ideal survey sample
izə	in seconds. Just put in the confidence level, population size, margin of error, and the perfect sample
ize	is calculated for you.
Co	onfidence Level:
95	5% •
Po	pulation Size:
25	6670635
Ma	argin of Error:
59	% •
Id	eal Sample Size:
38	15
210	
o le	arn more about the variables you can read this post on how to find your sample size or scroll down

Figure 3- Qualtrics Sample Size Calculator



Figure 4- Initial Invitation to Consider Participating in Study Two

The First Page of The Survey with Basic Information

Hello, you are invited to participate in a 40 question survey about violence in places of worship that will take about 5 to 10 minutes to complete. If you are interested, please click **NEXT** to read the informed consent page then decide whether to participate in the study by taking the survey.

Figure 5- Pre-questionnaire Message for Participants to Determine if the study topic will interest them



Figure 6- Means Plot for RQ 4 One-Way ANOVA

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A. Appendix

Questionnaire with numeric coding for analysis

1.	What is your religious aff Buddhist Hindu Sikh Other, please specify: _	Image: Specify Contraction in the system Image: Christian please specify denomination: Image: Christian ple
2.	Aside from weddings and Once a week or more One, two or three time Holidays and Faith-base I do not attend religiou	I funerals, how often do you attend religious services? es a month ed holidays is services
3.	Which of the following be	est describes your role at your place of worship?
	General Member	□ Staff/Volunteer (Musician/Choir member, Usher/Greeter, security team member, etc.,)

□ Other Please specify: _____

Section 1- Prior Training: Have you ever participated in any of the following types of trainings?

		Yes	No	Do Not Know
1.	Self- defense	Yes	No	Do Not Know
2.	CPR training	Yes	No	Do Not Know
3.	First Aid Training	Yes	No	Do Not Know
4.	(Prevention) Threat assessment: Identifying behaviors of concern	Yes	No	Do Not Know
5.	(Active Response) ALICE / Another active shooter training	Yes	No	Do Not Know
6.	(Active Response) Wound packing training	Yes	No	Do Not Know
7.	(Active Response) Improvisational Tourniquets application	Yes	No	Do Not Know
8.	(Active Response) Commercial Tourniquets application	Yes	No	Do Not Know
9.	(<i>Postvention: Debriefing, diffusing, and follow up</i>) Training about what type of follow up should be done after a violent event to protect the mental health of witnesses?	Yes	No	Do Not Know
10.	I am a certified trainer (please specify)	Yes	No	Do Not Know

Section 2- Perceived Threat:

what do you believe is the likelihood of the following incidents happening?

		Extremely unlikely to happen	Unlikely to happen	Likely to happen	Extremely likely to happen
11	Having an active shooter invade my place of worship	Extremely unlikely to happen	Unlikely to happen	Likely to happen	Extremely likely to happen
12	Having someone get shot in my place of worship	Extremely unlikely to happen	Unlikely to happen	Likely to happen	Extremely likely to happen
13	Having an intruder with a knife/machete/large blade invade my place of worship	Extremely unlikely to happen	Unlikely to happen	Likely to happen	Extremely likely to happen
14	Having someone get stabbed by a knife/machete/large blade in my place of worship	Extremely unlikely to happen	Unlikely to happen	Likely to happen	Extremely likely to happen
15	Having a violent intruder with a weapon (bat, club or other blunt weapon) invade my place of worship	Extremely unlikely to happen	Unlikely to happen	Likely to happen	Extremely likely to happen
16	Having someone in my place of worship with a deep wound or heavy bleeding	Extremely unlikely to happen	Unlikely to happen	Likely to happen	Extremely likely to happen

If the following incidents were to occur, how serious do you think it would they be?

		Not very Serious	Not Serious	Serious	Very serious
17.	Having an active shooter invade my place of worship	Not very Serious	Not Serious	Serious	Very serious
18.	Having someone get shot in my place of worship	Not very Serious	Not Serious	Serious	Very serious
19.	Having an intruder with a knife/machete/large blade invade my place of worship	Not very Serious	Not Serious	Serious	Very serious
20.	Having someone get stabbed by a knife/machete/large blade in my place of worship	Not very Serious	Not Serious	Serious	Very serious
21.	Having a violent intruder with a weapon (bat, club or other blunt weapon) invade my place of worship	Not very Serious	Not Serious	Serious	Very serious
22.	Having someone in my place of worship with a deep wound or heavy bleeding	Not very Serious	Not Serious	Serious	Very serious

Section 3- Level of Preparedness and Self-Efficacy Please rate your opinions of the following statements:

		Very Prepared	Prepared	Unprepared	Very Unprepared	l am unsure
23.	how prepared are you to react if there is a violent event (violent intruder) in your place of worship?	Very Prepared	Prepared	Unprepared	Very Unprepared	l am unsure 0
24.	how prepared are other members of your congregation to react if there is a violent event (violent intruder) in your place of worship?	Very Prepared	Prepared	Unprepared	Very Unprepared	l am unsure 0
25.	how prepared are the majority of your congregation leaders to react if there is a violent event (violent intruder) in your place of worship?	Very Prepared 1	Prepared 2	Unprepared 3	Very Unprepared 4	l am unsure 0

