

THE MENTAL HEALTH EFFECTS OF VICARIOUS TRAUMA, MORAL INJURY,
AND POSITIVE RELIGIOUS COPING WITH CANINE COMFORT HANDLERS

by

Terri O'Brien-Cross

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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ABSTRACT

The intention of this study was to examine whether positive religious coping buffered the mental health effects of vicarious trauma and moral injuries in canine comfort handlers. By examining whether positive religious coping would reduce symptoms of posttraumatic stress disorder (PTSD), a better understanding of the mental, emotional, and spiritual effects of volunteer handlers was discovered. Handlers work throughout their communities and deploy to crisis events such as mass shootings and natural disasters. By partnering with highly trained canines, they provide support and comfort to those in need. During these interactions, handlers are often exposed to traumatic situations and may experience moral injuries. A sample of 83 participants were recruited from two canine comfort organizations, LCC Comfort Dog Ministry and HOPE Animal-Assisted Crisis Response. Both programs have established handlers across the nation. A quantitative survey study was conducted using a multiple regression method. The survey included four different instruments that assessed vicarious trauma, moral injury, religious coping, and symptoms of PTSD. The data were analyzed utilizing Qualtrics and IBM SPSS Statistics 29. The results indicated that the buffering effect of positive religious coping fell short of statistical significance between vicarious trauma and PTSD as well as moral injury and PTSD. Additional findings suggest that canine comfort handlers can experience symptoms associated with vicarious trauma and moral injuries related to their volunteer work. Further examination of the mental health effects within this population is warranted.

Keywords: canine comfort handlers, religious coping, trauma, and moral injury

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Dedication

This dissertation is dedicated to my family. To my parents, Richard and Sandy O'Brien, throughout my life you have shown me how to love and care for others, how to stand up for what is right, and to be mindful by "stopping and smelling the roses." Grounded in faith, you promoted a life filled with laughter and lightheartedness, demonstrated courage during adversity, and revealed ways to be a positive light in this world. I am certainly blessed and forever grateful for your teachings and your unconditional love. To my brother David, life would have been very different without you. I am thankful that we share childhood memories and remain close throughout our adulthood. Your gift of analytical knowledge that often stretched beyond my reach presents a grand opportunity for me to explore the mind of a genius. My boys, Colton and Caleb, abundant blessings when God entrusted me to be your mom. Thank you for not only broadening my horizons, but helping me truly understand life's significant meaning and purpose. To Bryan, I thank God that He had our paths cross. You believed in me from the very beginning, and with your encouraging words you stood by me throughout this journey. With you my life is filled with true love, peace, and happiness. To my heavenly grandparents, M.J. and Bertie Mae Alford, you have taught the importance of balancing work and play. From dancing the night away to embracing the depths of a novel, you both instilled core values that I carry with me. To Robert and Golda O'Brien, the roots run deep within our Irish heritage. Thank you for supporting my educational goals. To all those who have encouraged and supported me throughout this academic feat, I want to sincerely thank you and know that this is not an accomplishment of one.

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Finally, I want to sincerely thank the canine comfort handlers, the canines, their partners, and their organizations for the work that they are doing all around the nation. I also want to acknowledge those handlers and canines who are no longer with us on Earth but who have fulfilled their mission and who await us in heaven. Your tremendous dedication to serving others in times of need is a selfless act of love which can create a profound effect. This is what has inspired this research. Without your participation in the study, this would not have been possible.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

Although volunteering to help others can be intrinsically rewarding, it can also create a variety of mental health challenges. Supporting and comforting others during times of crisis or grief can allow the exposure of trauma and at times can produce difficulties in morality. The ability to cope with grief, stress, and traumatic situations is a critical skill needed to support mental health and well-being throughout the lifespan. Individuals manage challenges in a variety of ways, one of which may involve religion. Positive religious coping could reduce the effects of these specific mental health concerns. This study aimed to further understand how these factors could affect the mental health of canine comfort handler volunteers. An individual who has developed positive coping strategies based on religious beliefs may have skills to address adversity or the adversity of others. Religious practices may also affect the mental health of an individual exposed specifically to vicarious trauma (VT) and moral injuries. This research not only explored levels of VT and moral injury but examined whether positive religious coping reduced the symptoms of posttraumatic stress disorder (PTSD).

Background

VT

Much of the research in the field of psychotraumatology has primarily been focused on individuals who have experienced trauma and their responses to care and treatment. More recently, there has been a focus on how trauma impacts the helper. VT can result in affective and cognitive problems due to being exposed to the trauma of others (Jimenez et al., 2021). This mental health concern is associated with

reexperiencing and at times avoiding traumatic material. There is a large amount of research on VT with professional mental health providers and first responders.

Weingarten et al. (2020) focused more recently on the COVID-19 pandemic and first responders. Canine comfort handlers also supported and comforted others during the pandemic; however, there is limited to no research conducted with volunteer canine comfort handlers. A study conducted by Jimenez et al. (2021) revealed that exposure to VT may result in long-term cognitive, emotional, and spiritual concerns. Mental health providers are highly trained to identify, manage, and cope with trauma interactions and possible effects. After years of educational training and experiences, mental health professionals are prepared and understand the risk and protective factors related to their work with clients. However, research conducted by Jimenez et al. revealed that this population can still experience negative effects of VT which may cause long-lasting impairment. These researchers also supported the need for interventions for these types of professionals to improve their work with clients and to support their positions in the field.

Within the research on VT with professionals, conflicting results have been revealed. Wild et al. (2020) studied the effectiveness of resilience to address stress with first responders. A study by Ball et al. (2020) examined professionals in the helping fields who typically can experience VT, moral injury, and other related mental health challenges. After conducting a qualitative study, students in an Australian clinical psychology master's program during training revealed the beginning stages of VT and moral injury as well as other mental health related problems (Ball et al., 2020). These researchers explored the clinical experiences of psychologist trainees. They found that

even professionals in the field of psychology can experience problems after the exposure of trauma due to empathetic bonding with a client (Ball et al., 2020).

According to another study by Greinacher et al. (2019), low levels of trauma were revealed with some first responders; however, the authors cautioned the results due to social desirability and concerns with potential job loss. Protective and risk factors were also considered with this population. A highlight of the study was a correlation found between VT and symptoms of PTSD. The study indicated that protective factors such as resiliency due to social support and risk factors including the female gender were consistent with findings compared to other groups within the literature (Greinacher et al., 2019).

Research has also been conducted with military chaplains who experience trauma during deployments in which some develop symptoms of PTSD (Whitworth et al., 2021). The researchers noted that to further support military chaplains' specific mental health psycho-education curriculum and strategies to enhance programs that focus on camaraderie and support could be implemented. Findings from research conducted by Juczynski et al. (2022) which studied Roman Catholic clergymen in Poland revealed that those who act as advisors to individuals who experienced a traumatic event are also exposed to trauma. The researchers noted that greater awareness and skills are needed for clergymen to address the complexity of mental health factors related to helping others who turn to them for support (Juczynski et al., 2022).

A review of literature focusing on families of first responders was conducted which revealed a rippling effect of VT onto spouses and children (Casas & Benuto, 2022). This research is critical as it shows how family members of those who help and

serve others can also be affected by VT due to the work of their loved ones. According to Casas and Benuto (2022), this could result in generational trauma. These issues could also arise with canine comfort handlers and their families.

In comparison to other populations, canine comfort handlers may receive minimal information related to trauma exposure and the importance of directly addressing these types of mental health concerns. Thormar et al. (2016) explained that 24%–46% of disaster volunteers develop PTSD. The study was one of the first to examine symptoms of this disorder with these types of volunteers and it was recommended that organizations aid their volunteers by providing PTSD screening, assessment, and support (Thormar et al., 2016).

Scripture speaks of bearing the burden of others in Galatians 6:

Brothers, if anyone is caught in any transgression, you who are spiritual should restore him, in a spirit of gentleness. Keep watch on yourself, lest you too be tempted. Bear one another's burdens and so fulfill the law of Christ.

(BibleGateway, 2011)

Handlers of faith may choose to dedicate their time and resources to support and assist individuals who are suffering. Their intentions may be a sacrifice of self to bring comfort to others in crisis. The Bible encourages people to be kind and gentle towards individuals hurting and to help them through hard times. The Bible also explains the importance of self-awareness and self-care (BibleGateway, 2011).

Psychological research has revealed that exposure to trauma can impact helpers and addressing these concerns is critical to an individual's emotional, mental, and spiritual well-being (Juczynski et al, 2022). After reviewing current research on a variety

of populations, VT has been shown to be a concern for individuals who provide empathy and support to others. There is no research revealing how canine comfort volunteer handlers may be affected by this type of trauma. These types of handlers are exposed to VT by engaging within their communities and working with survivors of natural disasters and mass shootings. This research study assessed the canine comfort handlers' levels of VT.

Moral Injury

Another mental health concern for those who work with others who have experienced trauma or crisis is the potential to experience moral injury. Moral injuries occur when someone is exposed to the aftermath of ethical violations because of one's actions (Antonelli, 2017). Examples of moral injury could include witnessing or learning about individuals who have killed or harmed others or not being able to serve all the individuals suffering after a natural disaster (West & Cronshaw, 2022). This could be due to the sheer mass number of people in need or internal struggles that prevent engagement.

Much research has been discovered about moral injuries and the effect on active military and veterans (Ball et al., 2020; Burkman et al., 2019; West & Cronshaw, 2022). Individuals may experience feelings of worthlessness, despair, isolation, and suicidal ideation after a moral injury. A phenomenological case study was conducted that explored moral and spiritual injuries and soul repair with military personnel (West & Cronshaw, 2022). It was revealed that these specific types of injuries naturally overlap, which highlights the need for further spiritual care and healing through church communities and among military chaplaincies (West & Cronshaw, 2022).

According to Liebert (2019), PTSD and moral injury can coexist and those who have developed a strong sense of morality could even be more vulnerable to moral injuries. Research conducted by Liebert (2019) explored how moral injuries can be aided through spiritual practices. Various strategies have been outlined that can combat or reduce these forms of injuries, such as contemplative and deep empathetic listening (Liebert, 2019).

Williamson et al. (2018) reviewed 13 articles related to the role of moral injury on mental health. Most of the population involved individuals who are also serving in the military or veterans. Consistent with other studies, the correlation between moral injuries and PTSD was strong, related to symptoms such as intrusive thoughts, negative appraisals like shame and guilt, and reliance on avoidance to cope. Tingey et al. (2019) conducted a study that focused on mass shootings and buffering effects that may create moral elevation rather than injury. It was revealed that compassion and social support may be buffers to moral injury (Tingey et al., 2019). Experiencing moral elevation may help further understand the social and emotional influences involved in moral injuries. Regarding the impact of moral injuries, researchers reported that civilian studies are lacking and may reveal similar or different safeguards (Williamson et al., 2018). After reviewing the literature, no studies were found that focused on moral injuries in a population of canine comfort handlers.

In Romans 8:18, the Bible speaks of suffering, stating, “For I consider that the sufferings of this present time are not worth comparing with the glory that will be revealed to us,” and in 2 Corinthians 1:5, “For as we share abundantly in Christ’s sufferings, so through Christ we share abundantly in comfort too” (BibleGateway, 2011).

Scripture provides guidance regarding the suffering of self and fellow humans as well as the gift of being comforted by the Lord. Moral dilemmas can be stressful and confusing, but the Lord reminds us that we are not alone. By having a secure relationship with God dealing with moral injuries may be easier to manage.

Positive Religious Coping

Individuals who volunteer to help others and who rely on God for life orientation and meaning can be affected by positive and negative religious coping. An Italian study of volunteers that help others found that life satisfaction can be negatively affected by spiritual dryness (Bussing et al., 2018). It was explained that this is a phase of a spiritual crisis, and that spiritual guidance and support is needed. In another study by Captari et al. (2018), the researchers examined the roles of positive and negative religious coping in buffering the effects of depression, anxiety, posttraumatic stress, and burnout in disaster relief humanitarian workers. The outcome revealed that negative religious coping was a risk factor for mental health issues (Captari et al., 2018).

Positive and negative religious coping have been shown to affect mental health in various populations. However, there is no research on religious coping with a population of canine comfort handlers. Although, similar research conducted by Kaufman et al. (2020) on canine search and rescue handlers revealed elevated levels of PTSD due to certain risk factors. Protective factors for that population had not been examined in the literature until the study found that resiliency and social support appeared to be beneficial elements. Positive religious coping may also be a protective factor within the canine comfort handler population and examining this variable offered additional insight.

Scripture speaks to building a relationship and coming to the Lord in Matthew 11:28-30, “Come to me, all you who are weary and burdened, and I will give you rest” (BibleGateway, 2011). Trusting the Lord will provide strong direction as indicated in Proverbs 3:5-6, “Trust in the Lord with all your heart and lean not on your own understanding; in all your ways submit to him, and he will make your paths straight,” and in Psalm 62:8, “Trust in him at all times, you people, pour out your hearts to him, for God is our refuge.” (BibleGateway, 2011). Whether it be VT, moral injuries, or some other form of hardship, the Bible teaches the importance of strengthening the relationship with the Lord and following the teachings within the Bible.

Problem Statement

Direct and indirect exposure to traumatic events can lead to mental health concerns (Queiros et al., 2020). Volunteers who respond after disasters or traumatic events have a 24%–46% risk of developing PTSD (Thormar et al., 2016). VT may be a common element due to the work conducted by a canine handler; however, the engagement process may not always lead to negative consequences (Hallinana et al., 2019). There are possible protective factors that could be further examined (Kaufman et al., 2020).

Canine comfort handlers who are similar to secondary crisis responders may also experience moral injuries. Moral injuries could lead to functional impairments and distress and contribute to symptoms of PTSD (Brondolo et al., 2018; Papazoglou et al., 2020). Focusing on potential protective factors positive religious coping has been found to buffer the effects of stress and negative affect (Whitehead & Bergeman, 2020). Research has revealed many benefits of animal-assisted therapy, including canine

interventions with various populations (Swall et al., 2016). The literature did not demonstrate ways in which VT, moral injuries, and positive religious coping could affect the level of symptomology related to PTSD in canine handlers.

As mentioned, there was a gap in the literature examining the mental health of canine comfort handlers, specifically VT, moral injury, and PTSD symptoms. Handlers partner with highly trained canines and respond to crisis situations to offer support and comfort to individuals who have experienced trauma. By examining how VT, moral injury, and positive religious coping affect the mental health of canine comfort handlers, individuals and organizations now have an opportunity to gain greater awareness of the risks involved which could lead to opportunities for additional support and mental health trainings. Also, by obtaining clarity regarding this phenomenon, organizations will now be able to further a proactive stance to ensure the needs of the handlers are being addressed. This could lead to healthier handlers who promote and provide healthier interventions with those they serve.

By examining these elements, individuals who volunteer to provide comfort and support to others in crisis will be provided with information regarding potential risks and possible protective measures. Canine comfort handlers could continue with their mission of serving others with a better understanding of the mental health effects related to their service. By conducting this study, a demonstration of care and concern for the well-being of this population was also revealed.

Purpose of the Study

The purpose of this quantitative survey study was twofold. First, to examine the correlations among positive religious coping, levels of PTSD symptoms, and VT.

Second, to examine the correlations among positive religious coping, levels of PTSD symptoms, and moral injury in canine comfort handlers. A sample of 83 participants were recruited from two partnered canine comfort organizations, Lutheran Church Charities (LCC) Comfort Dog Ministry, which has established handlers across the nation, and HOPE Animal-Assisted Crisis Response, which also operates throughout the United States. Through this correlated data, strengths and/or direction of the relationships of the variables were assessed.

The independent variable or covariate was positive religious coping, and the dependent variable was PTSD symptoms. Other covariates included VT and moral injury. The aim of this study was to examine how positive religious coping buffered the mental health effects of VT and moral injury in canine comfort handlers. To measure VT, the Vicarious Trauma Scale (VTS) was utilized (Jimenez et al., 2021). Moral injuries were measured by the Moral Injury Exposure and Symptom Scale-Civilian (MIESS-C; Nash et al., 2013). To measure positive religious coping, the Brief RCOPE was used (Kenneth et al., 2011). Finally, the selected measurement tool for trauma was the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2018). The research was conducted to examine whether positive religious coping moderated levels of VT and moral injury, resulting in a reduction of symptoms associated with PTSD.

Research Questions and Hypotheses

Research Questions

RQ1: Does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of VT?

RQ2: Does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of moral injury?

Hypotheses

Hypothesis 1: Positive religious coping would reduce symptoms of PTSD in canine comfort handlers experiencing a high level of VT.

Hypothesis 2: Positive religious coping would reduce the symptoms of PTSD in canine comfort handlers experiencing a high level of moral injury.

Theoretical Foundations of the Study

The foundation of this study is built on the constructivist self-development theory (CSDT) which focuses on self, traumatic memories, psychological needs, and a related cognitive framework. Vides et al. (2022) illustrated that CSDT provides a foundation through which to understand the social and behavioral functioning disruptions that can occur after an individual experiences a traumatic event and the relationship between emotional regulation and attachment. This approach offers the concept that an individual while interacting with their environment can create their own reality (McCann & Pearlman, 1990; Vides et al., 2022). This theory is specifically relevant to VT which explains psychological reactions to trauma. Following the CSDT, humans use life events that aid in the creation of a worldview which can then explain individual reactions to trauma. This theory also supports the concept that trauma symptoms and possibly other mental health concerns can be diminished or increased by internal and external factors. Some evidence suggests that social support and positive religious coping could diminish the mental health effects related to VT and moral injuries (Kaufman et al., 2020; Liebert, 2019).

There is a biblical perspective of the constructs within this study. According to Romans 8:28, “And we know that for those who love God all things work together for good, for those who are called according to his purpose,” and 1 Corinthians 29:18, “O Lord, the God of Abraham, Isaac, and Israel, our fathers, keep forever such purposes and thoughts in the hearts of your people, and direct their hearts toward you” (BibleGateway, 2011). Disaster and crisis volunteers choose to give freely their time and resources to help others in need. The Bible provides encouragement to act, look after others who are suffering, and to give of self to make a positive difference in the world. The Bible also provides guidance of caring for the mind, body, and soul (BibleGateway, 2011). Canine comfort handlers leave their homes and often travel around the country to provide support and comfort to individuals who are physically, mentally, emotionally, and spiritually hurt. By doing so, they are at risk of being exposed to trauma and experiencing conflicts of morality which could lead to mental health concerns. To ensure longevity with minimal negative impact, it is important to know the risks and to also understand potential protective factors.

Definition of Terms

The following is a list of terms used in this study:

Canine Comfort Handlers – Volunteers who team up with a highly trained canine to provide support and comfort to individuals in their communities and nationwide to those who have experienced a traumatic event.

Lutheran Church Charities K-9 Comfort Care (LCC K-9) – Volunteers who engage in a national human-care ministry using the unique and calming nature and skills of purebred Golden Retrievers. A handler uses a trained canine as a bridge for

compassionate ministry which supplies many opportunities to discuss faith and share the mercy, compassion, presence, and proclamation of Jesus Christ (LCC, 2008).

HOPE Animal-Assisted Crisis Response (HOPE AACR) – Specially trained dogs and volunteer handler teams who provide comfort in times of crisis by bringing emotional support and care.

Moral Injury – Exposure to events that violate core moral and ethical beliefs (Griffin et al., 2019; Yeterian et al., 2019).

Positive Religious Coping – Seeking spiritual support and forgiveness from God or a higher power, as well as having more benevolent religious appraisals in general (Walker et al., 2022)

Posttraumatic Stress Disorder (PTSD) – First, direct, or indirect exposure to a traumatic event, followed by symptoms in four categories: intrusion, avoidance, negative changes in thoughts and mood, and changes in arousal and reactivity (American Psychological Association, 2013).

Vicarious Trauma – A disruption of an individual's safety, trust, self-esteem, control, and intimacy which results in a negative perception of self, other people, and the world (Ball et al., 2020). This can occur when helpers engage empathetically with individuals or communities that are experiencing trauma (Ball et al., 2020).

Assumptions and Limitations of the Study

The population that was selected for this study included individuals who volunteer their time and resources to help others. The nature of this work requires extensive flexibility, travel time, and sometimes financial reserves. For this type of volunteer work, it is understood that the commonality of age would be revealed due to the

necessary requirements listed above. Most of these types of handlers have reached a stage in their life where retirement may be an option and therefore, work schedules could allow for more flexibility. It is assumed that diversity would also be limited in areas of race and religious beliefs. Most of the participants expressed Christianity as the foundation of their religious beliefs. One of the partnered canine organizations is directly connected to the Lutheran church and as part of their mission offers ministry during their interventions.

It is assumed that some participants may have believed negative outcomes may occur if they are truthful about the emotional or mental challenges of being a handler resulting in social desirability issues. Participants may have had concerns about exclusion from future deployments or community activities due to struggling with their own mental health or being judged as not being a strong enough believer in the Lord. This could result in dishonest survey responses. For other types of handlers, the recruitment demographics may have revealed different outcomes. This reduced diversity in participants may limit generalization of results. The instruments used to gather the data are based on self-report which impacts reliability. Due to the survey containing close-ended questions, validity may also be a challenge. It was noted that many participants started the survey but did not complete it. One big limitation was the recruitment process. The individuals who wanted to participate had to utilize technology to complete the survey. The survey included four embedded assessments that added length to the survey. This approach was needed for data collection purposes; however, this may have created participant fatigue. It is also believed that face-to-face contact with potential recruits would have allowed for an increase in trust and an increase in participation. In today's society, people are inundated with electronic scams and spam, and there is concern for

negative outcomes related to unknown emails, phone calls, and so forth. Although the emails came directly from members of the organizations, there may have been concern regarding the legitimacy of this project. Having direct contact with the researcher may have allowed for additional study details to be provided, questions answered, and a reassurance that the study is ethically sound and is being conducted with good intentions.

Another potential limitation was researcher bias. This researcher assumed that canine handlers experience VT and moral injury not only during the events of crisis but also during their normal activities throughout their communities. This researcher has collaborated with teams of canine comfort handlers during crisis interventions, has seen their work during regular outings into the community, and has provided VT training to some handlers at an annual LCC canine handler conference. Although awareness of researcher bias is clear based on these assumptions, a secondary reviewer was implemented to review the research data results to reduce likelihood of bias.

Significance of the Study

This research study has contributed to the field by examining multiple variables with an understudied population. No earlier research has been found that examined the combination of these specific mental health factors with this type of crisis responder. Due to the ongoing traumatic events that occur across the nation, such as bombings, mass shootings, natural disasters including hurricanes and tornadoes, as well as many other daily community situations that are met by canine comfort handlers, this research study was relevant and has supplied beneficial findings. The results of this study are helpful to the field and specifically to this population and eventually to the clientele that these volunteers serve. The findings revealed information that could be used to enhance

training curriculum to address the mental health needs and overall well-being of canine comfort handlers in the future.

According to Vides et al. (2022), the CSDT creates a foundation which helps further understand how disruption can occur after trauma exposure. It also helps illustrate the importance of healthy connection with self and others (Vides et al., 2022). According to the elements involved in this theory, an assessment of VT, moral injuries, and positive religious coping would expand the current understanding related to the risk and protective factors that contribute to the mental health of canine comfort handlers (Vides et al., 2022). By also examining levels of PTSD, the strength of the relationship was also revealed between positive religious coping and VT as well as moral injury. Studying volunteers who manage working canines while being exposed to traumatic situations has helped expand the psychological field and these findings can promote implementation of organizational interventions such as psychoeducation and therapeutic programs for the handlers.

The final and particularly crucial element of concern is the impact on the individuals being served. If canine handlers are struggling to deal with their own mental and emotional well-being and are not aware nor provided with resources to address these needs, they could unknowingly hinder the healing process for others. Engaging with individuals who are suffering requires personal awareness, healthy coping techniques, effective management tools, and healing strategies. If the negative effects related to the

work are recognized and addressed, the handlers could be better equipped to intervene in the aftermath of others' traumatic situations.

Summary

Canine comfort organizations intervene with individuals who may be facing hardships. This suffering could be related to a traumatic event or any other familiar challenges that life presents, such as physical health or loss of a loved one. A canine team that consists of a handler and a canine engage with their communities and are deployed to crises across the nation. The mission is to make a positive difference by offering support, comfort, and even biblical teachings when requested. Due to this line of volunteer work, there is exposure to VT and moral injuries which could contribute to symptoms of PTSD. An extensive literature review was conducted, and a gap was found.

Utilizing the CSDT, this research study was conducted to examine the effect of positive religious coping in the reduction of PTSD symptoms with canine comfort handlers who are exposed to VT and moral injuries. The quantitative study's design was provided, including four instruments that were combined and used in a survey to gather the data which were then analyzed. The problem, purpose, method, limitations, and the study's significance are also included. The findings of this research could help canine comfort handlers, their organizations, and the individuals being served. The Bible supplies guidance in Hebrews 6:10 and teaches that "God is not unjust, He will not forget your work and the love you have shown Him as you have helped His people and continue to help them" (English Standard Version Bible [ESV], 2001). The following chapter will share the findings of the literature review of recent peer-reviewed work related to animal-

assisted interventions, canine comfort handlers and volunteer work, VT, moral injury, and positive religious coping.

CHAPTER 2: LITERATURE REVIEW

Overview

Helping professionals and volunteers who provide support and comfort to others during times of stress could be intrinsically rewarded by their work; however, they could also be negatively affected. By working with those who are struggling, helpers may experience various mental health challenges such as VT and moral injuries. A thorough review of the literature was conducted which examined research involving the risks and protective factors for individuals who choose to help and support others amid crisis or suffering. There is no research regarding the mental health of canine comfort handlers and therefore, a comprehensive review was also conducted with first responders, disaster volunteers, and military personnel such as clergies. Identifying potential issues revealed in other populations could further increase understanding of what canine comfort handlers may be experiencing.

Through an examination of research associated with both risk and protective factors that contribute to mental health outcomes, specifically symptoms of PTSD, a deeper understanding was developed with the targeted population. This awareness could promote the well-being of this specific group of helpers. First, by recognizing possible mental health effects and second, by engaging in proactive strategies such as psycho-education training opportunities, debriefings, and other types of interventions.

This review focused on research associated with animal-assisted interventions, VT and first responders, moral injuries and veterans, positive religious coping with individuals of faith, and a combination of various mental health concerns, specifically PTSD symptoms, within these populations. Animal-assisted interventions such as canine

comfort animals and their handlers are designed to provide services in schools, hospitals, and among first responders such as emergency personnel and law enforcement officers. They help military and veteran populations as well. Not only do they work within their communities, but they are also integrated into crisis response teams across the nation (HOPE AACR, 2023; LCC K-9, 2023). Research has revealed that VT and moral injuries could be mental health concerns and could result in negative outcomes for those exposed to these elements (Coady et al., 2021; Williamson et al., 2018). Research has also shown that one buffering effect of PTSD symptomology is positive religious coping (Captari et al., 2018).

Description of Search Strategy

This literature search was conducted through various databases including Liberty University's online library, PsycINFO, PsycARTICLES, Research Gate Net, and Scholar Works using the keywords: canine comfort handlers OR animal-assisted therapy canine handlers OR comfort dogs OR animal assisted therapy OR first responders OR secondary responders OR volunteers AND vicarious trauma OR secondary trauma OR secondary traumatization OR trauma exposure AND moral injury AND positive religious coping AND post-traumatic stress disorder OR mental health effects.

The inclusion criteria primarily focused on peer-reviewed research published within the past 5 years. Added inclusion criteria included articles that were written or translated in the English language. Once found and selected, the articles were exported to RefWorks for bibliography creation and citations. The biblical research was conducted by using BibleGateway through biblegateway.com and the ESV Bible through biblestudytools.com.

Review of Literature

This review focused on exploring past and recent research studies related to the mental health effects of individuals who help others who are suffering. Due to the lack of previous studies focusing on the mental health of canine comfort handlers, a larger research exploration was conducted. This review included animal-assisted interventions, VT with a similar population such as first responders, moral injuries with veterans who encounter moral dilemmas, and the effects of positive religious coping with people of faith.

During the review of the literature relating to the constructs of this research study, it was clear that researchers have defined canine comfort dogs and VT in many ways. Locating precise definitions was difficult as some of the terms are defined differently throughout the research. Certain words were also used interchangeably within the literature; therefore, to help clarify and enhance understanding, a brief explanation will be provided. Canine comfort handlers are volunteers who utilize highly trained canines. Typically, these handlers are not trained as public service professionals. These are individuals who volunteer through an organization to provide their time, energy, and other resources to give back to society. VT has been used interchangeably with the terms compassion fatigue, critical incident distress, and secondary trauma and is like the exposure of a single or cumulative trauma-related helping experience (Ball et al., 2020). For this study, the term VT will be used.

In past research literature, there are many studies that reveal the harmful effects of VT in first responders and other populations such as mental health professionals. There are other problems that are revealed in the studies such as moral injuries, mostly among

military personnel. Some research has focused on protective factors such as the benefits of positive religious coping within disaster volunteers and clergy populations. Much of the research about animal-assisted intervention has focused on the populations being served which has indicated positive mental health outcomes. Studies have also been designed to examine the welfare of the canine. However, there is a gap in the literature that focuses primarily on the mental health of the canine comfort handler, specifically concerns such as VT and moral injury due to their type of volunteer work. There are also no studies that examined how positive religious coping affects the mental health of these handlers. A thorough examination of the factors that affect the mental health of handlers has discovered areas that could be addressed. This could promote overall well-being. The comprehensive literature review will begin with the animal-assisted interventions, discussing the history of these strategies, and then will move on to the canine handlers. Studies that focused on mental health concerns such as VT, moral injuries, and positive religious coping will be described. Scripture related to the elements within this study will be presented. This research study was designed with a biblical foundation which integrated research literature with biblical teachings.

Animal-Assisted Interventions History

Many individuals have been shown to experience mental health benefits through human-animal engagement with rabbits, poultry, and goats; however, the most popular species being integrated to assist humans include dogs and horses. For over 15,000 years, human beings and dogs have coexisted (Sundman et al., 2019). One of the first human-animal interactions designed for therapeutic purposes occurred in 1792 at the Quaker York Retreat in England (Fine et al., 2019). Early Greeks used horseback riding to

improve the mood of patients (Trevathan-Minnis et al., 2021). Rabbits and poultry have also been used for this purpose. In the 19th century, canines were trained to help individuals diagnosed with blindness. Due to unintentional animal integration and awareness of potential human benefits, this interaction was further explored. In the 1930s, Sigmund Freud also used his dog in therapy sessions and noticed unintentional positive outcomes (Trevathan-Minnis et al., 2021).

Another pioneer in psychology who unintentionally introduced canines into practice was Boris Levinson (Fine et al., 2019). In the 1950s, this animal-assisted approach was ridiculed and was not accepted as a method in therapeutic engagement. In the 1970s, however, Samuel Corson and Elizabeth O’Leary Corson studied canine interventions in a psychiatric setting. Due to these happenstance engagements, it was noted that patients improved communication with others due to the mere presence of the canines. These situations led to further investigation of animals in daily life and in therapeutic settings (Fine et al., 2019).

To further the understanding of the animal-assisted approach, history reveals much about the canine. There are at least 20 professions for dogs. This would include working dogs that are embedded within police departments and other agencies. These may include specially trained canines for suspect tracking and apprehension, narcotics and explosive detection, and search and rescue. There are also canines trained for service and aid that work with individuals diagnosed with blindness, deafness, traumatic brain injuries, epilepsy, anxiety, depression, and other challenges. Dogs can also help therapists during therapy sessions, which research studies have revealed to be an effective intervention by decreasing anxiety and other symptoms related to mental health concerns

(Kline et al., 2019). Canine interventions have also shown positive psychological impact with pediatric oncology patients (Silva & Osorio, 2018).

In the past 50 years, animal-assisted interventions continued to evolve. Animal-assisted interventions were developed to positively affect the health of a human by using animals in a therapeutic manner (Glenk, 2017; Glenk & Foltin, 2021). Although equine therapy is a method that is conducted with individuals diagnosed with autism, trauma, and other mental health concerns, dogs are most often used due to their availability and ability to be easily trained (Glenk & Foltin, 2021).

A quasiexperimental research study was conducted utilizing canines with female inmates with mental health issues (Holman et al., 2020). The importance of canine intervention with individuals who have experienced trauma was noted as results revealed a reduction of anxiety, depression, and symptoms of PTSD (Holman et al., 2020). Courthouse canines and handlers have also assisted child survivors of trauma during court proceedings, and this specific intervention was also reviewed to determine courtroom intervention efficacy with a population of survivors who experienced intimate partner violence (Kelly, 2022). Although the benefits to those being provided services are recognized due to assessment, it is not clear how the handlers were impacted due to these types of interventions.

Utilizing animals with human beings has revealed evidence of enormous potential benefits. Human–animal interactions throughout the human lifecycle have been shown to decrease loneliness, depression, and anxiety, which contribute to the slowing of progression of chronic illnesses (Arkow, 2020). This reveals both physical and mental health positive aspects. Another study conducted by Hediger et al. (2021) revealed that

animal-assisted interventions were effective in reducing PTSD and depression symptoms with adults and children (Hediger et al., 2021).

Research by Gee et al. (2017) explored the benefits of animals with the elderly population, such as reducing cardiovascular disease, reducing obesity, improving overall levels of physical activity, and enhancing progress and retention of functionality after experiencing a stroke. Based on this research, it may be that older handlers may experience some of these physical benefits as well, but due to their volunteer work, the costs may outweigh the benefits. Some of the organizations that have canine comfort handler teams have designed their programs where the canine lives separately from their handler and reunite for work, while other organizations have the canine live with the handlers (HOPE AACR, 2023).