Please rate your level of confidence in doing the following

		Not at all confident	Somewhat Confident	Very confident	Extremely confident
26.	identify behaviors of concern in a person	Not at all confident	Somewhat Confident	Very confident	Extremely confident
27.	Apply a commercial tourniquet	Not at all confident	Somewhat Confident	Very confident	Extremely confident
28.	Apply improvisational tourniquets	Not at all confident	Somewhat Confident	Very confident	Extremely confident
29.	Pack a wound	Not at all confident	Somewhat Confident	Very confident	Extremely confident
30.	Identify behaviors to indicate an individual needs further assistance /counseling	Not at all confident	Somewhat Confident	Very confident	Extremely confident
31.	Run during a violent event at your place of worship	Not at all confident	Somewhat Confident	Very confident	Extremely confident
32.	Hide during a violent event at your place of worship	Not at all confident	Somewhat Confident	Very confident	Extremely confident
33.	Fight during a violent event at your place of worship	Not at all confident	Somewhat Confident	Very confident	Extremely confident
34.	Identify indicators of maladaptive post- incident stress response	Not at all confident	Somewhat Confident	Very confident	Extremely confident
35.	Identify appropriate resources for mental health follow-up care	Not at all confident	Somewhat Confident	Very confident	Extremely confident
36.	Identify mental health coping methods to share with affected individuals	Not at all confident	Somewhat Confident	Very confident	Extremely confident

How **likely** are you to do the following items **during a violent event** ?

		Extremely Unlikely	Unlikely	Likely	Extremely Likely
37.	If you observe someone behaving or speaking in a threatening manner at your place of worship, how likely are you to notify the security team/religious leadership?	Extremely Unlikely	Unlikely	Likely	Extremely Likely
38.	During a violent incident at your place of worship, (assuming you are both in a secure room) how likely are you to volunteer to help someone who is injured?	Extremely Unlikely	Unlikely	Likely	Extremely Likely
39.	If you witness a violent event at your place of worship, how likely are you to speak with a FREE counselor that shares your faith, and is NOT affiliated with your place of worship	Extremely Unlikely	Unlikely	Likely	Extremely Likely
40.	If you witness a violent event at your place of worship, how likely are you to speak with a FREE counselor that shares your faith, and is affiliated with your place of worship	Extremely Unlikely	Unlikely	Likely	Extremely Likely

Demographics and General Information

41. I identify with the following p	oronouns 🛛 he/his	□ she/hers
	□ they/theirs	\Box Others (please specify):
42. Are you of Hispanic, Latino, o	r of Spanish Origin? □Yes	□ No □ Prefer not to answer
43. How would you describe you	rself (select all that apply)?	
□ White	🗆 Black (African American)	🗆 Asian (Asian American)
🗆 Native Hawaiian	Two or more races	Native American
(Pacific Islander)		(Alaskan/Indian)
		Prefer not to answer
Unsure	\Box Other (please specify):	
44. What is your age?	years	

Please leave any comments about the questionnaire or violent events at places of worship below:

B. Appendix

Introduction- Relevant Articles regarding challenges surrounding violence in places of worship

Search Terms

church* or synagogue* or faith or temple* or mosque* shooting* or stabbing* or gun*violence

Databases:

Religion and Philosophy Collection, Plus with Full Text, National Criminal Justice Reference Service Abstracts, Open Dissertations, Psychology and Behavioral Sciences Collection, SocINDEX with Full Text-, Criminal Justice Abstracts with Full Text,

Time Range: 2000 to present

Major Themes and categories (color-coded):

(Prevention) - Security, (Responding) – Drills, Plans, (Data) – no data found for place of worship (Threat assessment) – behavioral threat assessment (Education) – situational awareness What happens after violence- Changes after violent attacks Postvention- mental health

(Bourns & Wright, 2004)

Bourns, W., & Wright, W. D. (**2004**). A study of church vulnerability to violence: Implications for law enforcement. *Journal of criminal justice*, 32(2), 151-157.

This study looked at the questions of whether pastors/ministers believed if violence was increasing in churches and were church clergy fearful? Have churches become more security conscious? Results showed low levels of violence, however, clergy thought violence and anger was slowly increasing. Vandalism and stealing were the major forms of violence reported; violence being defined as a destructive act towards persons or property. Churches had <u>no plan of action</u> if a violent act did occur; nor did they expect such an act, even at youth events.

The church shooting at the *Wedgwood Baptist Church in 1999* and St. *John Baptist Church* in Gonzales, Texas raised the issue of whether news media reports of violence in churches are rising.

Major points summarized below:

The author points out that little research has been conducted on violence in churches. Additionally, no national crime count data is readily available. The FBI Uniform Crime Report data for cities and towns on crime, is collected on American churches but is not readily accessible to the general public. U.S. Department of Education and the U.S. Department of Justice in the annual report: Indicators of School Crime and Safety (National Center for Education Statistics, 2002). Moreover, no state or private agency collects violence data on churches.

Outside of a fire, tornado, or earthquake plan, churches had no plan of response against person-onperson violence. None had even thought of a terrorist plan. Only five percent said they currently used retired seniors to help with church safety similar to a school crossing guard at traffic control points.. Many did not know who had a key to the church

(Gass, 2017)

Gass, H. (2017). Soul searching after Texas church shooting. *Christian Century*, 134(25), 14-15.

Major points from this article are listed below.

After a shooting, churches face the decision on what to do with the crime scene. Schools and other sites of mass shootings have been razed and rebuilt, but in the case of a religious building, worshipers have sometimes set out to reclaim their sacred space

Shooting at First Baptist Church of Sutherland Springs in November of 2017 was mentioned as an example because building a memorial was not an easy decision for the congregation. Some members even decided they will never set a foot in the building again. Below are major items from the memorial service.

Frank Pomeroy, the church's pastor, who was away the day an assailant killed half of the congregation, including all of its Sunday school teachers and several music leaders, gave an emotional sermon under a tent to accommodate people who can't bear to enter the building again. Survivors and the public were invited to view the memorial of chairs, one for each of the 26 victims, bearing the person's name painted in gold and a red rose. One had a pink rose for the child of a woman who was eight months pregnant when she died.

After the shooting at Knoxville Unitarian Universalist Church in July of 2008 during a children's play, the following was done after the incident. Pews were realigned, walls were repainted, and a curtain filled with bullet holes was removed but saved.

After the shooting at Sikh temple in Oak Creek, Wisconsin, in 2012, worshipers did not abandon the sanctuary and even preserved some of the bullet holes.

(Childress, 2018)

Childress, K. (**2018**). Guns and baptism: A Texas church talks about safety. *Christian Century*, 135(1), 11-13.

This article discusses the conversations his congregation had about church safety after major shootings in places of worship. The author is Kyle Childress a pastor of Austin Heights Baptist Church in Nacogdoches, Texas.

After shootings at *Sutherland Springs Baptist Church in South Texas and Mother Emanuel Church in Charleston,* churches in the US, congregations all over the world are asking the same question "What are we going to do?"

The author also recalls asking the same question after the *Nickel Mines shooting back in 2006*. Author explains that Some churches were arming their ushers.

The author also said that after the shootings" We purposely chose to speak about safety rather than security as a way to try to tone down the conversation swirling about us, which is inundated with images of guns and guards in black uniforms. All that seems to be missing from those visions of security are sandbag emplacements at the front door and helicopters sweeping the perimeter of the church property."

The author's congregation had more tangible discussion that resulted in question such as

- 1. "How many doors do we have open on Sunday mornings and what should we do about them?"
- 2. How many ushers do we have and should we increase the number?
- 3. Where and how do we greet people on Sunday mornings?

One major concern was the Nursery. The author explained that they discussed how we might make it safer, whether by changing the doors, or adding locks, or adding more adult volunteers. And the ushers loved the idea of getting clip-on walkie-talkies and earpieces so they could whisper

Some church members discussed "enhanced hospitality" and "extreme welcoming" by giving everyone a 'holy hug' out on the front steps and do a pat-down.

The author concludes that they did not resolve those questions that night. "I don't know if we ever will. But they have given us plenty to think about and pray about, plenty to live into. They (questions) have given me plenty to preach about."

(San Roman et al., 2019)

San Roman, L., Mosher, D. K., Hook, J. N., Captari, L. E., Aten, J. D., Davis, E. B., . . . Campbell, C. D. (2019). Religious support buffers the indirect negative psychological effects of mass shooting in church-affiliated individuals. *Psychological Trauma*: Theory, Research, Practice, and Policy, 11(6), 571-577. doi:10.1037/tra0000448

The pilot study explored the extent to which religious support (*i.e., sense of comfort and support from the Sacred, religious leaders, and fellow faith participants*) buffered against the indirect negative psychological symptoms (*i.e., religious/spiritual struggle, depression, anxiety, posttraumatic stress disorder [PTSD]*) after the 2015 mass shooting on the campus of Umpqua Community College in Roseburg, Oregon.

Relevant findings (related to postvention) from this study are summarized below:

A mass shooting refers to an act of gun violence that occurs in a public place and involves the deaths of four or more in discriminately selected victims (Bjelopera et al., 2013; Wilson, 2014).

There have been a total of 78 public mass shootings in the United States in the 30 years between 1983 and 201 3, which have resulted in 547 lives lost and 476 injuries (Bjelopera, Bagalman, Caldwell, Finklea, & McCallion, 201 3).

The psychological effects of mass shootings extend beyond the victims (Wilson, 2014). Individuals who witness the crime, first responders to the scene, victims' family and friends, and entire communities suffer. For example, research has shown that mass shootings can lead to feelings of horror, fear, and disbelief among students who witnessed the event (Turunen, Haravuori, Punama[°]ki, Suomalainen, & Marttunen, 2014)

Prior research on exposure to disasters has revealed that resource loss, which includes psychological constructs such as sense of control, influences mental health outcomes such as depression, anxiety, and posttraumatic symptoms. Survivors often suffer from acute stress disorder, posttraumatic stress disorder (PTSD), depression, or anxiety (Turunen et al., 2014; Santilli et al., 2017). The severity of one's life being in danger and losing close friends increases the risk for mental health problems (Zatzick et al., 2007). Losing a loved one through violent death (e.g., shooting) increases one's risk for prolonged and complicated grief.

Considering the increasing prevalence of mass shootings, it is important to understand the psychological impact of such events on survivors as well as their family members, friends, and community (Smith, Abeyta, Hughes, & Jones, 2015). In particular, mass shootings may pose a unique threat to felt safety and psychological well-being because of being both completely unpredictable (e.g., unlike an ongoing war) and premeditated

(Post, 2019)

Post, J. A. (2019). How much security? *Christian Century*, 136(10), 10-11

This article was written by a person who attended a church in Atlanta where the Red Door Café doors were always open to give meals to the homeless. The author talks about how the raise in violence in places of worship has challenged her views of safety at church.

The author now serves at a Parish in a suburban village where the "people who enter the church are mostly known to us. **Nevertheless, this church has installed security protocols worthy of a Federal Reserve bank**. " Her explanation is detailed below:

The congregation in the suburban village now have motion-activated cameras at every entrance. She explains that their doors lock at specified times. Additionally she stated that "We have declared ourselves a gun-free zone and advertise that status on our doors". Furthermore "Our ushers and educators are armed with walkie-talkies. We have developed a Sunday volunteer position called the "Walk Around"—a person who walks the property inside and out during worship, alert to signs of trouble, with 911 on speed dial. We do a background check on every volunteer." Also, we lock all but the front door 15 minutes after an event begins. Why the Fort Knox–level security? Part of the answer is the rise in shootings she explained.