Comparable results in reducing PTSD symptoms were found in a study involving adolescents and a dog training program (Maoz et al., 2021). Animal-assisted engagement was shown to be impactful in reducing PTSD. However, a study using canines in therapy for children with PTSD revealed an increase in avoidant behaviors as the canine provided the avenue to disengage when facing difficult topics (Allen et al., 2021). It is said that younger children respond well to animals in therapy; however, contradicting research by Allen et al. (2021) showed caution with the sole usage of animal-assisted therapy. It was recommended that a combination be considered such as trauma-focused cognitive behavior therapy due to the lack of strong evidence-based outcomes with animal-assisted therapy. Research conducted by Crenshaw et al. (2019) described the challenges that children face in the courtrooms due to the distressing conditions and cognitive development limitations of children. It was suggested that utilizing canines with this

vulnerable population in this type of environment may be effective in reducing negative outcomes. Utilizing canines in couple and family therapy has shown positive psychological results (Policay & Falconier, 2019).

Germone et al. (2019) focused on animal interventions with children diagnosed with autism within a psychiatric setting. Again, more positive aspects such as social interactions significantly improved, which included positive facial expressions, an increase in the amount of conversation, an increase in gestures, an increase in time looking at peers and adults, and an increase in physical movement (Germone et al., 2019). These types of engagements continue to reveal a good outcome to those being served. As noted in the research, there are many benefits to utilizing canines to help others. Understanding how a handler may be affected by this type of exposure and experiences could potentially improve their services with vulnerable and young individuals.

According to research conducted by Binfet and Struik (2020), canine animal-assisted programs are common within hospitals and geriatric settings and are becoming more popular on university campuses. It was suggested that volunteer handlers are prescreened, trained, and receive ongoing formative assessments and feedback. As revealed in these studies, animals can be used to intervene in numerous ways with diverse types of populations. Stewart et al. (2021) stressed recommendations regarding ethical and holistic practices when using animal-assisted interventions to aid in the effectiveness.

After a thorough review of the literature, few studies were found that focused on the mental health outcomes of canine handlers. One of the first empirical studies that examined protective or preventive measures of PTSD symptoms with volunteer search

and rescue teams using canine search and rescue was conducted by Kaufman et al. (2020) in Europe. The findings showed that social support, individual resilience, and manageability were key factors in preventing PTSD. A qualitative study that explored challenges associated with being a disabled first-time handler revealed a variety of challenges and difficulties. These included the individuals' physical and mental abilities and engaging in a limited social environment (Gravrok et al., 2019). Although these handlers received a personal canine, the problems associated with being a handler were not clearly illustrated.

Several studies have focused on the possible negative effects for the canine that engages in animal-assisted interventions. This shift examined emotional contagion between canines and owners, which revealed that canines mirrored stress levels of their owners instead of owners mirroring stress of their canines (Sundman et al., 2019). This study contributes to the recognition that a handler's stress status can affect canine stress. Similarly, Maoz et al. (2021) found that a dog's interaction with humans resulted in decreased attention and increased anxiety showing issues with performance and well-being. According to Meyers-Manor and Botten (2020), physical changes in humans, such as heart rate, were also revealed with canine interventions. The outcome of research in this area is of concern due to the sign that animals can be affected by the mental health state of their owner or handler.

According to Harvie et al. (2021), findings reflected that there may be emotional contagion between humans and animals. It was noted that canines can react to their owner's stress levels. Much of the recent research related to animal-assisted interventions focuses on the benefits to humans and concern for the well-being of the working animal.

Both concerns are prevalent in present literature. Aside from the needs of the canines, the primary essential elements that have been the focus included the canine selection process and the need for extensive and proper training of the animal. There has been limited research on the mental health effects of a canine handler which included proper training of how to manage the canine in various situations and circumstances, how to ensure the well-being of the animal, and how to engage with clientele. Again, there are many recommendations as to how animal-assisted interventions can be used and how to ensure the well-being of the canine, but there is a lack of discussion regarding the potential negative mental health outcomes of handlers.

Canine Comfort Handlers and Volunteer Work

The outcome of interventions such as therapeutic animal engagements relies on the ability of the helpers and their organization's understanding of risk and protective factors (Ball et al., 2020). Individuals who help others in crisis may themselves experience hardships related to their work. People who interact with those struggling with mental or physical ailments could be exposed to stories of immorality, trauma, and grief, and other various psychological difficulties such as moral injuries may occur (Whitworth et al., 2021).

The act of helping others could have risks. In a study conducted by Gross et al. (2021), they assessed the balance between the value of helping others and the volunteers' assessment of personal risk. By assessing the psychological and neurobiological elements related to the social aspect of helping and the risks involved in making decisions to help others, it was revealed that both factors are independent of each other. It was argued that people make decisions regarding the amount of risk they are willing to take to help others

(Gross et al., 2021). If the risks are unknown, it is unclear how handlers would remain aware of the risks and make informed decisions related to helping others.

Canine handlers can face individuals who are dying, innocent children who have been shot by an individual committing a crime, parents who have lost children due to gun violence, law enforcement officers who have experienced years of occupational trauma, emergency first responders who have experienced traffic fatalities, 911 operators who have heard an individual being assaulted while the line is open, or families who have lost loved ones and all their belongings in a tornado. These are only some of the stories that could be shared while engaging in volunteer work in this type of format. These volunteers typically gravitate towards this type of work to give back to their community and to make a positive difference, not fully knowing the impact of what they will encounter.

To examine the recommended prerequisites for therapists who engage in animal-assisted counseling, a study was conducted to examine standards that are needed to obtain credentials in this specialized intervention (Hartwig, 2021). The results indicated that 117 training hours, 22 hr of live supervised experiences, and 141 hr of posttraining experience were recommended. Due to lack of research with canine comfort handlers, it is not known how many hours are needed to be fully informed regarding the risks and benefits of helping others after traumatic events. In comparing canine handlers with mental health therapists, it is understood that requirements to engage with clientele are different due to the specific roles involved. However, it is argued that both can be exposed to VT and moral injuries. The difference is that therapists are provided with

information related to potential work-related risks through formal education, training, and supervision while canine handlers may be limited.

After disasters, some portions of society engage in a spiritual and emotional care movement. The ministry of presence refers to an individual of faith by listening and showing care and support (Entwistle et al., 2018). Volunteers who are cognitively and spiritually moved to act and take part in community work or agree to deployments after a tragedy may receive intrinsic reward due to their work with others. Although there are many positive outcomes related to helping others, there are also risks. These costs can be substantially difficult to manage and cope with due to the types of risk involved in helping others after trauma. This can be especially true if there is no awareness of the challenges involved (Gross et al., 2021). According to research conducted by Abbey et al. (2020), many churches focus more on providing services to their communities rather than promoting self-care and mental health well-being among their parishioners.

Volunteering can create many health benefits partly due to community identification and social support (Bowe et al., 2020). In the United Kingdom, the value of volunteerism has been recognized by the government and academic entities and is viewed as being valuable to the community and economically sound (Bowe et al., 2020). This research illustrated the positive outcome of others and self, but did not focus on the potential hardships of those serving others. A study conducted in Norway described severe psychological concerns associated with mental health hotline volunteers (Vatsoe et al., 2020). Individuals who volunteer and help others who have been traumatized or are in pain, however, can be exposed to various physical, mental, and emotional hazards.

Volunteering as a canine comfort handler can bring about much joy, but may also involve a variety of physical and psychological challenges that are simply unexpected. This work often consists of traveling to far distances and working long hours with individuals who have experienced life and death situations or some other form of trauma. Handlers encounter indirect or VT and face decisions of morality not only at the aftermath of tragedies, but also during their work locally.

According to LCC (2008), their canines are highly trained working animals that promote human-care. A handler and an assigned dog serve their community by visiting churches, schools, nursing homes, hospitals, police and fire departments, and other organizations where there are identified individuals suffering (LCC, 2008). In times of disaster and crisis, the canine and a handler are deployed to the site of the tragic event including locations where mass shootings, hurricanes, tornados, bombings, and other tragedies have occurred. Directly after an event, the dogs and handlers travel across the nation to serve the communities being affected. The goal is to bring comfort to individuals who are in pain and who may be suffering due to traumatic experiences (LCC, 2008). Canines can be affected by their handler's emotions, and this could affect the behavior of the animal. This in turn could reduce the effectiveness of interventions.

Research by Glenk (2017) also focused on the welfare of the canine due to animal-assisted interventions. It was noted that canine perspectives due to the work that they conduct with humans have not been extensively studied. The researcher provided reasoning behind the need for additional research to support the canine due to possible threats to their welfare. The concerns expressed that surround the animal involve the frequency and the duration of the intervention sessions, the types of environments that the

canine encounters, the clients to whom they are exposed, and the handler's ability to assess the canines' stress levels (Glenk, 2017).

Researchers Glenk and Foltin (2021) revisited canine welfare in animal-assisted intervention and explored scientific advancements. The utilization of salivatory oxytocin, breath rates, and temperature are assessments that can be implemented in studying canine welfare. The researchers also stressed the importance of the relationship of the canine/handler as well as the handler's skillset. As noted, much emphasis in animal-assisted intervention is on the handler's abilities to manage a canine during interactions with those individuals being served and to ensure canine well-being. Due to the team approach, it is beneficial to both parties to recognize the mental and physical aspects of this type of work. This research is another example of the importance of caring for and studying the canine/human intervention duo. The effectiveness of canine intervention was also tested in a controlled clinical trial. This trial was conducted with emergency room patients who were experiencing at least a moderate level of anxiety (Kline et al., 2019). The patients who experienced dog and handler exposure revealed significantly lower anxiety (Kline et al., 2019). This study provides additional support for the positive outcomes of the intervention; however, there remains a gap in the literature regarding the impact to the handlers.

For the current research study, canine comfort dogs and handlers were the target population. As reviewed previously, comfort dogs are essentially canines that are professionally and extensively trained to assist individuals who are suffering and in need of comfort (LCC, 2008). No specific therapy is being conducted as the handler and the

canine are simply present and available to listen and supply support. With some handlers, Biblical teachings are offered, if requested.

VT

The latest version of the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed., text rev.; American Psychiatric Association, 2022) refers to trauma in the section of PTSD which is a mental health condition that reveals symptoms of emotional and cognitive dysregulation, recurring and distressing memories, intrusive thoughts, extreme anxiety, avoidance, and other concerns such as lower quality of life and problematic relationships (American Psychiatric Association, 2022; Ball et al., 2020). VT includes either experiencing a traumatic event or being confronted with details of a traumatic experience (Greinacher et al., 2019).

Literature related to trauma typically focuses on individuals who have experienced a traumatic event. However, there has been a shift in recent years to focus on the helpers of those who have experienced trauma. First responders are one of the main populations selected to examine this phenomenon. VT is one factor that could affect the well-being of individuals who provide services to those who are suffering. It is important to distinguish these different forms of trauma. This not only creates a better understanding of the variety of types but also will help clarify specifically what is being investigated in this research. Regarding VT, it has been revealed as a challenging psychological factor that can negatively affect the overall well-being of an individual and can lead to self-destructive behaviors. Symptoms of depression and anxiety and the reduction of occupational satisfaction have been shown to be a concern (Tuttle et al., 2019).

Terms such as emotional burnout, compassion fatigue, and posttraumatic stress are also used to describe similar phenomenon. VT is a psychological response associated with the disturbing experiences and traumatic events of another person, often victims of crime or abuse (Tuttle et al., 2019). Researchers Jimenez et al. (2021) indicated a difference between VT, secondary trauma, and other forms of trauma. As mentioned previously, some literature used these terms interchangeably; however, the distinction is that VT occurs over a longer period due to gradual exposure to others' traumatic events and secondary trauma occurs in a shorter period. VT can have negative effects on identity, self-perception, spirituality, and worldview. These types of changes can be persistent and permanent and can be seen as a reduction of empathy, competence, and lack of motivation (Jimenez et al., 2021).

After reviewing the literature on trauma, another systematic review by Greinacher et al. (2019) revealed further examination of definitions and prevalence of trauma, risk factors, and resiliency in first responders. Although terms have been used interchangeably in the research, they recognized that the definitions were at times contradictory; therefore, they selected secondary trauma to describe all forms of trauma, including VT (Greinacher et al., 2019). After reviewing 219 studies, Greinacher et al. discovered that first responders exhibited low levels of secondary trauma. Conflicting qualitative research outcomes with law enforcement were revealed in a study conducted by Gancz et al. (2020). The researchers observed officers who revealed heightened affective reactions to disturbing visual material after exposure. After a period, they began to experience desensitization which could result in other problems. The stress of these

experiences led to mental health issues which were associated with VT (Gancz et al., 2020).

In another study conducted by Gancz et al. (2020), findings supported the outcome that law enforcement officers are exposed to various traumatic experiences. It was noted that many factors are associated due to the work that they engage in. The findings revealed four specific themes which involved responses to trauma, its impact, personal coping strategies, risks, and other mitigating factors. The first response to viewing distressful images by officers included short-term emotional and physical responses of shock and disgust.

Over time, secondary trauma or VT symptoms such as intrusive thoughts, flashbacks, and nightmares were experienced. Some of these symptoms spilled over into personal lives, such as law enforcement parents becoming overprotective of their own children. Organization stigma was also related to mental health issues which were problematic and contributed to an officer being deterred from receiving treatment. This study supports the outcome of other studies examining the work of helpers and the effects of VT (Gancz et al., 2020).

After a meta-analysis, according to Greinacher et al. (2019), researchers were concerned that their findings may be skewed due to certain participant risks such as social desirability and concerns related to potential job loss. The population focused on professionals and volunteers that immediately respond to a traumatic situation. It was noted that many of the studies combined professionals and volunteers who responded to these types of scenes. As mentioned as a limitation, many of the studies involved the culture of first responders, typically associated with not revealing problems related to

workload exposure. There tends to be reluctance to disclose mental health related issues in first responders, including police officers (Greinacher et al., 2019).

VT is also clarified as an occupational challenge for people working and volunteering in the fields of victim services, law enforcement, emergency medical services, fire services, and other allied professions, due to their continuous exposure to victims of trauma and survivors (Office for Victims of Crime, 2020). A qualitative study conducted with Australian psychologist trainees by Ball et al. (2020) revealed that even during the training process, the selected participants revealed that burnout, feelings of being overwhelmed, and issues related to self-care and work–life balance were of concern.

This could result in a negative view of self and others and could rattle a sense of safety. Negative affect, poor self-esteem, developing problems associated with intimacy and trust, and the destruction of relationships could be revealed (Ball et al., 2020). Mass school shootings in the United States continue to create traumatic outcomes for first responders and other volunteers due to the physical, mental, and emotional impact (Paez et al., 2021). Exposure to trauma at an individual level or at large-scale events such as mass shootings or natural disasters can predict outcomes such as PTSD (Ponder et al., 2021; Tingey et al., 2019).

Although different from PTSD, VT does exhibit comparable symptomology. A study that used a population of mental health providers revealed that negative effects due to being exposed to VT can result in long-lasting deterioration (Jimenez et al., 2021). A systematic review conducted by Casas and Benuto (2022) focused on the families of first responders and their occupation-related trauma. It was noted that there were very few

studies on this specific topic and most of the work showed that spouses and children of first responders experience posttrauma psychological distress. Also revealed in the review was the approach of a spouse in dealing with their first responders' traumatic experiences. There was an insulated culture of support shown with the first responder and their families (Casas & Benuto, 2022).

VT has been revealed as a challenging psychological factor that can negatively affect the overall well-being of individuals and can lead to self-destructive behaviors, symptoms of depression, and anxiety (Tuttle et al., 2019). Volunteering for this line of work as a canine handler may involve a variety of environmental and health risks. Many of these volunteers may not be fully aware of the mental and emotional risks involved in working with survivors and other individuals suffering due to trauma or other types of distress.

As mentioned previously in the research conducted by Jimenez et al. (2021), 48 mental health providers such as psychologists, therapists, and social workers were surveyed, and findings indicated long-term effects from this form of trauma exposure. Quick intervention is critical in addressing these concerns due to the potential for hopelessness and the possible development of a negative worldview (Jimenez et al., 2021).

Another problematic consideration for individuals exposed to VT is the personal history of the individual. For example, if the person has experienced personal trauma, hearing others' stories of trauma can be triggering, which could delay recovery and impact overall psychological well-being (Jimenez et al., 2021). The study utilizing mental health professional trainees who were exposed to clients experiencing suicidal ideation or

trauma revealed problems with phenomena such as VT, moral injuries, and secondary traumatic stress (Ball et al., 2020).

Another study that focused on military chaplains exposed to trauma explored the protective and risk factors associated with the development of PTSD symptoms (Whitworth et al., 2021). The findings revealed that chaplains with more risk factors in comparison to protective factors such as being knowledgeable and having supportive faith communities were able to reveal resiliency. This could combat or reduce symptoms. Chaplains who revealed more risk factors, such as lack of support from their faith communities, struggled and were less resilient and had more difficulty in recovery (Whitworth et al., 2021). Trauma exposure was also examined in a different study designed and conducted in Poland involving Roman Catholic clergymen (Juczynski et al., 2022).