According to Dallas Drake at the Center for Homicide Research, almost half of the incidences of gun violence in houses of worship are committed by persons affiliated with the congregation, and another quarter involves intimate partners. Since the school shooting at Columbine, Colorado, in 1999, the Washington Post has chronicled 18 fatal shootings at faith-based properties. According to the Associated Press, a dozen of those shootings occurred in the past six years

like the shootings at Tree of Life Synagogue in Philadelphia and First Baptist Church in Sutherland Springs, Texas, have gotten lots of publicity

Church security expert Carl Chinn says, Odds are their church will never face a serious threat. But if their congregation does face a serious threat, the odds won't matter much."

In that same vein, the author's congregation members heard this advice from a local law enforcement officer: "We don't know when it will happen. We don't know where it will happen. We don't even know what 'it' will be. But it will happen. You would be foolish to be unprepared."

Congregations' fear has mostly arisen because of the increase in mass shootings in public places and the accompanying media coverage.

The author explained the extent of new training. She said "We don't arm worshipers, but we have trained them in the event of a shooting to scatter." If scattering is not possible, they should create as much chaos as they can to confuse the shooter, firing back with whatever is at hand. We were told that throwing hymnbooks can be effective in such cases.

The author laments how the new security feature trouble her and make her proud at the same time "Sometimes I am proud of our congregation's forethought and preparedness. At other times I am

ashamed of our fear. And sometimes I remember with fondness the simple rule of the Red Door Café: if you are hungry, you are welcome."

Each congregation faces its own unique challenges. Each congregation sets its own goals. Each congregation determines its own threshold beyond which concerns for perceived safety undermine the agility of its ministry.

The author concludes with this quote "I believe that a church cannot promise complete safety and security. It can only promise to be a trustworthy place, a place where the safety of all is taken seriously, but where the always risky act of welcoming the stranger remains key to its mission."

(Baer, 2019)

Baer, M. (2019). A CHURCH THAT DWELLS IN SAFETY. Christianity Today, 63(8), 19-21. Retrieved from <u>http://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=rlh&AN=138749868&</u> site=ehost-live&custid=s8899245.

Two states Louisiana and Nebraska, have banned concealed carry in houses of worship, with exceptions for trained security. Individual churches may establish their own policies designating gunfree zones if they would like to keep worshipers from packing in the pews.

Experts at Brotherhood Mutual, which insures churches and ministries, have suggested easy changes that can improve **security** in sanctuaries, like using two-way radios, locking doors to create a single entry point during Sunday services, and pointing out the exits.

Police can also offer an outsider's perspective on the church's vulnerabilities, particularly aspects that a criminal could exploit. Rocks in landscaping could quickly become weapons. Detailed updates or schedules on the church website could tip off criminals, Chinn said.

Although 60 percent of attacks at places of worship involve guns, neither Chinn nor Mitchell who has spent 31 years on the police force— believes anonymous concealed carry in church is wise. He discourages concealed carry at Friendship-West, although he does request some plainclothes members of his security team carry their guns during times of increased threat. But in those cases, those team members wear a special pin so that Mitchell can identify them.

(Meyer, Reicher, & Ellis, 2017)

Meyer, H., Reicher, M., & Ellis, M. (**2017**). When violence invades sacred spaces. *Christian Century*, 134(22), 16-16.

This short article reviews the comments and thought of many people after the shooting at Burnette Chapel Church of Christ in Nashville, Tennessee. A shooting at the church on September 24 that left one woman dead and seven others injured.

McPherson is Burnette Chapel's minister said, "You think you're going to be safe in church,"

The author reported data that people are shot at churches every year across America. There aren't any official government statistics, but the Center for Homicide Research counted 137 shootings at Christian churches from 1980 to 2005.

One challenge Lt. Todd Caron of the Anderson County Sheriff's Office in South Carolina highlighted is the notion that You can't pat someone down and give them a hug at the same time. Lt. Todd Caron said "When greeting people, you can't give them the stink eye. But you should notice if they're disgruntled or upset, they may need some help or you may just want to keep watch on them." Threat assessment

(Hanna, 2000)

Hanna, J. (2000). Secure Your Sanctuary in an Unsafe World. Your Church, 46(2), 18.

This article is about Wedgwood Baptist Church in Fort Worth, Texas

This article discusses security issues concerning churches in the U.S. It also reviews the impact media coverage of the September 1999 shooting at Wedgwood Baptist Church in Fort Worth, Texas. It mentions Education of church members on safety precautions; Storage of valuables; Identification of emergency exits; Conducting of emergency drills; Provision of awareness training to church officers; and Identification of strangers within the congregation.

Church leaders around the country are wondering whether their congregations also are vulnerable to attack and what they ought to be doing to protect themselves. The author suggests putting together a comprehensive plan of action that will help churches to be safe and secure while remaining open and inviting.

The author outlines following focuses will help them do that:

- 1. Focus on Education and training
- 2. Focus on technology
- 3. Focus on safety and
- 4. Focus on God

situational awareness,

Though it's important for everyone to focus on worship, church leaders, staff people, ushers, and greeters should receive awareness training in security. They should identify the exit closest to where you are sitting so you can find it quickly in an emergency. They should also have the congregation participate in an occasional emergency drill to show people how to quickly and efficiently exit the building. Additionally, they should enter the church and exit it in groups, especially at night. Yes, there is safety in numbers.

As greeters reach out to people and shake their hands, they should also be watchful for individuals who seem out of place. Strangers can be greeted, engaged in conversation, and asked if they need help. People with suspicious behavior should be allowed to enter the sanctuary to worship, but they should also be closely watched. Other ushers and leaders should be alerted to the situation so that if a crisis develops, they'll be ready to react.

The church might appoint a church **security team** and/or safety officers to stand ready in case of an emergency. Security people could be police officers, retired military personnel, or others who have the ability and stamina to respond to an emergency situation

Southeast Christian Church in Louisville, Kentucky, has one of the best nonobtrusive security plans and technology systems available. Below are some details about their security:

The church has a welcome center in the front that church doubles as a soft security barrier. It is equipped with security monitors, two-way communication devices, telephones, and an intercom system. Nonuniformed people who work in the center are trained in how to respond to a crisis. Closed-circuit television (CCTV) cameras are positioned discreetly throughout the church complex. (these cameras can be installed in daycare and nursery rooms of a church).

Two-way communication devices, such as portable radios, A good intercom or paging system is important for linking childcare workers with parents or health professionals in the congregation

More churches today are installing technological tools such as security systems, papers, and closed-circuit monitors. As usage rises, prices are coming down, says Michael Benedict, director of Security Pro (Interactive Technologies, Inc.; 800-777-1415, ext. 2206; www.securitypro.com), which manufactures security systems. Vector Security (800-832-8575) also makes security systems for churches. Size of equipment is also going down making them harder to notice.

Some families, especially those with young children, will not come to a church that is not serious about safety issues

Take Action- get going

This means you should assess your situation. Assemble a group of respected, progressiveminded people from your congregation. Ask them how serious they are about helping people feel safe in the church. Encourage them as well as church staff and volunteers to express their thoughts on church security. After gathering this data, honestly, evaluate how vulnerable your church and its ministries are to potential attack.

Appoint a security officer or team. Keep the team small (3-5 members), and train them well. There are several good books and a growing list of resources that can help educate people on church safety

Train others. The security team should train church leaders, ushers, volunteers, and members about their role in making the church a safe place. Remind people that you are doing this not out of fear but because you care about them and want to do what it takes to help them feel safe in every part of the church. Every church should be a haven from--not an invitation to--violence.

(Banks, 2017)

This was a brief update on the Emmanuel African Methodist Episcopal church. Through a partnership with the Medical University of South Carolina in Charleston, the church's new counseling center is staffed by clinicians offering therapy and other care. Security now includes uniformed officers in worship and at Bible study, as well as cameras in the building

("Church violence," 2009)

CHURCH VIOLENCE. (2009). Christianity Today, 53(10), 7-7. Retrieved from

http://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=rlh&AN=44656533&si te=ehost-live&custid=s8899245.

This is a short bulleting with information on what to do If a shooter gets in:

1. Pastors or other visible leaders should draw attention away from the congregation.

- 2. Throw hymnals, yell from multiple directions, and attempt to tackle shooter from behind en masse.
- 3. Establish communication with the police as soon as possible. (Preferably, only those on the church's crisis response team should call 911)
- 4. When the police arrive, stay on the ground until you are told to move. When told to get up, move slowly with no objects in your hand.

(America Magazine, 2017)

When churches are targets (2017). *America*, 217(12), 14-14. Retrieved from <u>http://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=rlh&AN=126464808&</u> site=ehost-live&custid=s8899245

This is a short guide by the Catholic News Service where an expert Carl Chinn is quoted. Carl Chinn, a church security consultant in Colorado Springs, CO, keeps tabs on attacks at places of worship and says incidents of violence have increased on religious properties in recent years.

Carl Chinn advises churches to put together volunteer **security teams** to focus, on keeping an eye out for anything unusual, or anything which is security lingo for "don't look good." He also urges churches to keep their security plan simple—"not something that would fill up a three-ring binder." The security team can be the "eye and ears" of the church— armed if they can be—and properly trained Clergy training for an effective response to intimate partner violence disclosure: Immediate and long-term benefits

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C. Appendix

Study One Research Questions and Answers

<u>RQ 1</u>: What practices do places of worship currently employ to **prevent targeted violence?** <u>RQ 2</u>: what challenges do places of worship experience when trying to **protect their establishments** from active violence?

RQ 3: what practices do places of worship use to recover after a violent event?

RQ 4: What structured approach to addressing violence in places of worship exists in the U.S.?

RQ 1: What practices do places of worship currently employ to prevent targeted violence?

Currently, some places of worship have different approaches, if any to prevent, mitigate, and recover from violence (Baer, 2019; Childress, 2018; Hanna, 2000; Post, 2019). No standardized practices were documented in the selected articles. Some of the practices include parking security vehicles (), some mention training but no information on the type of training was documented (<u>Post, 2019</u>. Other strategies include using two-way radios, locking doors to create a single entry point during Sunday services, and pointing out the exits. <u>Baer, 2019</u> Several PWs had no plan of action to prevent a violent event (Bourns & Wright, 2004); some were arming usher with weapons (Childress, 2018).

RQ 2: what challenges do places of worship experience when trying to protect their establishments from active violence?

Challenges Preventing and Planning for Targeted Violence

A major challenge to protecting PWs from targeted violence, is a lack of a plan to protect PWs. A 2004 study about perceived church vulnerability sought to determine whether pastors/ministers believed violence was increasing in churches, whether church clergy were fearful, and whether the churches had become more security conscious due to violence (Bourns & Wright, 2004). 51 of the 175 churches responded to the questionnaire revealing that churches had no plan of action if a violent act occurred; moreover, the churches did not expect such an act to happen (Bourns & Wright, 2004). More specifically, with the exclusion of a fire, tornado, or earthquake plan, churches had no plan of response against person-on-person violence.

Regarding rates of violence, in 2004, churches reported low levels of violence, but the clergy thought violence and anger were slowly increasing (Bourns & Wright, 2004). At the time of the study, Vandalism and stealing were the major forms of violence reported (Bourns & Wright, 2004). However, in 2018, many PWs had to have safety talks with their leadership teams due to rising rates of violence. For example, Kyle Childress a pastor of Austin Heights Baptist Church in Nacogdoches, Texas discussed some of the conversations his congregation had about church safety after major shootings in places of worship in a 2018 edition of Christian Century (Childress, 2018).