Clergymen typically provide support in times of grief, crisis, and traumatic situations such as natural disasters, violence, and other social crises. According to Juczynski et al. (2022), this population is not fully aware of the harmful effects of their role in providing empathy and support to those individuals who have experienced trauma. Due to clergymen going beyond simple moral support, into deeper content like mental health professionals, the resulting outcome revealed that clergymen are not prepared to deal with the effects of VT (Juczynski et al., 2022).

Attention regarding the effects of traumatic experiences is often on those who have experienced wildfires, mass shootings, mudslides, hurricanes, tornados, and other events, but little attention is directed toward first responders (Lanza et al., 2018). A

review focused on the need to enhance prevention education, including coping and social connections after an event, and mental healthcare when needed (Lanza et al., 2018).

The United States FBI data reveal that between 2000 and 2013, mass shootings rose drastically (Hoagwood et al., 2017). In 2014, there were 269 mass shootings and in 2020 that number rose to 611 (GVA, 2023). According to the Gun Violence Archive, since the beginning of 2023, there have been 630 mass shootings in the United States. A study conducted by Hoagwood et al. (2017) focused on the community services provided during the aftermath of the Sandy Hook shooting. The effects of mass shooting were profound, resulting in high rates of PTSD, anxiety, and depression, and the effects can linger for years (Hoagwood et al., 2017).

Twenty elementary students and six staff members were killed by a 20-year-old male. Twelve first-grade students were shot but survived. It was determined that over 500 individuals were traumatized, which included students, teachers, staff, police officers, emergency personnel, and community members. The LCC-K9 handlers responded to this crisis (LCC, 2008). It is not clear how the aftermath of this mass shooting has mentally, emotionally, and spiritually affected the handlers deployed to that crisis event.

It is understood that supporting and comforting individuals who have experienced trauma can expose the helper to VT. This could become a compounding and negative mental health concern. Another study was conducted that focused on whether a psycho-educational program such as mental health first aid implemented in a religious environment could increase awareness of symptoms associated with an individual experiencing a mental health crisis (Costello et al., 2021). The outcome data showed that religious communities could benefit from mental health training by increasing awareness

of mental illness, reducing the stigma, and improving recognition of mental health resources (Costello et al., 2021).

A study was conducted by Kim et al. (2021) that focused on an organization's preparedness and ability to manage trauma, specifically training, leadership commitment, organizational policies, and staff supervision with first responders, health care institutions, and a child welfare agency. The results indicated that first responders such as law enforcement had well-established policies and debriefing programs but needed more support and training. The healthcare institutions revealed strong levels of training regarding patients but poor communication within and unstructured resources. Finally, the child welfare agency revealed high levels of training but struggled with managing and knowing ways to cope with VT. Research conducted by Morris et al. (2022) stressed the importance of early mental health interventions with individuals who work with trauma survivors. These studies highlight the concerns associated with VT among several organizations (Kim et al., 2021).

Moral Injury

Often a core component of trauma is moral injury. Moral injuries are associated with individuals who have experienced traumatic or unusually stressful circumstances, where people may perpetuate, do not prevent, or witness events that contradict deeply held moral beliefs and expectations (Papazoglou et al., 2020) and violate one's code of ethics (Antonelli, 2017). Morality is shown through behaviors of individuals and is expected from self and others. Many veterans who served in the Vietnam, Iraq, and Afghanistan wars experienced trauma symptoms. (Antonelli, 2017). Experiencing moral injury predicts symptoms of PTSD (Papazoglou et al., 2020). Spiritual practices may

soothe the wounds created by moral injuries not only with individuals who have served in the military, but their families, congregations, spiritual leaders and caregivers, and other individuals providing support (Liebert, 2019).

Surprisingly, this was a result of not only engaging in warfare but also an outcome of the perception of how they were drafted into the military, the way they were treated by antiwar protestors when they returned home, and treatment by the Veteran's Administration which minimized their physical and mental health concerns related to the war (Antonelli, 2017). Experiencing moral injury predicts symptoms of PTSD (Papazoglou et al., 2020). Much of the research that has focused on moral injuries involves a military population. Stress, disruption of spirituality or existentialism, and problems with daily functioning have been revealed with individuals who have experienced moral injuries (Ball et al., 2020). A small to moderate relationship related to moral injury, PTSD, and depression was revealed that illustrated symptoms of intense negative appraisals, intrusive thoughts, and cognitive avoidance (Williamson et al., 2018). It is worthy to note that moral injury and PTSD are not the same but, can coexist.

Other symptoms associated with moral injury involve shame, isolation from family, friends, and communities, problems with trusting others, disruption of a moral compass and altering or abandoning one's values and beliefs, emotional disconnection, and even potentially suicidal ideation (Liebert, 2019). In research conducted by West and Cronshaw (2022), a participant indicated that her symptoms associated with PTSD could be addressed through traditional treatment, although the moral injury thoughts and emotions she experienced were only affected by theological and religious intervention.

Another similar study involved first responders. Research conducted by Smith-MacDonald et al. (2021) selected a Canadian population to help explain that the morality of public safety personnel can be affected due to their chosen profession. Moral injuries could lead to a public safety employee leaving their job and even committing suicide. The researchers examined moral injuries with firefighters, paramedics, and safety communicators to further understand risk and protective factors. The findings showed that the core theme illustrated the frustration of moral expectations. A theory appeared that held four categories. These included creating unrealistic expectations, trying to do the “good,” minimizing and managing moral frustration, and finding resolutions (Smith-MacDonald et al., 2021).

Much of the earlier literature on moral injuries is related to the military and many of the studies with mental health professionals and law enforcement focus on VT. Some of the studies have been conducted with law enforcement within other countries. However, the foundational aspect of the profession is similar with differences in culture, organizational styles, and practices. Studies conducted on other populations such as a variety of first responders have also been included to illustrate the similarities and differences. There are unique qualities and distinctions in comparing canine handlers to other responders, however, there are also many similarities. Due to these similarities and lack of depth in research focusing on American officers, some of this research is included.

According to Burkman et al. (2019), research related to PTSD treatment and to moral injuries is limited. Law enforcement officers who experience occupational hazards such as VT or moral injuries have been shown to experience challenges in obtaining basic

or generally qualified mental health treatment, let alone a more specialized treatment modality. This phenomenological study conducted by Burkman et al. which provides added clarity about the impact of injuries to held values of morality can offer more support for the concern surrounding moral injuries.

There is limited research overall focusing on moral injury which contributes to a strong cognitive and emotional response following events that violate a person's moral and ethical standards. According to Papazoglou et al. (2020) research indicated that compassion fatigue and moral injury significantly predicted PTSD. This study which was conducted with police officers who struggle with moral injuries revealed to have experienced shame and guilt which could be related to certain PTSD symptom clusters. It was also noted that frustration and moral conflicts may be related to PTSD symptoms of hyperarousal and that other traumatic exposure can be contributing factors as well (Papazoglou et al., 2020).

According to Tuttle et al. (2019) researchers noted that compassion fatigue and moral injury were significantly and negatively associated with compassion satisfaction which may reveal that various forms of traumatization may negatively influence an officer's view of the importance of their role. Increasing compassion satisfaction and decreasing compassion fatigue may contribute to an officer's well-being. It was noted that agencies experiencing high rates of turnover may assess their officers' level of burnout, frustration, and stressors. Also, frequent and repeated interactions with mental health clinicians can reduce stigmatization and increase mental health care participation. Education and training focusing on these topics may be useful interventions.

In another study conducted by Lambert et al. (2021) the researchers that studied police officers from India revealed that what occurs at work does influence life satisfaction. An affective organizational commitment had positive effects on life satisfaction, showing the usefulness of agencies being aware of this relation. Findings also revealed that organizational commitment to the officer's well-being had the largest effect on life satisfaction of an officer. The researchers illustrated the importance of helping the helpers. This is an example of a movement towards person-oriented approaches recognized in recent research worldwide.

Williamson et al. (2018) conducted a systematic review that focused on occupational moral injuries and noted that most of the research conducted used a military population and it was emphasized that studies that focused on the effects of MI with civilians was needed. Individuals who have a strong moral sense can be more susceptible to moral injuries although they could have developed reserves that could assist with the ability to cope and manage and even reconstruct their moral compass (Liebert, 2019). In examining the research by Williamson et al. (2018) there was a strong relationship between mental health, specifically PTSD and moral injury in military personnel. Although not as strong as PTSD there was also a relationship between moral injury and depression revealed in the same study. This was also discovered cross-culturally. This cultural aspect was revealed in research with Zimbabwe war veterans (Williamson et al., 2018). These researchers noted and supported the need for conducting other research on civilian populations as most of the studies focused on a military population.

Another aspect of the literature describes moral injuries as a bio-psycho-social phenomenon and deep spiritual wounds (Liebert, 2019). This connection focuses on the

impact of moral injuries on spiritual well-being. This concept is that the spirit is wounded due to the experience of trauma due to an individual's morality being challenged (Liebert, 2019). Moral injury and spiritual wounds naturally overlap. Treatments for moral injury could include spiritual and religious practices. A phenomenological research study conducted by West and Cronshaw (2022) revealed themes of community, scripture, and religious services to be contributing factors to healing.

Positive Religious Coping

The work and well-being of professionals and volunteers could be enhanced by utilizing a wholistic approach such as a biopsychosocial-spiritual model (Ball et al., 2020; Odukoya et al., 2020). By focusing on the physical, psychological, social, and spiritual needs of an individual a thorough examination of risk and protector factors can be conducted. People worldwide experience stress and personal trauma and are exposed to the trauma others experience. When terrible things happen such as the loss of innocent lives due to a natural disaster or a mass shooting it can be a reminder that the world in which we live is broken.

Research has shown that a protective element against the effect of trauma is religion (San Roman et al., 2019). To buffer negative outcome faith may be instrumental however, it could also create existential issues. Spirituality is another influencing factor connected to police officer's worldview which contributes to functioning levels which also affect levels of stress and resilience (Pandya, 2017). When tragic events happen to others many individuals seek out ways to help reduce the negative impact of an event such as a tornado, hurricane, mass shooting, death of a loved one, and even medical diagnoses such as cancer.

Religious beliefs affect an individual's response to these types of disasters. Some individuals turn to God after a terrible event and engage in reframing. The event then is seen as God's will. This creates a sense of companionship and connection with a higher being. They are no longer dealing with the crisis alone but, God walks alongside them. Then there are others that blame God and separates from Him due to believing He is responsible for the tragedy (Ellor & Mayo, 2018). According to Entwistle et al. (2018) there is a connection between an individual's religious practices and how they react or respond to a tragic situation. The specific mindset and approach utilized by survivors and faith volunteers often will be due to the integration of their worldview. How they perceive and make meaning of the situation can greatly influence recovery (Entwistle et al., 2018).

Church organizations and people of faith can play a vital role in the aftermath of such a traumatic event. Members of these groups often volunteer their time to help others in need by providing emotional and spiritual support (Entwistle et al., 2018). Some churches have created and implemented various charity groups that go out into the communities and support the less fortunate. For example, one of these specialized groups as mentioned previously is the LCC K9 Comfort Program.

There are many ways that individuals cope following the witnessing of the suffering of others and after experiencing trauma exposure. One method that has been researched with volunteers is religious coping. People may have thoughts that the Lord has abandoned them or feels judged and punished by God after tragedies. Others may derive comfort by their beliefs that they are not alone and that their higher power will

restore hope (Entwistle et al., 2018). Based on these engagements with others who are hurting the volunteers can be healing agents or can-do harm (Entwistle et al., 2018).

A study conducted by San Roman et al. (2019) utilizing 34 religious oriented individuals indirectly impacted by a mass shooting on a college campus in Oregon revealed that religious support buffered the relationship between negative psychological symptoms such as depression, PTSD, and religious/spiritual struggle and loss of resources. To further clarify, the findings of this study show that an individual's practices of religion or spirituality may help protect against mental health concerns if supported by church affiliated individuals after a difficult situation even if resources are lost.

Religious coping involves both negative and positive elements. Positive religious coping involves a relationship with God or superior force and a sense of spiritual connection with others, and a kind worldview (Captari et al, 2018). A positive religious coping strategy is obtaining support by others through means of spiritual and religious engagement. It has been revealed that positive coping can be a protective factor against symptoms of trauma (San Roman et al., 2019).

Negative religious coping refers to methods that reveal internal and external struggles and spiritual tensions. Research on faith-based organizations that conduct work in disaster areas indicated that positive religious coping revealed better psychological adjustment (Captari et al., 2018). Individuals cope with distress in many ways. One way that people of faith may deal with stress is through spiritual practices or daily exercises of religion. In some spiritual experiences it has been shown to reduce stress. In a study conducted with older adults (Whitehead & Bergeman, 2020) findings revealed that there are both physical and mental improvements in coping and management of stress.

Research conducted by Keefe et al. (2001) revealed that daily spiritual experiences positively affected mental health and reduced physical pain of those suffering from a medical condition. Other literature focused on research by Whitworth et al. (2021) that examined military chaplains who identified protective and risk factors that contribute to overall well-being. Protective factors included others who understood symptoms of PTSD and the impact of trauma exposure, social support, coping skills, and specialized interventions including those that involved religious aspects (Whitworth et al., 2021). Another study with women who were diagnosed with diabetes revealed that spiritual practices helped control glucose levels (Newlin, 2007). Research by Godbolt et al. (2018) revealed a protective factor that examined white women's body mass who attended church regularly.

Captari et al. (2018) examined the mental health effects of humanitarian workers who assisted survivors of a typhoon in the Philippines. Individuals who work with survivors of natural disasters such as earthquakes, hurricanes, tornados, and tsunamis are at increased risk for anxiety, depression, burnout, and post-traumatic stress symptoms (Captari et al., 2018). In a study conducted by Haynes et al. (2017) spiritual perspectives and influences were shown to buffer PTSD symptoms in survivors of hurricane Katrina.

For individuals who have experienced a moral injury spiritual support, deep listening, and connection with others can enhance the recovery process (Liebert, 2019). Individuals who engage in religious practices may experience phases of spiritual struggle. A study conducted with an Italian volunteer organization indicated that laypersons are at risk for spiritual crisis which could impact life satisfaction and disrupt their voluntary activity (Bussing et al., 2018). Those who volunteer to help others and then are

consequently exposed to the aftermath of traumatic situations may feel that God is distant. They may believe that God has abandoned those who are suffering or reach a point where they are feeling spiritually empty and are not able to give anymore (Bussing et al, 2018).

Research conducted by Currier et al. (2019) focused on the spiritual struggles of leaders of faith who are working to promote justice and healing in Columbia. This research revealed that within a sample of 166 Christian leaders, 29.9% experienced problems with morality, 5.4% struggled with the issues associated with the divine, 18% expressed issues with the meaning of life, 16.2% expressing feelings of doubt, and 18% were experiencing interpersonal problems. Currier et al. noted that the greater concerns with morality were correlated with the severity symptoms associated with PTSD and major depressive disorder. This study reveals that faith leaders who serve individuals who are experiencing loss, grief, and trauma can struggle with their own intrapersonal emotional, mental, and spiritual challenges due to these types of exposures (Currier et al., 2019).

According to the literature on positive religious coping, this practice can aid in buffering against negative mental health symptoms such as PTSD following natural disasters (San Roman et al., 2019). These studies are examples of how spiritual experiences and positive coping can affect well-being which is directly connected to overall mental health. The current study examined canine handlers' religious coping strategies which may impact mental health, which was revealed in other populations.

Biblical Foundations of the Study

The Bible provides guidance that focuses on trauma, VT, and distressful situations. Scripture teaches us that God is a comforter, as stated in Matthew 11:28-30, “Come to me, all who labor and are heavy laden, and I will give you rest” (ESV, 2001). Corinthians 1:3-7 further guides us to understand that the helpers will be helped by reminding us that God “comforts us in all afflictions, so that we may be able to comfort those who are in affliction.” The Bible goes on to explain that while individuals share in sufferings, they will also share in comfort (ESV, 2001). Another aspect of this research involved the effects of moral injury on an individual’s mental health.

Canine handlers who experience the aftermath of mass shootings or other violent events may struggle with morality, as it is stated in Romans 13:9 that “you shall not commit murder and that you shall love your neighbor as yourself as love is the fulfilling of the law” (ESV, 2001). Handlers often witness and recognize the destruction brought on by immoral acts that have taken place, which could result in moral injury. Matthew 10:16 describes the encounter of moral injuries as it is told that the Lord will send you out as sheep among wolves, so be wise as serpents and innocent as doves (ESV, 2001). Suffering and redemption described in the Bible can help illustrate moral injuries and spiritual wounds (West & Cronshaw, 2022). Scripture provides guidance in how to understand other people in Ephesians 4:32, which states, “Be kind, compassionate, and forgiving to each other, in the same way God forgave you in Christ” (ESV, 2001). In this study, religious coping is another element to further understand the potential effects on mental health.

The human–dog relationship could possibly be dated back to the origins of homo sapiens. Archaeological records of canines have been viewed in art, folklore, and religious ritual ceremonies. These historical documents and images have been discovered in various regions around the world (Wilmer, 2019). Even early Christianity and other religions were affected by the canine as they were featured in religious practices (Wilmer, 2019). The animal–human connection in Christianity began at the very beginning of time. Genesis 7:15 states that the animals went into the ark to Noah, “by twos in which was the breath of life.” (ESV, 2001).

Understanding the purpose and benefits of canine-assisted interventions will help build a foundation related to the targeted population. As canine handlers go about their work on tragic scenes, their primary goal is to reduce the suffering of others. 2 Corinthians 5:7 illustrates faith as it is stated, “for we walk by faith, not by sight,” and in James 2:17 that teaches us that “faith by itself without works, is dead” (ESV, 2001). These individuals may volunteer their time solely to help others and make a positive difference in the world. The Bible reminds us in Romans 1:11-12 that connection with others may impart some spiritual gift to strengthen us and be mutually encouraged by each other's faith (ESV, 2001). Moral injuries can be experienced in life. God recognizes the terrible outcomes of these experiences, and some individuals may decide to alienate from God or choose to experience the divine presence and comfort from the Lord (West & Cronshaw, 2022).

There are challenges in life which may include understanding the behaviors of others. Individuals can be affected by others’ behaviors. In Romans 12:2, scripture encourages individuals to not copy the behaviors and customs of the world, “but, let God

transform you into a new person by changing the way you think. Then you will learn to know God's will for you, which is good and pleasing and perfect" (ESV, 2001). To help strengthen us, Psalm 46: 1-2 indicates that "God is our refuge and strength, always ready to help in times of trouble. So, we will not fear when earthquakes come and the mountains crumble into the sea," and in John 14:27, we are reminded of the gift of peace of mind and heart and to not be troubled or afraid. (ESV, 2001).

Summary

Earlier research showed that first responders, therapists, and other individuals in helping professions are exposed and are at risk of VT. It was also noted that military veterans have struggled with issues associated with moral injuries. Past studies focusing on mental health and positive religious coping have revealed a positive relationship between clergymen and other populations.

No previous studies have examined the combination of mental health effects of canine comfort handlers who respond to not only the aftermath of traumatic events for a community but also support first responders, individuals who are hospitalized, those living in nursing homes, hospice, school children, young adults in universities, and many other subsections of the population. When these groups are called upon for assistance, they take the call, and provide the services that are needed.

As mentioned previously, there is a gap in the literature. These specialized handlers are requested to provide services to a variety of populations with people who are suffering. To further examine the mental health effects such as VT and moral injury, and

to explore a potential buffering effect of positive religious coping among canine comfort handlers, a quantitative study was conducted.

CHAPTER 3: RESEARCH METHOD

Overview

Due to work that involves tragedy, crisis, and human suffering, canine comfort handlers are exposed to experiences that could lead to mental health concerns. To further describe how this study was conducted, the research method will be fully reviewed. To examine ways in which the handlers may be impacted, this study assessed levels of various elements. The purpose of this quantitative survey study was to examine the correlations among positive religious coping, VT, and levels of PTSD symptoms, as well as to examine the correlations among positive religious coping, moral injury, and levels of PTSD symptoms in canine comfort handlers. The detailed research design for this study is presented as well as an illustration of the type of participants who were recruited from two organizations in the United States. The specific study procedures are outlined and the combined instruments survey which was designed to gather the data is provided.

Research Questions and Hypotheses

There were two research questions for this study. First, does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of VT? Second, does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of moral injury? The first hypothesis was that positive religious coping would reduce symptoms of PTSD in canine comfort handlers experiencing a high level of VT. The second hypothesis was that positive religious coping would reduce the symptoms of PTSD in canine comfort handlers experiencing a high level of moral injury.

Research Design

A quantitative survey design was used for this study. This was a solid choice as this approach had the benefit of using quantitative data which is objective data. This design offered the capability to gather and examine the data and conduct the research fairly quickly using an online survey (Bussing et al., 2018; Juczynski et al., 2022; Kaufman et al., 2020). After gathering the data, this cross-sectional survey design provided the opportunity to then analyze the data statistically into meaningful results. The approach fulfilled the purpose of this study as it allowed this researcher to engage in an in-depth examination of the variables by measuring VT, moral injury, positive religious coping, and PTSD symptomology.

The multiple regression method was utilized to analyze the relationships between the dependent variable, symptoms of PTSD, and three independent variables including VT, moral injury, and positive religious coping. This approach offered the opportunity to predict the value of PTSD by gathering data known from the independent variables. This is a verifiable and replicable method. Choosing this specific research design promoted further understanding of the mental health effects associated with canine handlers in a scientific and efficient manner.

Participants

The sampling procedure included a convenience sample of volunteers. This researcher partnered with two canine comfort organizations for recruitment. To maximize statistical power, a power analysis was conducted (Faul et al., 2007). The current study obtained 83 participants. The organizations that were selected included LCC Comfort Dog Ministry and HOPE Animal-Assisted Crisis Response. Both organizations have

established handlers across the nation. The participants included men and women who are members of these groups. The sample involved individuals who reside throughout the United States. Diversity including ethnicity, background, and socioeconomics within the sample were also encouraged.

The inclusion criteria involved participants who have completed the canine comfort training and have certification as a canine comfort handler. All participants have been a handler for at least 1 year. The reason for this inclusion was to ensure that the participants have had the opportunity to experience the extensive role as a handler which includes weekly community activities as well as deployments to crisis situations. There were no exclusion criteria.

Study Procedures

This researcher submitted an Institutional Review Board (IRB) application and requested permission to recruit participants. Once IRB approval was obtained, the directors of both canine comfort organizations were contacted by email. The email that was sent to each organization included an explanation of the study in detail. It also included a request to forward a separate email to all the handlers within their program (see Appendices A and B). The secondary email included a letter to the handlers which explained the details of the study (see Appendix C). The recruitment flyer was also attached (see Appendix E). One organization requested further clarification of the study prior to approval. The additional information that was requested was sent to the organization via email.

Handlers within the two organizations then received a forwarded email from the director or regional director that included the letter to the handler with the attached flyer.

After 2 weeks, the researcher contacted the directors again by email and requested that they send a reminder email to all the handlers regarding the opportunity to participate in the study. After 3 weeks from the initial distribution, another email reminder was requested (see Appendix D).

All handlers who accepted the invitation to participate in the study chose to either start the survey by clicking on a provided link or a QR code. They would then be directed to the first of three screening questions. The Screening Survey ensured the participant was eligible to be included in the research study. If the participant chose “Yes” to being 18 years old or older, identified as a handler, and had at least 1 year of handling experience, they proceeded to the consent form. Individuals who chose “No” to one or more of these questions were ineligible to participate in the research study. They received a message thanking them for their willingness to participate but were informed that they were not eligible to participate in the survey.

If the participant met the criteria for participation, they were directed to the informed consent form (see Appendix F). The informed consent clarified that the study is completely voluntary, the individual could choose not to participate, and could withdraw from the study at any time without repercussions. The potential participants were then informed that this study adheres to the guidelines of anonymity. The consent explained that participant responses would be anonymous. The recruits were also informed that all records related to this study would be kept private, stored securely, and would only be accessible to this researcher and the secondary reviewer. They were also notified that the data would be stored on a password-locked computer and after 5 years, all electronic records would be deleted.

This researcher explained in the consent that this study was designed to obtain new knowledge which may help other individuals in the future. It was noted that the participants should not expect a direct benefit from taking part in this study and there was no monetary compensation for participation. Within the consent the expected risks for participating in the study were described as minimal, meaning they are equal to the risks that an individual would encounter in everyday life. The possible risks involved in this study included psychological stress due to having to recall and answer questions related to trauma and other psychological elements which could lead to triggering effects for some participants. To reduce risk, this researcher provided referral information. If help was needed the participant was encouraged to simply text the word “Hello” to 741741 anywhere, at any time in the United States. The participant would then have access to a crisis counselor. The counselor would then provide support and offer additional information for further counseling services, if desired.

Handlers that provided consent and chose to participate in the survey selected “START” in the survey. They were then directed to the first of many demographic questions. If they chose to not participate, they simply left the survey or clicked, “EXIT.” The demographic questions were specifically related to the participant. These included gender, age, race, marital status, religious background, estimated amount of times the handler participated in community engagements and crisis events while working as a handler, how many personal traumatic events have they experienced in their life, and other details. Another inquiry was whether their organization provided specific mental health training on VT and moral injury and whether their organization provided support

and interventions for the handler, and other pertinent information that could contribute to the study.

The final portion of the survey was the combined scales questionnaire which comprised of four different instruments. This included the VTS (see Appendix I), MIESS-C (see Appendix J), Brief RCOPE (see Appendix K), and the PCL-5 (see Appendix L). These instruments measured VT, moral injuries, religious coping, and symptoms of PTSD. All the responses from the surveys that were completed were collected. These data were then analyzed by Qualtrics. For further statistical analyses, the data were gathered from Qualtrics and entered into IBM SPSS Statistics software Version 29.

Instrumentation and Measurement

VT Instrument

To measure VT, the VTS was utilized. It contains eight items (Jimenez et al., 2021). This instrument was developed to assess subjective levels of distress with individuals who support and counsel others who have experienced trauma (Jimenez et al., 2021). This tool uses a 7-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). A score in the range of 8–28 indicates low VT, a range of 9–42 indicates moderate VT, and a range of 43–56 indicates high VT (Vrklevski & Franklin, 2008). It has shown good reliability (Cronbach's $\alpha = 0.88$). Originally, this instrument was validated using criminal attorneys and revealed potential for other populations (Jimenez et al., 2021).

Moral Injury Instrument

To measure moral injuries, the MIESS-C was utilized. It is a 10-item scale. This assessment measures exposure and distress and uses a 1–6 Likert scale. This scale measures exposure to potentially moral injury in civilians (Nash et al., 2013). Items 1, 3, 5, 7, and 9 assess the exposure of morally injurious events and Items 2, 4, 6, 8, and 10 assess distress related to those events. Scores range from 5–30 for each subscale. Higher scores suggest higher exposure and/or distress (Fani et al., 2021). For this study, only the subscale for moral injuries/distress was utilized for analytical purposes.

Positive Religious Coping Instrument

To measure positive religious coping, the Brief RCOPE was utilized. This instrument measures the role of religion in dealing with crisis, trauma, and transition. It contains 14 items (Kenneth et al., 2011). This is a shortened version of the RCOPE (Pargament et al., 2011). This assessment tool includes two subscales, positive coping (seven items) and negative coping (seven items). To score the Brief RCOPE, this researcher summed the positive items and then the negative items separately to generate two subscale scores (Rezaeipandari et al., 2021). Only one subscale, positive religious coping, was utilized for analysis. Reliability for the two subscales includes the PRC = .92 and NRC = .81 (Pargament et al., 2011). Validity with a sample of Christian outpatients who were diagnosed with anxiety or depression resulted in alpha values of positive religious coping = .74 and negative religious coping = .71 (Verhoeff et al., 2022).

Trauma Instrument

The PCL-5 is a self-report measurement tool that assesses 20 DSM-5 symptoms of PTSD. It contains 20 items and uses a 0–4 Likert scale. The range is 0–80 with a cutoff

score between 31–33 which would be indicative of probable PTSD (Morrison et al., 2021; Weathers et al., 2018). It is used by professionals to screen for PTSD, monitor symptom changes during and after treatment, and to make provisional PTSD diagnoses.

Operationalization of Variables

Independent Variable 1 – VT is a ratio variable and was measured by total score on the VTS (Jimenez et al., 2021).

Independent Variable 2 – Moral Injury is a ratio variable and was measured by total score on the MIESS-C (Nash et al., 2013).

Independent Variable 3 – Positive Religious Coping is a ratio variable and was measured by total score on the Brief RCOPE (Kenneth et al., 2011).

Dependent Variable – PTSD symptoms is a ratio variable and was measured by total score on the PCL-5 (Weathers et al., 2018).

Demographic Variables – Participant demographic information are nominal variables. These data were gathered using a demographic questionnaire asking participants to select answers from specific categories.

Data Analysis

A quantitative survey study was conducted using a multiple regression method including a scatter plot and regression line. A multiple regression analysis provides an extension of a simple linear regression (Kuhn & Johnson, 2013). This is predictive research which allows the opportunity for a researcher to measure the strength or degree of the relationship between a dependent variable and predictor or independent variables (Kuhn & Johnson, 2013). Another benefit of this method is that it allows further analyses regarding whether differences were correlated with one or more variables (Roberts &

Roberts, 2020). A scatter plot contains dots that represent values for two or more variables. This type of figure provides a visual illustration of the data. A straight-line representation of the relationship between variables is a linear regression. This research involved a one-tail approach. The one-tail points to the direction of the effect (Roberts & Roberts, 2020).

For this study, it was predicted that individuals with higher levels of positive religious coping would reveal lower levels of PTSD. This method has also been used with similar research that has studied other influencing variables that could lead to PTSD symptoms. Research conducted by Wang et al. (2020) revealed that the multiple linear regression method may identify influencing factors of symptoms associated with PTSD. The analyses for this research were conducted using IBM SPSS Version 29.

Delimitations, Assumptions, and Limitations

This research was designed to increase reliability and validity; however, as with all study designs, there are limitations. One limitation is that there have been no studies that have been conducted that assess levels of VT, moral injury, and the buffering effects of positive religious coping on symptoms of PTSD with this specific population. The consistency of the findings cannot be comprehensive due to no other comparable studies for comparison. Another possible limitation may be that the handlers are volunteers. Due to recruiting directly through the leadership of the organizations, the handlers may not be fully open and honest due to concerns with possible repercussions. For example, the participants who are members of a church canine comfort handler organization may believe that if they are truthful about the emotional or mental challenges of being a handler, they would be excluded from future deployments or community activities.

Clarification of anonymity was provided in the consent form to enhance the likelihood of honest responses by the participants. Social desirability may also be a limitation which could skew the results. Due to the population selected, diversity may be limited in areas of gender, race, ethnicity, and religious beliefs. Many volunteer handlers are older, and many are retired, which may also impact diversity as well as researcher cultural bias. Due to the length of the survey, there may be issues with habituation. Some of the participants may also not be comfortable using technology. A computer or phone with internet and an email address will be needed to agree to the consent and to complete the questionnaire.

The instruments used to gather the data are based on self-report which impacts reliability. Due to the survey containing close-ended questions, validity may also be a challenge. Another potential limitation is researcher bias. This researcher has collaborated with teams of canine comfort handlers during crisis events and has provided VT training for a variety of populations which could lead to confirmation bias. This researcher also responds alongside law enforcement and provides interventions with individuals who have experienced trauma. Being immersed in the trauma field and identifying as a woman with strong faith this may create unintended errors during analyses that could be attributed to personal and preconceived beliefs and expectancies. This could create a Type 1 error if not acknowledged and addressed effectively. A second data reviewer was implemented to reduce bias. This study was designed to enhance reliability and validity and to reduce errors, bias, assumptions, and other problems that could arise while conducting the study and analyzing the research data. While these

limitations and areas of concern may affect outcome results, steps have been taken to reduce the likelihood of these issues.

Summary

To conclude, the work of a canine comfort handler can offer intrinsic reward but also can create challenges. These individuals utilize a highly trained canine to engage members of their communities who are in pain or suffering. They are also deployed to crisis events across the nation. A well-designed study was needed to research the mental health and potential buffering effects related to their volunteer work. Within this chapter, many key factors related to the research method were presented. The selected quantitative design and the study procedures were thoroughly explained. The population was described including any inclusion and exclusion elements. The number of participants needed, based on a power analysis, was clarified and the details of the recruitment process were thoroughly discussed to ensure replication of the study, if desired.

A description of the combined questionnaire which was created with Qualtrics assessed levels of VT, moral injury, religious coping, and symptoms of PTSD. A discussion regarding the data collection, the multiple regression analyses, and the use of IBM SPSS helped further clarify the steps that were conducted for the research. The results of the study are discussed, not only the findings of the research in a narrative format but also the statistical analyses including tables and figures. A discussion regarding the limitations of the study and future recommendations were also presented.

CHAPTER 4: RESULTS

Overview

The purpose of this quantitative survey study was twofold. First, to assess whether positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of VT, and second, to examine whether positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of moral injury. By examining the correlations among positive religious coping, levels of PTSD symptoms, and VT and the correlations among positive religious coping, levels of PTSD symptoms, and moral injury in canine comfort handlers, further findings were revealed.

Within this chapter, several elements will be reviewed, including the purpose of the study and a brief synopsis of the data collection process. A strong review of the descriptive and data analyses related to the research questions will also be presented. Tables and graphs are included to further illustrate the findings.