When safeguarding places of worship, several safety concerns were identified in 2004 and 2018, such as having an unknown number of people with keys to the church buildings (Bourns & Wright, 2004). Others include the fact that only a few churches (5%) had safety teams that were mostly comprised of retired senior citizens that functioned like school crossing guards at traffic control points (Bourns & Wright, 2004). Other facilities worried about how many doors should be open during services

and how many ushers and greeters should be serving during each service, and whether or not they needed to be armed with weapons and clip-on walkie-talkies and earpieces (Childress, 2018). Others are trying to figure out how and where to perform "enhanced hospitality" and "extreme welcoming" techniques that involve giving visitors a "holy hug" while simultaneously patting them down (Childress, 2018). Another major safety concern was protection for the nursery and whether adding more locks and adult volunteers would address the safety concerns (Childress, 2018).

RQ 3: what practices do places of worship use to recover after a violent event? <u>Psychological and Mental Impacts of Targeted Violence</u>

A major theme emerging from the articles was the psychological and mental ramifications targeted violence has on worshipers who fellowship in the buildings affected. It has been well established that mass shootings have psychological effects that affect several people, not just the victims (Wilson, 2014). Studies show that Individuals who witness the crime, first responders, victims' family, and friends, and entire communities are known to experience feelings of horror, fear, and disbelief (San Roman et al., 2019). Some evidence suggests that religious support can help buffer the psychological impact targeted violence has on these groups of people.

After the 2015 mass shooting on the campus of Umpqua Community College, researchers found that **religious support** (*specifically, a sense of comfort and support from religious leaders or parishioners*) may be an important factor for helping religious-affiliated individuals cope with, and help buffer against **negative psychological symptoms** (*such as religious/spiritual struggle, depression, anxiety, posttraumatic stress disorder*) and resource loss that often occurs after shootings (San Roman et al., 2019). One practical example of religious support that helped members cope is the preservation of the physical building where the violent incident transpired.

Schools and other sites of mass shootings have been destroyed and rebuilt, but in the case of a religious building, worshipers sometimes reclaim their sacred space (Gass, 2017). For instance, after the shooting during a children's play at Knoxville Unitarian Universalist Church in July of 2008, pews were realigned, walls repainted, and a curtain filled with bullet holes was taken down but saved (Gass, 2017). After the shooting at Sikh temple in Oak Creek, Wisconsin, in 2012, instead of abandoning the sanctuary, worshipers preserved some of the bullet holes in the walls (Gass, 2017). In addition to the preservation of the physical buildings, some congregations hold memorial services.

For those who could not set foot into the buildings again, outside memorials were erected. For example, after the shooting at First Baptist Church of Sutherland Springs in November of 2017, an outside memorial with an emotional memorial service was held because some members expressed that they could never enter the building again (Gass, 2017). Survivors and the general public were invited to view the memorial of chairs, one for each of the 26 victims, bearing the person's name painted in gold with a red rose. One chair had a pink rose for the baby of a woman who was eight months pregnant when she died (Gass, 2017).

Although memorials can help initial healing, the psychological wellbeing of survivors, victims and their parents, friends and families, needs to be directly addressed. This is precisely what Emmanuel African Methodist Episcopal church did after the shooting in June of 2015. Thanks to a partnership with the Medical University of South Carolina in Charleston, the church's new counseling center is staffed by clinicians offering therapy and other care (Christian Century, 2017)

RQ 4: What structured approach to addressing violence in places of worship exists in the U.S.?

Overall, several structured trainings with different components were found. Several organizations and states have their own forms of training using different components of different trainings around the country. Some notable trainings include "Safe Places: Protecting Places of Worship from Violence and Crime" offered by Dolan consulting Group, "Worshipers STRIVE to Survive" offered by STRIVE to Survive (from the University of Toledo) and "Active Shooter Response Training for the Faith-Based Community" offered by Serve DC - The Mayor's Office on Volunteerism and Partnerships.

The Active Shooter Response Training for the Faith-Based Community offered by Serve DC - The Mayor's Office on Volunteerism and Partnerships, is a free 2-hour training program designed for all faith-based communities. As part of this training, attendees receive education on history an demographics of active shooter events and church shootings; PWs lock-down protocols and principles; how to recognize pre-attack indicators; first Aid education; keys to developing a strong security plan; and the 5 O's to survival (Serve DC, 2019).

Safe Places: Protecting Places of Worship from Violence and Crime" offered by Dolan consulting Group is a paid training that addresses several components of violence prevention in PWs. Some of these include: the nature and motives for offending PW; proven techniques for protecting building structures and reducing the likelihood of victimization; strategies for protecting staff, volunteers, attendees, and children that help develop a culture of safety; how to plan ahead for handling a critical incidents (active shooter, mental health crisis, fire, etc.); and case study examples (Dolan Consulting Group, 2019). The training also gives attendees tools to help them assess their own safety issues and train their own staff and volunteers in light of their unique security needs (Dolan Consulting Group, 2019).

A variation of the STRIVE program is "churches STRIVE to Survive," designed to train churchgoers and their leaders. This program is set to launch after STRIVE to Survive is standardized. This compressive 4-hour training based on four phases of addressing a critical incident, namely: prevention (threat assessment), intervention (individualized case management, PW lock down protocol, tourniquets and wound packing training), active response (active shooter drill and evacuation), and postvention (critical incident stress management and mental health recovery).