Qualtrics software was used to first create a survey and then collect the data. The designed survey contained screening questions, a consent form, demographic questions, as well as four embedded questionnaires that measured levels of VT, moral injury, posttraumatic stress, and religious coping. To gather the data, handlers from two canine comfort organizations were recruited. After the organizational directors approved participation, the handlers were sent an email from their director that contained a letter and a recruitment flyer. The letter and the flyer explained the details of the study and provided a web link as well as a QR code to access the survey. Two follow-up emails

were then sent by the directors to the handlers to remind them of the opportunity to participate in the study. The study was open from July to August 2023.

Research Questions

RQ1: Does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of VT?

RQ2: Does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of moral injury?

Descriptive Results

A total of 83 handlers completed the survey for this research study of which 77% identified as female participants. Regarding the age of the individuals 83% were 56 years and older. Race included 98% White with one participant identifying as Asian and one participant preferred not to answer. Marital status revealed that 78% of the participants were married. Regarding religion, Christianity was selected by 85% of the handlers while 10% were nonreligious. Thirty-four percent of handlers indicated that they have experienced 3–4 personal traumas and 31% experienced 7 or more than 7 personal traumas.

Thirty-eight percent of the participants had 4–6 years of experience as a handler with 39% working in this role from 6–10 hours per week. Deployments ranged from 34% having been deployed 1–3 times, 32% deployed 4–6 times, and 27% deployed 7 or more than 7 times. To note, four of the participants have not been deployed to a crisis event. Answers related to support by their organizations included 77% of the participants received debriefings after deployments, 30% received mental health workshops/training

on VT while 9% received training on moral injury and 7% received no support (see Table 1).

Table 1

Support Provided by Organizations

Type of Support	Frequency	Percentage
Mental health workshops/ VT training	25	30%
Mental health workshops/MI training	8	9%
Debriefing after deployments	64	77%
Weekly check ins	3	3%
Support groups	6	7%
Counseling	12	14%
Financial Support	21	25%
Other type of training/support	24	28%
No support	6	7%

Note. Descriptive statistics (means and standard deviations of all study variables are shown below (see Table 2).

Table 2

Descriptive Statistics for All Instruments

	Mean	Std. Deviation	N
PTSD	7.4699	8.03853	83
Vicarious Trauma	32.8675	7.97369	83
Moral Injury	10.0361	4.55975	83
Positive RC	21.4940	6.64679	83

Instruments

The VTS was utilized to measure VT. It contains eight items (Jimenez et al., 2021). This instrument was developed to assess subjective levels of distress with

individuals who support and counsel others who have experienced trauma (Jimenez et al., 2021). This tool uses a 7-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). A score in the range of 8–28 indicates low VT, a range of 29–42 indicates moderate VT, and a range of 43–56 indicates high VT (Vrklevski & Franklin, 2008). Relating to VT, 67% strongly agreed that their work as a handler exposed them to traumatized or distressed clients and 36% slightly agreed that they were distressed by listening to individuals’ stories and situations. The frequencies and percentages specifically related to the participants’ levels of VT are shown in Table 3.

Table 3

VT Score Frequency

	Frequency	Percentage
Low VTrauma	24	29%
Moderate VTrauma	53	64%
High VTrauma	6	7%
Total	83	100%

To measure moral injuries the MIESS-C was utilized. It is a 10-item scale. This assessment measures exposure and distress and uses a 1–6 Likert scale (Nash et al., 2013). The subscale with Items 2, 4, 6, 8, and 10 which assesses distress related to events was used for this study. Scores range from 5–30 for the subscale. Higher scores suggest higher exposure and/or distress (Fani et al, 2021). Regarding moral injury, 27% of the participants slightly agreed that they were troubled by having witnessed others’ immoral

acts. The frequencies and percentages specifically related to the participants’ levels of moral injury are shown in Table 4.

Table 4

Moral Injury Subscale Score Frequency

	Frequency	Percentage
Low Moral Injury	60	72%
Moderate Moral Injury	21	25%
High Moral Injury	2	2%
Total	83	100%

The PCL-5 is a self-report measurement tool that assesses 20 DSM-5 symptoms of PTSD. It contains 20 items and uses a 0–4 Likert scale. The range is 0–80 with a cutoff score between 31 and 33, which would be indicative of probable PTSD (Weathers et al., 2018).

Table 5

PTSD Symptoms Score Frequency

	Frequency	Percentage
Low Symptoms PTSD	71	86%
Moderate Symptoms PTSD	10	12%
High Symptoms PTSD	2	2%
Total	83	100%

To measure positive religious coping, the Brief RCOPE was utilized. This instrument measures the role of religion in dealing with crisis, trauma, and transition. It contains 14 items (Kenneth et al., 2011). This is a shortened version of the RCOPE (Pargament et al., 2011). This assessment tool includes two subscales, positive coping

(seven items) and negative coping (seven items). A 4-point Likert scale ranging from 1–4 is used. To score the Brief RCOPE, this researcher summed the positive items and then the negative items separately to generate two subscale scores (Rezaeipandari et al., 2021). Only one subscale, positive religious coping, was utilized for analysis.

Table 6

Positive Religious Coping Subscale Score Frequency

	Frequency	Percentage
Low Positive RC	11	13%
Moderate Positive RC	7	8%
High Positive RC	65	78%
Total	83	100%

Study Findings

Initially, the assumptions related to multiple regression were reviewed. First, the dependent variable was measured on a continuous scale. Second, there are three independent variables that are continuous variables. The Durbin Watson statistic was utilized to check for independence of residuals and this result was 1.7; therefore, there is no autocorrelation. Then, the linear relationships between PTSD and the independent variables were analyzed. The deviation from linearity with vicarious trauma was .14 and positive RC was .94; however, moral injury was .04. Homoscedasticity was also examined. There was mild violation for this assumption.

The residuals normality assumption was then examined for normal distribution utilizing a histogram as well as a P-P Plot of regression chart. The findings revealed that the data are approximately normally distributed. The next step was to check all the variables for multicollinearity. The variance inflation factor for each of the predictor

variables are as follows: vicarious trauma was 1.470, moral injury was 1.453, and positive religious coping was 1.052. None of the values are greater than 5, which indicated that multicollinearity would not be a problem in the regression model.

Research Question #1

Does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of VT?

A multiple linear regression was fitted to examine whether positive religious coping moderated the association between PTSD symptoms and VT. The overall model explains 26.7% variation of PTSD score; however, VT and positive religious coping do not have a significant effect on PTSD scores, $F(3, 79) = 9.583, p < .001$. With a 1-unit increase in VT and positive religious coping, the PTSD score increases by .015, which was not found to be a significant change, $t(79) = 1.084, p = .282$. We fail to reject the null hypotheses at the 5% significance level. There is not sufficient evidence to support the claim that positive religious coping would lower scores of PTSD with handlers with high levels of VT.

Table 7

Model 1 Summary with Dependent Variable PTSD

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517 ^a	.267	.239	7.01258

a. Predictors: (Constant), VT_PosRC, Vicarious Trauma, Positive Religious Coping

Table 8

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1413.748	3	471.249	9.583	<.001 ^b
	Residual	3884.927	79	49.176		
	Total	5298.675	82			

a. Dependent Variable: PTSD

b. Predictors: (Constant), VT_PosRC, Vicarious Trauma, Positive Religious Coping

As shown in Table 9, although positive religious coping may not moderate the association between PTSD and VT, it was shown that higher levels of positive religious coping reduce levels of PTSD, although not significantly.

Table 9

Coefficients

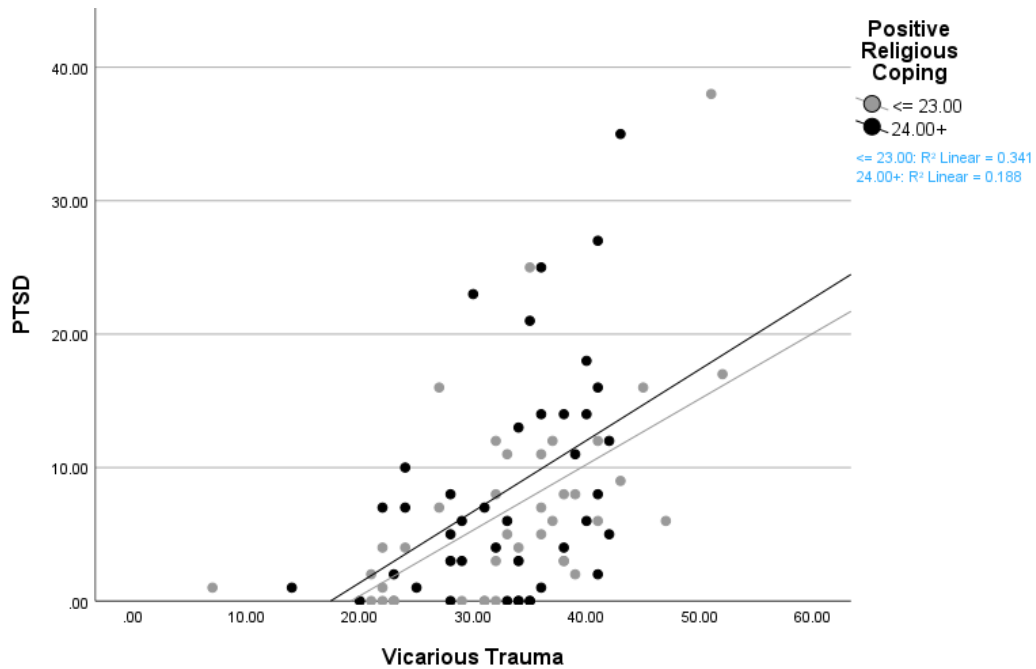
Model	Unstandardized B	Coefficients Std. Error	Standardized		
			Beta	t	Sig.
1 (Constant)	-.603	9.152		-.066	.948
Vicarious Trauma	.193	.305	.191	.631	.530
Positive RC	-.428	.433	-.354	-.990	.325
VT_PosRC	.015	.014	.542	1.084	.282

a. Dependent Variable: PTSD

In the figure below (Figure 1), a scatterplot illustrates levels of PTSD and VT with the moderator, positive religious coping. As shown in the table, positive religious coping does not have a moderating effect on PTSD.

Figure 1

Scatter Plot of PTSD by VT Using Positive Religious Coping Moderator



Research Question #2

Does positive religious coping lower scores of PTSD symptoms in canine comfort handlers experiencing high levels of moral injury?

A multiple linear regression was fitted to examine whether positive religious coping moderated the association between PTSD symptoms and moral injury.

The overall model explains 29.9% variation of PTSD score however, moral injury and positive religious coping do not have a significant effect on PTSD scores, $F(3, 79) = 11.25, p < .001$. With a 1-unit increase in moral injury and positive religious coping, the PTSD score increases by .024 which was not found to be a significant change, $t(79) = .757, p = .451$. We fail to reject the null hypotheses at the 5% significance level. There is not

sufficient evidence to support the claim that positive religious coping would lower scores of PTSD with handlers with high levels of moral injury.

Table 10

Model 2 Summary with Dependent Variable PTSD

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.547 ^a	.299	.273	6.85507

a. Predictors: (Constant), MInj_PosRC, Positive Religious Coping, Moral Injury

Table 11

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	156.312	3	528.771	11.252	<.001 ^b
	Residual	3712.363	79	46.992		
	Total	5298.675	82			

a. Dependent Variable: PTSD

b. Predictors: (Constant), MInj_PosRC, Positive Religious Coping, Moral Injury

As shown in Table 12, although positive religious coping may not moderate the association between PTSD and moral injury, it was shown that higher levels of positive religious coping reduce levels of PTSD, although not significantly.

Table 12

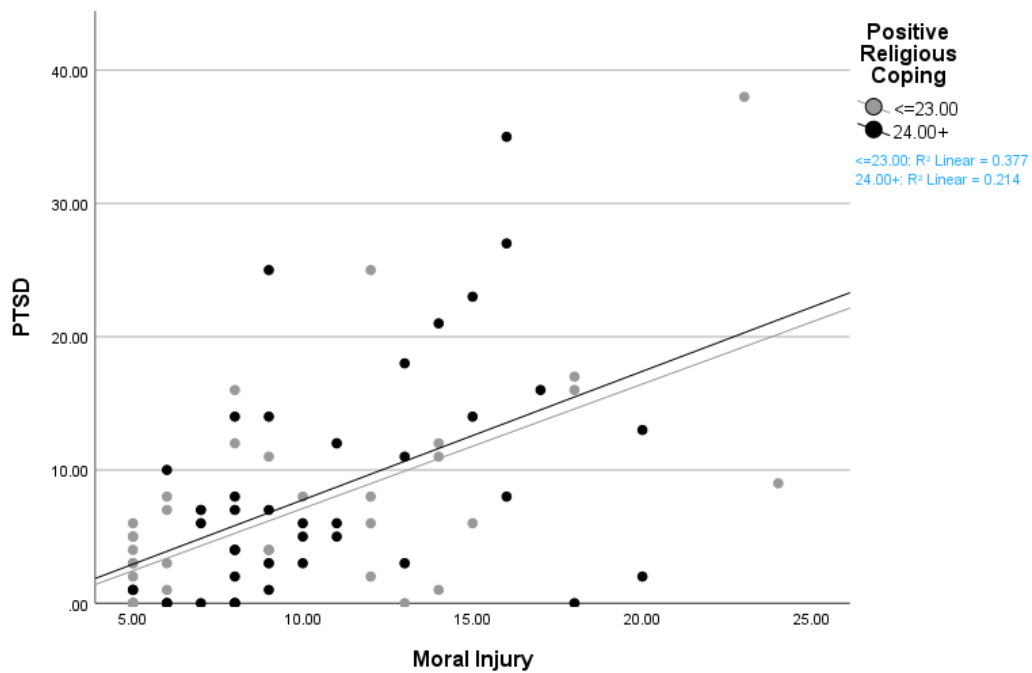
Coefficients^a

Model	Unstandardized B	Coefficients Std. Error	Standardized		
			Coefficient Beta	t	Sig.
2 (Constant)	1.969	6.823		.289	.774
Moral Injury	.417	.720	.237	.580	.564
Positive RC	-.186	.311	-.154	-.599	.551
Minj_PosRC	.024	.032	.384	.451	.451

a. Dependent Variable PTSD

Figure 2

Scatter Plot of PTSD by Moral Injury Using Positive Religious Coping Moderator



The results in Table 13 reveal the strength of the relationship or the significance of all the variables in the model and the magnitude with which it impacts the dependent variable. VT and moral injury have positive relationships, and both are significant, indicating that higher scores on each of these variables would reveal higher scores of PTSD. Positive religious coping does reveal a negative relationship, indicating higher scores on positive religious coping would reveal lower scores of PTSD; however, it was not statistically significant.

Table 13

Coefficients^a

Model	Unstandardized	Coefficients Std. Error	Coefficient		
	B		Beta	t	Sig.
(Constant)	-8.895	3.558		-2.500	.014
Vicarious Trauma	.300	.111	.297	2.711	.008
Moral Injury	.667	.192	.378	3.471	<.001
Positive RC	-.008	.112	-.007	-.072	.943

a. Dependent Variable PTSD

As noted in the table below, the strength and direction among PTSD, VT, moral injury, and positive religious coping reveal various results. There was a moderately positive correlation between VT and PTSD, as well as with moral injury and PTSD.

Table 14

Pearson Correlations

		PTSD	VT	Minj	PosRC
Pearson	PTSD	1.000	.506	.542	.123
Correlation	VT	.506	1.000	.555	.208
	Minj	.542	.555	1.000	.179
	Pos RC	.123	.208	.179	1.000

Summary

To conclude, the aim of this study was to examine whether positive religious coping buffered the mental health effects of VT and moral injury in canine comfort handlers. This chapter revealed relevant demographic and descriptive information related to the participants and the findings of the study. The results revealed that the majority (64%) of canine comfort handlers are experiencing moderate levels of VT and 25% are experiencing moderate levels of moral injury. Seventy-eight percent expressed high levels of positive religious coping and 86% revealed low levels of PTSD. The findings from the statistical analyses indicated that there was not enough sufficient evidence to support the claims that positive religious coping would lower scores of PTSD with handlers with high levels of VT and that positive religious coping would lower scores of PTSD with handlers with high levels of moral injury. Within this research, it was found that as positive religious coping increased, PTSD scores decreased, although it was not statistically significant.

The following chapter provides an in-depth discussion related to the key findings of the study, the meaning of the results, and a strong focus of how this research compares

to other current literature in the field. There will also be a thorough review of how these findings contribute to the CSDT and ways in which it fits a biblical foundation.

Limitations of this study will be reviewed as well as implications and several recommendations for future research.