"Worshipers STRIVE to Survive" designed by several members of the mass violence collaborative at the University of Toledo, is based on a comprehensive simulation-based training "STRIVE to Survive." STRIVE is free a 4-hour long simulation-based training session designed based on the four phases of addressing a critical incident, namely: prevention (threat assessment), intervention (individualized case management), active response (active shooter drill, evacuation, tourniquets application, wound packing), and postvention (critical incident stress management and mental health recovery) (Sexton et.al., 2019). For example, "STRIVE to Survive for Nurses" has added components such as administration and competency of tranexamic acid (TXA) (Pusateri et al., 2013), and use of the Iserson Method of Evacuation method (Iserson, 2013). "STRIVE to Survive for the general public" is a version suitable for people with no medical background. Another variation of this program is "Worshipers STRIVE to Survive," designed to train worshipers and their leaders. A key benefit of STRIVE to Survive is the portable nature of the training. That is, team members, travel to the place of worship for the training sessions.

To date, 105 people have completed the comprehensive (4-hour) STRIVE training and XX completed the abbreviated (1-hour) training. The data indicate that the training statistically significantly increased participants' confidence in acting during a violent event and increased their knowledge in all four phases of addressing a critical incident (Sexton et.al, 2020).

D. Appendix

Study Two: Research Questions, Hypothesis and Answers

1. RQ 1: Is there a statistically significant association between **prior training** (CPR, First Aid, Tourniquet Application, wound packing, threat assessment, active response, and Postvention) and **level of confidence?**

Statistical test: Multiple Regression

A point-biserial correlation was run to determine the relationship between the level of confidence and prior training. Dummy variables were created for each category of prior training (yes, no, not sure). All of the statistically significant correlations were positive and had strengths ranging from weak to moderate. These have been summarized in <u>Table 4 -RQ1- Point-biserial correlation output</u> COMBINED.

A stepwise logistic regression was run to predict the level of confidence (DV) from prior training variables (IVs). Five trainings (Commercial tourniquet, Postvention, Self-Defense, Wound Packing, and Behavioral Threat Assessment), statistically significantly predicted the level of confidence in acting in a violent situation F(5,404), =44.253, R²=.346). Having commercial tourniquet training alone accounts for 24% of the variance in level of confidence.

<u>Hypothesis:</u>

- H10: There is no statistically significant relationship between **prior training** and **level of confidence**.
- H1a: There is a statistically significant relationship between **prior training** and **level of confidence.**

Hypothesis decision:

Reject the null hypothesis.

2. *RQ 2:* Is there a statistically significant association between *demographics* (Age, gender/sex, role in church, ethnicity) and *level of confidence*?

A *Pearson product-moment correlation* was run to determine the relationship between the level of confidence in acting during a violent event and age. A *point-biserial correlation* was run to determine the relationship between the level of confidence in acting during a violent event and remaining demographic variables (gender, ethnicity, role in PW, and religious affiliation). Dummy variables were created for each categorical demographic variable. All of the statistically significant correlations were either negative or positive, and had strength of associations ranged from very weak to weak. These have been summarized in <u>Table 5 - RQ 2 point-biserial correlation combined</u>.

A stepwise logistic regression was run to predict level of confidence from the IV variables that were statistically significantly correlated with level of confidence (namely: Visitors, PW Leadership, General Members, Buddhists, Muslims, Jewish, Genders/He, Genders/ She, Age (in years)?, and being Hispanic, Latino, or of Spanish Origin). Five demographic variables were statistically significant predictors of level of confidence (namely, PW Leadership, Muslims, Age in years, Genders/She, being Hispanic, Latino, or of Spanish Origin) $F(5, 387) = 30.669, p<0.01, R^2 = .275$.

• A *Pearson product-moment correlation* was run to determine the relationship between the level of confidence in acting during a violent event and age. There was a **weak negative**

correlation between the level of confidence and **age**, which was statistically significant (r= -.294, n=393, p <0.01)

- A point-biserial correlation was run to determine the relationship between level of confidence and gender. There was a weak negative association between being female and level of confidence in acting during a violent event that was statistically significant (*r*_{pb} = -.300, n= 411, p<0.01)
- A *point-biserial correlation* was run to determine the relationship between the level of confidence and being Hispanic. There was a **very weak positive** correlation between being **Hispanic** and the level of confidence in acting during a violent event, which was statistically significant ($r_{pb} = .153$, n=411, p= 0.002).
- A point-biserial correlation was run to determine the relationship between level of confidence and religious affiliation. There was a very weak negative association with being Buddhist (being Buddhist meant people were less likely to feel confident) and level of confidence that statistically significant (r_{pb} = -0.101, n=411, p=0.041). There was a weak positive association between being Muslim and level of confidence that was statistically significant (r_{pb} =0.295, n=411, p<0.01). There was a very weak negative association between being Jewish means peole were less likely to feel confident) and level of confidence that was statistically significant (r_{pb} =0.295, n=411, p<0.01). There was a very weak negative association between being Jewish means peole were less likely to feel confident) and level of confidence that was statistically significant (r_{pb} =-0.107, n=411, p =0.31).
- A point-biserial correlation was run to determine the relationship between level of confidence and role in place of worship. There was a weak positive association between being a leader in PW and level of confidence that was statistically significant (*r*_{pb} =0.325, n=411, p <0.01). There was a very weak negative (being a visitor meant people were less likely to feel confident) association between being a visitor and level of preparedness that was statistically significant (*r*_{pb} = -0.109, n=411, p=0.028). There was a very weak negative (being a member meant people were less likely to be prepared) association between being a general member and level of confidence that was statistically significant (*r*_{pb} = -0.119, n=411, p=0.016)

<u>Statistical test</u>: Point biserial correlation and Logistic Regression

- **H2.10:** There is no statistically significant association between *Age* and level of confidence.
- **H2.1a:** There is a statistically significant association between *Age* and level of confidence. <u>Hypothesis decision:</u>
 - Reject the null hypothesis.
- **H2.20:** There is no statistically significant association between *gender/sex* and level of confidence.
- **H2.2a:** There is a statistically significant association between *gender/sex* and level of confidence.

Hypothesis decision:

- Reject the null hypothesis.
- **H2.30:** There is no statistically significant association between *role in church* and level of confidence.
 - **H2.3Ao** There is no statistically significant association between *role of visitor in church* and level of confidence.

- **H2.3Bo** There is no statistically significant association between *role of leader in church* and level of confidence.
- **H2.3Co** There is no statistically significant association between *role of general member in church* and level of confidence.
- **H2.3Do** There is no statistically significant association between *role of staff/volunteer in church* and level of confidence.
- **H2.3Eo** There is no statistically significant association between *role of other in church* and level of confidence.
- **H2.3a:** There is a statistically significant association between *role in church* and level of confidence.
 - **H2.3Aa** There is a statistically significant association between *role of visitor in church* and level of confidence.
 - **H2.3Ba** There is a statistically significant association between *role of leader in church* and level of confidence.
 - **H2.3Ca** There is a statistically significant association between *role of general member in church* and level of confidence.
 - **H2.3Da** There is a statistically significant association between *role of staff/volunteer in church* and level of confidence.
 - **H2.3Ea** There is a statistically significant association between *role of other in church* and level of confidence.

Hypothesis decision:

- Reject the null hypothesis H2.3Ao, H2.3Bo, and H2.3Co. Fail to reject null hypotheses H2.3Do and H2.3Eo.
- **H2.40:** There is no statistically significant association between *race* and level of confidence.
- H2.4a: There is a statistically significant association between *race* and level of confidence.
- **H2.50:** There is no statistically significant association between *ethnicity* and level of confidence.
- **H2.5a:** There is a statistically significant association between *ethnicity* and level of confidence.

Hypothesis decision:

- Reject the null hypothesis.
- **3.** *RQ 3:* Is the level of *perceived preparedness* (for participant, other religious organization members, and religious leaders) to take some action during a violent event more than 40% for participant/ more than 50 % for other religious organization members/ and more than 60% for religious leaders?

More than 40% (43%) of participants felt prepared to take some action if a violent event occurred at their place of worship. Overall, participants thought less than 50% (41.3%) of their PW members and less than 60% (45.1%) of their PW leaders were prepared to act if a violent event occurred in their PW. Overall, participants thought their leaders (45.1%) were more prepared to react if a violent intruder entered their PW. The majority of leaders (78%) who answered the questionnaire thought they were prepared to act during a violent event and only 12% were unsure of their preparation level.

Statistical test: Frequencies

- H3.10 µ ≤ 40%
- H3.1a: μ > 40%

Hypothesis decision:

- Reject the null hypothesis.
- H3.1o µ ≤ 50%
- H3.2a: μ > 50%

Hypothesis decision:

- > Fail to reject the null hypothesis.
- H3.1o µ ≤ 60%
- H3.3a: μ > 40%

Hypothesis decision:

> Fail to reject the null hypothesis.

4. RQ 4: Is there a statistically significant association between religious affiliation and the perceived threat of a violent event?

There is a statistically significant difference between groups as determined by one-way ANOVA (F (5,405) = (4.018), P = 0.001). The highest mean perceived threats were reported for Muslims (35.4789), Jews (35.0548), and Sikhs (35.0000). However, a Tukey post hoc test revealed that the Perceived threat of violence was significantly higher among **Muslims** (35.4789 ± 7.57224 units, P = .005) and **Jews** (35.0548 ± 5.59238 units, P = 0.015) when compared to **Buddhists** (31.0000 ± 7.02071 units). There was no statistically significant difference between Buddhists (31.0000 ± 7.02071 and Sikhs (35.0000 ± 8.82547 units, P = 0.284). Although Sikhs had the lowest number of questionnaire responders, they reported the third-highest mean perceived threat of violence. The mean perceived threat of violence for Sikhs was .050 less than the reported mean threat of violence reported by Jews (35.050) and .048 less than the mean threat reported by Muslims (35.47). This is summarized in tables (<u>Table 18- One Way ANOVA Summary Table</u>) and figures (Figure 6- Means Plot for RQ 4 One-Way ANOVA) section.

Statistical test: One-Way ANOVA

- H4.o: There is no statistically significant association between religious affiliation and the perceived threat of a violent event
 - **H4. Ao:** There is no statistically significant association between **religious** affiliation = Buddhist and the perceived threat of a violent event
 - **H4. Bo:** There is no statistically significant association between **religious** affiliation = Hindu and the perceived threat of a violent event
 - **H4. Co:** There is no statistically significant association between **religious** affiliation = Muslim and the perceived threat of a violent event
 - **H4. Do:** There is no statistically significant association between **religious** affiliation = Christian and the perceived threat of a violent event
 - **H4. Eo:** There is no statistically significant association between **religious** affiliation = Jewish and the perceived threat of a violent event
 - H4. Fo: There is no statistically significant association between religious affiliation = Sikh and the perceived threat of a violent event

- H4.Aa: There is a statistically significant association between religious affiliation and the perceived threat of a violent event
 - H4. Ao: There is a statistically significant association between religious affiliation = Buddhist and the perceived threat of a violent event
 - **H4. Bo:** There is a statistically significant association between **religious** affiliation = Hindu and the perceived threat of a violent event
 - **H4. Co:** There is a statistically significant association between **religious** affiliation = Muslim and the perceived threat of a violent event
 - **H4. Do:** There is a statistically significant association between **religious** affiliation = Christian and the perceived threat of a violent event
 - **H4. Eo:** There is a statistically significant association between **religious** affiliation = Jewish and the perceived threat of a violent event
 - **H4. Fo:** There is a statistically significant association between **religious** affiliation = Sikh and the perceived threat of a violent event

Hypothesis decision:

> Reject the following null hypothesis **H4.Ao**, **H4.Co**, and **H4.Eo**.