CHAPTER 5: DISCUSSION

Overview

The purpose of this research was to examine whether positive religious coping would reveal a buffering effect for levels of PTSD symptoms among canine comfort handlers who exhibited either high levels of VT or high levels of moral injury. A multiple regression method was utilized to analyze the relationships between the dependent variable, symptoms of PTSD, and three independent variables including VT, moral injury, and positive religious coping. The correlations among levels of VT, moral injury, positive religious coping, and PTSD symptoms were also explored. In this chapter, a summary of the findings will be presented as well as a thorough discussion regarding the meaning of the findings, how they compare to current literature in the field, implications, and future research recommendations.

Summary of Findings

The present study adds to the growing body of evidence that helpers who help others may be affected by their work and can experience deleterious mental health outcomes. The results of the study offered much insight into specific mental health risk factors as well as a potential protective factor that could influence the well-being of canine comfort handlers. After conducting the analyses, the results revealed that positive religious coping did not create a moderating effect between high levels of VT and symptoms of PTSD, nor did it have a moderating effect between high levels of moral injury and symptoms of PTSD. The findings, therefore, failed to support the hypotheses that positive religious coping would reduce PTSD symptoms in handlers with high levels of VT or high levels of moral injury. Related specifically to two of the independent

variables that were studied, results indicated that only six handlers scored in the high range on VT and two individuals scored high on moral injury. The findings also indicated that as positive religious coping increased, PTSD symptoms decreased, but this relationship was not significant. Other results revealed that 64% of handlers exhibited moderate levels of VT and 25% expressed moderate levels of distress related to moral injury. Regarding positive religious coping, 78% of the handlers revealed high levels and 86% are experiencing no symptoms or low levels of PTSD symptoms. Regarding demographics, among the participants, it was also shown that the majority, 78%, were married and 85% identified as Christians.

Discussion of Findings

Positive Religious Coping

Research on religious coping has increased in recent years and most studies have indicated that when individuals utilize positive religious coping a positive mental health outcome is the result (Captari et al., 2018; Entwistle et al., 2018; San Roman et al., 2019; Whitworth et al., 2021). Furthermore, more specifically, the examination of positive religious coping as a buffer to the mental health effects of being exposed to a disaster or a traumatic event are shown in the literature (Ball et al., 2020; Ellor & Mayo, 2018; Pandya, 2017).

Based on the review of previous studies, there are similar findings which show that religion and spirituality can promote the ability to cope and can buffer against mental health concerns such as PTSD (Captari et al., 2018; Currier et al., 2019; San Roman et al., 2019).

By examining the positive effects of religion with diverse populations such as church-oriented individuals, humanitarian aid volunteers, and those who have experienced a traumatic event or are experiencing some form of suffering, a greater understanding has been developed regarding the role religion plays in mental health (Captari et al., 2018; Entwistle et al., 2018; San Roman et al., 2019). However, there has been no research examining the mental health effects related to the work of canine comfort handlers.

To add to the literature, this quantitative multiple regression study examined whether positive religious coping buffered the mental health effects with a volunteer canine comfort handler population. It was hypothesized that positive religious coping would reduce symptoms of PTSD in canine comfort handlers with a high level of VT or a high level of moral injury. The results revealed that positive religious coping did not provide a buffering effect for PTSD with handlers who expressed high levels of VT. The results of this multiple linear regression are presented in Table 7 and Table 8. Although the overall model explains 26.7% variation of the PTSD score, it was revealed that the relationship between VT and positive religious coping do not have a significant effect on PTSD scores.

The results also revealed that positive religious coping did not provide a buffering effect for PTSD with handlers who expressed high levels of moral injury. The results of this multiple linear regression are presented in Table 10 and Table 11. Even though the overall model explains 29.9% variation of the PTSD score, it was revealed that the relationship between moral injury and positive religious coping did not have a significant effect on PTSD scores. Although the lack of a buffering effect was unexpected, the

overall rate of PTSD symptoms among the handlers were quite low, with 86% of the handlers experiencing no symptoms or low levels of PTSD symptoms. This indicates that there may be different factors that are contributing to well-being.

As a result of this research study, new data and information have been revealed. Most of the handlers, 78%, expressed high levels of positive religious coping, which means that most of these individuals seek religious and spiritual support, which is positively associated with well-being and life satisfaction (Entwistle et al., 2018; Godbolt et al., 2018; San Roman et al., 2019; Whitworth et al., 2021). During the handlers' interactions with those they serve, and generally in life, they may utilize positive religious coping to create meaning and perceive their experiences, which has been shown to greatly influence mental, emotional, and physical health (Captari et al., 2018; Entwistle et al., 2018; San Roman et al., 2019).

Of interest, although this study did not focus specifically on the effects of negative religious coping, of the participants within this research study, 64% generally utilized no or low levels of negative religious coping, 34% utilized moderate levels, and 1% utilized high levels of negative religious coping. The usage of negative religious coping has been shown to have harmful effects (Captari et al., 2018; Ellor & Mayo, 2018; Entwistle & Maroney, 2018; San Roman et al., 2019).

The theory associated with religious and spiritual coping describes several elements of coping which could serve other purposes, including the search for meaning, connection or intimacy with others, personal identity, worldview, locus of control, anxiety-reduction, and others (Pagament et al., 2011; Park et al., 2019; Xu, 2016). Due to this multifaceted focus of interpersonal and intrapersonal, thought processing, emotions,

and behaviors are all involved in this strategy that can change over time depending on circumstances. This theory also supports the CSDT.

Handlers and Animal-Assisted Interventions

Within recent literature, there are many studies that reveal numerous benefits associated with humans interacting with animals (Kline et al., 2019; Maoz et al., 2021; Swall, 2016). Studies have discovered that canine exposure was positively correlated with not only a statistically significant improvement in PTSD symptoms with adolescents, but also a decrease in anxiety, pain, depression, and the psychological effects related to dementia. The research has typically focused on positive outcomes due to these engagements with humans (Fine et al., 2019; Glenk & Foltin, 2021; Trevathan-Minnis et al., 2021). A qualitative case study was conducted with broadcast journalists who covered a mass shooting and afterwards were provided services from canine comfort handlers. The handlers were from one of the organizations that participated in this current study. The results found that the services provided by the handlers created a sense of joy and relief and opened doors for the journalists to seek additional mental healthcare options (Garvey, 2021).

There have been studies that focused on other types of handlers who are in the field, such as search and rescue, military, law enforcement, and those working in a therapeutic setting who may experience similar encounters. Research indicated that resilience, social support, and specific dog training have helped in the prevention of PTSD (Arkow, 2020; Gravrok et al., 2019; Harvie et al., 2021; Kaufman et al., 2020; Moaz et al., 2021). More recently, studies in animal-assisted interventions have gravitated toward the negative effects experienced by canines due to animal-assisted

engagements. Studies have shown that canines may experience zoonotic disease transmission from human to animal as well as the mental and physical stress related to this form of work (Fine et al., 2019; Sundman et al., 2019).

Based on the review of the previous studies of scientific research in the field of animal-assisted interventions, it was found that most of the studies focused on the mental health benefits of the intervention for those who were served (Glenk, 2017; Glenk & Foltin, 2021; Holman et al., 2020). Several of the previously reviewed studies primarily focused on professional first responder handlers and the mental health effects of their work (Holman et al., 2020; Kaufman et al., 2020). However, there were no studies that focused on the mental health effects of volunteer canine comfort handlers who respond to the aftermath of traumatic events.

Holding true to the volunteering nature of canine comfort handlers, one obvious finding of the study in animal-assisted interventions is that there were a good amount of canine comfort handlers who were willing to take time to participate in this study, knowing that doing so could result in personal psychological distress. They understood that there would be risks and that there was no monetary compensation for answering the survey, yet chose to participate not only to further enhance understanding in the field but to help others.

VT

Based on the review of previous studies, most of the findings revealed that individuals who choose to help others in times of crisis can be exposed to others' trauma, resulting in consequences (Jimenez et al., 2021; Juczynski et al., 2022). Recent statistics also support this finding. As mentioned previously, this form of trauma, VT, can create

problems with mental health. Research on helping professionals such as police officers and therapists have shown that there is a risk for this mental health concern and that females are at a higher risk (Ball et al., 2020; Greinacher et al., 2019). This canine comfort handler research study was primarily comprised of female volunteers.

Additional research has shown that not only are helping professionals exposed to VT, but if the effects of VT are not managed, it can spillover to their families (Casas & Benuto, 2022). Most of the handlers in this study identified as being married, and some handler teams work alongside their husband or wife during deployments and community engagements. Research that has focused on protective and risk factors supports that age and gender, the assessment of a potential threat, the effectiveness of coping strategies during and immediately after the trauma exposure, as well as social support and means of coping could increase or decrease this mental health concern (Greinacher et al., 2019; Juczynski et al., 2022). This study was designed to assess gender, age, types of support received by their organizations, and other protective and risk factors. After tragedy, some people seek assistance from mental health professionals while others may gear towards the clergy. A study conducted on VT with people of faith who help others revealed that the levels of VT are higher with this group in comparison to a group of therapists (Juczynski et al., 2022). Most of the participants in this study revealed high levels of positive religious coping and moderate levels of VT.

Some conflicting research indicated that among first responders, low levels of VT were revealed which researchers explained could be a result of social desirability and potential job loss (Greinacher et al., 2019; Tuttle et al., 2019). The elements of social

desirability and loss of participation opportunities were concerns related to gathering honest and accurate data for this study as well.

The findings of this study support most of the previous literature on VT with populations of individuals who help others. Due to the type of work that canine comfort handlers are involved in within their communities and during deployments to traumatic events, it is recognized that they too may have been experiencing mental health concerns related to VT. Based on the findings, it appears that canine comfort handlers can range in symptoms associated with VT; however, the majority (64%) revealed moderate levels of VT, which aligns with previous studies (Gancz et al., 2020; Jimenez et al., 2021; Juczynski et al., 2022). Out of 83 handlers, only six revealed high levels of VT.

Moral Injury

Moral injury is a core component of trauma. Previous research on this mental health concern primarily focused on military personnel (Antonelli, 2017; Coady et al., 2021; Williamson et al., 2018). Prior studies examining moral injuries discovered the effects of moral injury on mental health and found that individuals who experience these types of issues are at higher risk of developing symptoms of PTSD and depressive symptoms (Coady et al., 2021; West & Cronshaw, 2022; Williamson et al., 2018). For this study, it was important to assess levels of moral injury to examine whether levels of this mental health challenge would also be heightened. This researcher assessed for moral injury and discovered that 25% of the handlers expressed moderate levels of distress and two participants revealed high levels of moral injury.

Spiritual practices, specifically Christian, can aid in managing moral injuries, and there may be a relationship between moral injuries and spiritual distress (Coady et al.

2021; Liebert, 2019). Most of the handler participants identified as Christians and exhibited high levels of positive religious coping. In line with recent qualitative research by West and Cronshaw (2022), it was revealed that Christian scripture can be therapeutic and could help address issues associated with moral injuries.

Other recent research continued to point toward support to increase likelihood of a more positive outcome after or during the experience of a moral injury, but suggested that gaining support from others may not be one of the only protective factors that could influence outcome. This research indicated that individually or communally, moral elevation could be experienced (Tingey et al., 2019). Due to the low rate of high distress associated with moral injuries within this study, moral elevation may be an outcome that could be considered for future exploration with this group of individuals.

PTSD

Due to the harmful mental health concerns, potential buffers of PTSD have been studied throughout the literature with various populations. Based on the review of the past research, many of the studies examined the risk and protective factors associated with the development of this mental health disorder among professionals and volunteers (Captari et al., 2018; Hartwig & Smelser, 2018; Kaufmann et al., 2020; San Roman et al., 2019; Whitworth et al., 2021). Studies with volunteers and canine search and rescue teams that respond to traumatic events related to disasters also revealed an elevated risk of developing symptoms of PTSD (Entwistle et al., 2018; Kaufman et al., 2020). The previous studies primarily focused on predictive factors such as coping styles and social support which could buffer symptoms of PTSD, and it was shown that PTSD was significantly predicted by social general disapproval (Kaufman et al., 2020). In

comparison, canine comfort handlers are often greeted and welcomed by those whom they serve and are typically socially accepted and supported by those individuals to whom they provide services.

Eighty-six percent of the canine comfort handlers are experiencing no symptoms or low level of symptoms related to PTSD, even though there were moderate levels of VT as well as heightened levels of moral injury directly related to their volunteer work. It was also revealed that 31% had experienced 7 or more than 7 traumatic events in their life, 22% experienced 5–6 events, 35% experienced 3–4 events, and 12% experienced 1–2 traumatic events. This means that more than half of the handlers have experienced at least three personal traumatic events in their life. These stats do not include the traumatic events to which handlers respond, such as the aftermath of mass shootings, hurricanes, tornados, and so forth, yet the vast majority are expressing no or low levels of PTSD. Due to the canine comfort handlers directly working with canines while they are providing services to others, it is wondered if the relationship with the canine could impact the overall effects of mental health, specifically symptoms of PTSD, or if other buffers are being activated and are currently unknown and have not been discovered by the scientific research field.

Support has been mentioned throughout the literature and is an important aspect to protect from PTSD symptoms (Thormar et al., 2016). What type of support, however, has been unclear as the results of many studies differ. Social support has been revealed as one strong protective factor against PTSD, although it is unclear whether social support needs to be related to other humans, or if canines or other animals can provide the need of social support. Recent research has revealed that many dog owners believe that their dog

helps them through difficult times. Comfort canines are available, they have shared in the experiences, and they are close in physical proximity, factors which impacted the results of the study conducted by Bowe et al. (2020).

Canine comfort handlers within this study indicated that they are not experiencing symptoms of PTSD or have low levels of PTSD. Research conducted by Wang et al. (2020) may also help explain the low levels due to a predictor of posttraumatic growth, which is the female gender. Most canine comfort handlers are female, which was highly represented in this study at 77%. Posttraumatic growth, however, was not assessed in this study.

The canine comfort handlers also expressed various types of support from the organizations. Thirty-nine percent received training on either VT or moral injury, 77% have received debriefings after deployments, 3% received weekly check-ins, 7% had experienced a support group, 14% received counseling, 25% received financial support, and 28% received some other type of training or support. Seven percent indicated that they have not received any type of support. To prepare the handlers for what they may be facing, a strong training curriculum is needed, and this study revealed that only 39% of the handlers received training on either VT or moral injuries. However, with the higher rate associated with handlers participating in debriefings, it is noted that the organizations appear to be aware of the need for additional support after deployments and have implemented a strategy.

To enhance the psychological field, one of the goals of this research study was to acknowledge and reveal the work that is being done every day throughout the nation by canine comfort handlers. Their volunteer work involves engaging with survivors of

traumatic events and working with those suffering or struggling in life or grieving a loss. The work of a handler demonstrates care and concern for others. This research study was designed and conducted to better understand the mental health effects of their work and discover possible risk and protective factors. Due to the lack of research with this population, more research is needed to further identify other possible mental health protective and risk factors associated with the work of a canine comfort handler.

Theory of Concepts Comparison

This study contributes to the CSDT. Canine comfort handlers, as revealed in this study, indirectly experience traumatic events and can be affected by psychological reactions to trauma. This theory points to a focus of self, traumatic memories, psychological needs, and a cognitive framework. Vides et al. (2022) illustrated that CSDT provides a foundation of which to understand the social and behavioral functioning disruptions that can occur after an individual experiences a traumatic event or a moral injury and the relationship between emotional regulation and attachment.

This theory is relevant when examining VT, moral injury, positive religious coping, and PTSD as it can help explain the psychological reactions to trauma and moral dilemmas. This theory can also help explain how individuals perceive their reality while interacting with their environment (McCann & Pearlman, 1990; Vides et al., 2022). By adhering to CSDT, canine comfort handlers may utilize their experiences in such a manner that it could help create their reality and worldview. As a result of positive religious coping, some may frame life experiences and the effects on mental health in a particular way that contributes to well-being.

This theory also supports the concept that trauma symptoms and possibly other mental health concerns can be diminished or increased by internal and external factors. Some evidence suggests that social support, an external factor, and positive religious coping, an internal factor, could diminish the deleterious mental health effects (Kaufman et al., 2020; Liebert, 2019).

As seen in this study, more than three quarters of the handlers utilize positive religious coping in times of distress, a little over half of the handlers are experiencing moderate levels of VT, and a quarter are experiencing moderate levels of moral injuries. PTSD levels overall were low indicating that even though canine comfort handlers are being exposed to traumatic events and moral injuries while engaging in their volunteer work and have personally experienced traumatic events in life they are responding or reacting in such a way that their experiences are not resulting in PTSD.

Biblical Foundation Comparison

Canine comfort handlers have chosen to help others who have experienced traumatic events such as mass shootings and natural disasters like hurricanes and tornados. They also provide support to members of their community who are suffering or struggling in life due to health-related issues, loss, hardships, and other types of challenges. This research study revealed that helpers who help others also need help. Symptoms of VT, moral injuries, as well as PTSD were selected as potential mental health concerns to be examined in this study. These mental health concerns were assessed due to the type of support that the handlers provide to others.

The work that handlers engage in can be very challenging, although scripture can provide strength. The helpers will be helped by reminding us that God “comforts us in all

afflictions, so that we may be able to comfort those who are in affliction.” The Bible goes on to explain that while individuals share in sufferings, they will also share in comfort (ESV, 2001, 1 Corinthians 3:7). Canine handlers who offer support to survivors of a mass shooting or another violent event may struggle with morality, as it is stated in Romans 13:9 that “you shall not commit murder and that you shall love your neighbor as yourself as love is the fulfilling of the law” (ESV, 2001). Matthew 10:16 describes the encounter of moral injuries as it is told that the Lord will send you out as sheep among wolves, so be wise as serpents and innocent as doves (ESV, 2001).

Seventy-eight percent of the handlers who participated in this research utilize high levels of positive religious coping. These individuals tend to seek religious or spiritual support during difficult times. As stated in Isaiah 41:13, “After all, it is I, the Eternal One your God, who has hold of your right hand, who whispers in your ear, “Don’t be afraid. I will help you.” Described as a shield of armor in James 1:19-21,

My dear brothers and sisters, take note of this: Everyone should be quick to listen, slow to speak and slow to become angry, because human anger does not produce the righteousness that God desires. Therefore, get rid of all moral filth and the evil that is so prevalent and humbly accept the word planted in you, which can save you.

In this study, most of the handlers tend to lean on God to cope with the mental and emotional aspect of their work. The Lord provides strong guidance to the canine comfort handler in Romans 12:21, “Do not be overcome by evil but overcome evil with good.”

Implications

This study was the first to focus on the mental health well-being of canine comfort handlers. By studying this population, the scientific community has been introduced to the work of canine comfort handlers and their organizations. These types of volunteers choose to work within their communities and travel, sometimes across the nation, to provide support to others who have experienced a traumatic event.

The findings of this research suggest that this type of volunteer work as a canine comfort handler could result in being exposed to traumatic situations, experiencing morality concerns that are distressful, and undergoing symptoms related to PTSD. Canine comfort handlers and their organizations can be provided with these results and become better informed regarding the possible mental health effects. No previous study has been conducted that measured VT, moral injury, PTSD symptoms, and positive religious coping levels with this population. This research extends the field's current understanding of the mental health effects related to volunteers who engage with trauma survivors after a crisis and for those in their community that are suffering.

The findings can be used to not only better inform the handlers of potential mental health outcomes related to their work, but also to promote organizational awareness. If handlers become cognizant of the mental health risks, they may be more prepared and could proactively engage with their organization, fellow handlers, religious leaders, or mental health professionals when needed. The results can also encourage canine comfort organizations to develop strategies to enhance their current operational processes and integrate additional training and support. Organizations can use these results to not only

enhance their awareness of the possible mental health effects and other challenges of their handlers, but to strengthen training programs especially focusing on mental health.

By further gaining information related to the types of individuals who typically gravitate toward this form of volunteer work, additional techniques can be implemented to increase recruitment. This may lead to further wellness due to the strengthening of teams and sharing deployment opportunities and community engagements. Regarding the demographics, the findings also revealed that screening for at least 1 year of experience was beneficial to this study as it produced only four participants who had not been deployed to a crisis or traumatic event such as a mass shooting or a natural disaster.

The organizations and any associated churches have the responsibility and the opportunity to continue encouraging, training, and supporting their handlers as they face these challenges. For organizations that involve a church, support from the congregation and religious leaders from the church may be especially beneficial to many of the handlers as the findings revealed that the majority engage their religious beliefs to cope. Regarding support by the organizations, most of the handlers indicated that they have received some form of training and assistance; however, a small number of handlers, 7%, indicated that they have not received any form of support from their program.

Limitations

There are some notable limitations to this study. One of the main limitations of this research study is that there have been no previous studies conducted focusing on the mental health effects of volunteer canine comfort handlers. More specifically, there has been no previous research with this population that has assessed levels of VT, moral injury, and the buffering effects of positive religious coping for symptoms of PTSD. The

consistency of the findings cannot be comprehensive due to having no other comparable studies for comparison.

Another limitation involves the voluntary nature of being a handler. Due to directly recruiting through the leadership of the organizations, the handlers may not have been fully comfortable answering the survey openly and honestly due to concerns with possible repercussions. The participants may have believed that if they were truthful regarding the emotional or mental challenges of being a handler, they would be excluded from future deployments or community activities. To combat this concern, the researcher provided clarification related to confidentiality and anonymity, which may have elicited more honest responses on the survey, but the potential limitation remained. Social desirability may also have been a limitation which could have skewed the results.

Diversity was extremely limited in areas of gender, race, and religious beliefs. Most canine comfort handlers within the two organizations are female and older, which was also represented in this study. Seventy-seven percent of the participants were female, and 83% of the handlers were 56 years old or older. Another concern was the length of the survey, as there may have been issues with habituation.

Other potential limitations are related to technology. Depending on the level of knowledge related to technology, some of the participants may have not been comfortable using the newer technology and chose to not participate in the survey or was unable to use the technology to access the survey. To participate, a computer or phone with internet and an email address was needed. To open the survey, the participant had to click a link or scan a QR code for access. QR codes are relatively newer technology, and some potential participants may not have known how to scan the code. Another limitation

included the instruments. The tools used to gather the data are based on self-report, which could impact reliability. Due to the survey containing close-ended questions, validity may have also been a challenge.

An additional limitation is researcher bias. This researcher has collaborated with teams of canine comfort handlers during crisis events and has provided VT training for a variety of populations which could lead to confirmation bias. This researcher also currently responds alongside law enforcement and provides interventions with individuals who have experienced trauma. Being immersed in the trauma field and identifying as a woman with strong faith may have created unintended errors during analyses that could be attributed to personal and preconceived beliefs and expectancies. This could have created a Type 1 error if it was not acknowledged and addressed effectively. To reduce likelihood of researcher bias, a second data reviewer was implemented.

This study was designed to enhance reliability and validity and to reduce errors, bias, assumptions, and other problems that could have arisen while conducting the study and analyzing the research data. While these limitations and areas of concern may have affected outcome results, steps were taken to reduce the likelihood of these issues.

Recommendations for Future Research

There are numerous recommendations for future research. Due to this study being the first to focus on how this type of volunteer work affects the mental health of canine comfort handlers, there is still much unknown. Future studies could replicate this research with a larger sample of more diverse handlers. It is recommended that not only symptoms of positive religious coping, VT, moral injury, and PTSD be explored further

to understand the long-term consequences of mental health distress, but other mental health concerns such as complex trauma, depression, and anxiety could be examined as well. Understanding the effects of moral injury remains limited and researchers could further explore how religious and spiritual beliefs shape not only the moral event but also how they experience issues associated with morality concerns.

It is recommended that other possible protective factors such as posttraumatic growth, moral elevation, social support, and religious support be examined. Future longitudinal studies are also encouraged to help clarify the effects of positive religious coping related to mental health concerns with this population over a period of time. Another study approach could focus on the risk associated with negative religious coping as it may be most beneficial in predicting worse health-related outcomes.

Canine Comfort Handlers' Interventions

The weight of the impact related to the handlers' interventions has not been thoroughly studied. Further examination is warranted into the effectiveness of not only those whom they serve directly but of first responders who are often on the scene and engage with the handler teams. It is understood in the literature that animal-assisted interventions provide positive benefits to humans. Research has also been conducted that focused on how the canines are affected by their handlers. However, additional examination is needed to understand how the partnership with the canine affects the well-being of the handlers.

Expanding Focus

To increase diversity, one of the organizations that had participated in this study had inquired about the recruitment of their ministry prayer partners that often work

alongside handlers. It was explained that these individuals are also exposed to the same traumatic experiences and moral dilemmas as the handlers. Due to the specific scope of this study, the prayer partners were not included; however, it is recommended that these specialized volunteers are recruited in future research. Another design difference between the two organizations is that one program was created to have the handlers and the canines living in different residences while the other organization designed their program to have the canines reside in the same home with their handlers. There are many different reasons associated with these decisions and further research could explore if there is any impact on the outcome directly related to these differences.

A qualitative research study could help further explore complex phenomena and gain insight into the canine comfort handlers' and ministry partners' experiences. This specific study design could further be useful in clarifying types of organizational support that handlers find most beneficial.

Positive Effects of Volunteer Work

Future studies could also examine how this form of specialized volunteer work positively impacts the handlers. After the exposure of indirect trauma and moral violations, research could focus on moral elevation and posttraumatic growth within this population. The volunteer work that is being conducted by the handlers and others partnering with them can be very challenging. Future research is needed to explore other protective factors that could contribute to their well-being.

Summary

This research filled a gap in the literature by studying the mental health effects related to the work conducted by canine comfort handlers. By examining the effect of

positive religious coping on the mental health concerns of VT, moral injury, and PTSD in canine comfort handlers, much has been revealed. Although positive religious coping did not offer a buffering effect between VT symptoms and PTSD or moral injury and PTSD, it was shown that higher levels of positive religious coping reduce levels of PTSD, although not significantly. Furthermore, it was revealed that more than half of the handlers are experiencing moderate levels of VT, and a quarter of the handlers are experiencing moderate distress related to moral injuries.

This study stressed the importance of canine comfort handlers' mental health. With the number of mass shootings and natural disasters that continue to occur within the United States, canine comfort handlers will continue to volunteer and serve those who need comfort and support. To promote handler longevity and overall well-being, more research is needed to examine other risk and protective factors.

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APPENDIX A: PERMISSION REQUEST-LCC K-9 COMFORT DOG MINISTRY

July 26, 2023

Lutheran Church Charities K-9 Comfort Dog Ministry
Rev. Chris Singer
[REDACTED]

Dear Rev. Singer,

As a doctoral student in the School of Behavioral Sciences at Liberty University, I am conducting research to better understand the mental health effects of canine comfort handlers. The title of my research project is The Mental Health Effects of Vicarious Trauma, Moral Injury, and Positive Religious Coping with Canine Comfort Handlers and the purpose of my research is to examine potential mental health risks and protective factors which may be associated with the experiences of canine comfort handlers.

I am writing to request your permission to recruit participants within the LCC Canine Comfort Ministry. A second email will follow that will contain a flyer and a recruitment letter for the canine comfort handlers.

If you could please forward the second email to all the canine handlers within your organization this would be extremely helpful to ensure anonymity.

Participants will be asked to complete an on-line survey. All participants will be presented with informed consent information prior to participating and all responses are anonymous. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you have any questions, please reach out to me by email. [REDACTED]

Sincerely,

Terri O'Brien-Cross
Doctoral Candidate

APPENDIX B: PERMISSION REQUEST-HOPE-ANIMAL
ASSISTED CRISIS RESPONSE

July 25, 2023

HOPE Animal-Assisted Crisis Response
Ms. Jeanne Hooke
[REDACTED]

Dear Ms. Hooke,

As a doctoral student in the School of Behavioral Sciences at Liberty University, I am conducting research to better understand the mental health effects of canine comfort handlers. The title of my research project is The Mental Health Effects of Vicarious Trauma, Moral Injury, and Positive Religious Coping with Canine Comfort Handlers and the purpose of my research is to examine potential mental health risks and protective factors which may be associated with the experiences of canine comfort handlers.

I am writing to request your assistance to recruit participants within the HOPE organization. A second email will follow that will contain a flyer and a recruitment letter for the canine comfort handlers.

If you could please forward the second email to all the canine handlers within your organization this would be extremely helpful to ensure anonymity.

Participants will be asked to complete an attached survey. All participants will be presented with informed consent information prior to participating and all responses are anonymous. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you have any questions, please reach out to me by email. [REDACTED]

Sincerely,

Terri O'Brien-Cross
Doctoral Candidate

APPENDIX C: RECRUITMENT EMAIL

Dear Canine Comfort Handler,

As a doctoral candidate in the School of Behavioral Sciences at Liberty University, I am conducting research to better understand the mental health effects of canine comfort handlers. The purpose of my research is to examine potential mental health risks and protective factors which may be associated with the experiences of canine comfort handlers, and I am writing to invite you to join my study.

Participants must be 18 years of age or older, be certified as a canine comfort handler, and have at least one year of experience as a handler. Participants will be asked to take an anonymous, on-line survey. It should take approximately 20 minutes to complete the procedure listed. Participation will be completely anonymous, and no personal, identifying information will be collected.

To participate please open hyperlink here:
[REDACTED]

or you can scan the QR code to complete the attached survey.

[REDACTED]

A consent document is provided as the first page of the survey. The consent document contains additional information about my research. Because participation is anonymous, you do not need to sign and return the consent document unless you would prefer to do so. After you have read the consent form, please click the link to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the study.

Thank you for taking the time to consider participating in my research.

Sincerely,
Terri O'Brien-Cross
Doctoral Candidate
[REDACTED]

APPENDIX D: RECRUITMENT FOLLOW-UP

Dear Canine Comfort Handler,

As a doctoral candidate in the School of Behavioral Sciences at Liberty University, I am conducting research to better understand the mental health effects of canine comfort handlers. Two weeks ago, an email was sent to you inviting you to participate in a research study. This follow up email is being sent to remind you to complete the survey if you have not already done so.

Participants must be 18 years of age or older, be certified as a canine comfort handler, and have at least one year of experience as a handler. Participants will be asked to take an anonymous, on-line survey. It should take approximately 20 minutes to complete the procedure listed. Participation will be completely anonymous, and no personal, identifying information will be collected.

To participate please open hyperlink here:
[REDACTED]

or you can scan the QR code to complete the attached survey.

[REDACTED]

A consent document is provided as the first page of the survey. The consent document contains additional information about my research. Because participation is anonymous, you do not need to sign and return the consent document unless you would prefer to do so. After you have read the consent form, please click the link to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the study.

Thank you for taking the time to consider participating in my research.

Sincerely,
Terri O'Brien-Cross
Doctoral Candidate
[REDACTED]

APPENDIX E: RECRUITMENT FLYER

[REDACTED]

APPENDIX F: CONSENT

Consent

Title of the Project: The Mental Health Effects of Vicarious Trauma, Moral Injury, and Positive Religious Coping with Canine Comfort Handlers

Principal Investigator: Terri O'Brien-Cross, Doctoral Candidate, School of Behavioral Sciences Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be 18 years of age or older, be a volunteer certified canine comfort handler, and have at least one year of experience as a canine comfort handler. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to examine potential mental health risks and protective factors which may be associated with the experiences of canine comfort handlers.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Complete an anonymous, on-line survey that will take approximately 20 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society could include gaining awareness of the mental health effects of individuals who engage in specialized volunteer work which could impact the individual and the quality of services that are provided to others. Your participation could also advance the current understanding of the mental health risks and potential protective factors of canine comfort handlers which could lead to organizational change such as enhancement of training curriculum and interventions. Within the field of psychology there is no other similar study in current literature. Your participation in this study could enhance the field.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life. The risks involved in this study include psychological stress due to having to recall and answer questions related to trauma and other psychological elements which could lead to triggering effects for some participants. To reduce risk, I will provide referral information. Text the word "Hello" to 741741 anywhere, at any time in the United States and you will have access to a crisis counselor who can provide support and offer additional information for further counseling services.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be anonymous.
- Data will be stored on a password-locked computer. After five years, all electronic records will be deleted.

Participants will not be compensated for participating in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Terri O'Brien-Cross. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her. [REDACTED] You may also contact the researcher's faculty sponsor, Dr. Diane Pearce. [REDACTED]

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB.

[REDACTED]

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

APPENDIX G: SCREENING SURVEY

Directions: For each question, please select one of the options.

Are you 18 years of age or older?

- Yes
- No

Are you a volunteer certified canine comfort handler?

- Yes
- No

Do you have at least one year of experience as a handler?

- Yes
- No

APPENDIX H: DEMOGRAPHIC SURVEY

Directions: For each question, please select one of the options.

What is your gender?

- Male
- Female
- Prefer not to answer

What is your age?

- 18-25
- 26-35
- 36-45
- 46-55
- 56 and older
- Prefer not to answer

What is your race/ethnicity?

- American Indian or Alaska Native
- Hawaiian or other Pacific Islander
- Asian or Asian American
- Black or African American
- Hispanic or Latino
- White
- Prefer not to answer

What is your current marital status?

- Single
- Married
- Divorced
- Widowed
- Prefer not to answer

What is your religious affiliation?

- Christianity
- Islam
- Hinduism
- Buddhism
- Other religion
- Non-religious
- Prefer not to answer

How many life events have you experienced that you would describe as traumatic?

(for ex: childhood trauma, divorce, death of a loved one, experienced/witnessed

violence, serious health problem, war, natural disaster such as tornado, hurricane,

etc.)?

- 1-2
- 3-4
- 5-6
- 7 +
- Prefer not to answer

How many years of experience do you have as a canine comfort handler?

- 1-3 years
- 4-6 years
- 7-9
- 10 +

How many hours on average do you work as a canine comfort handler per week?

- 0-5
- 6-10
- 11-20
- 21-30
- 31-40
- 40 +

How many deployments have you participated in related to mass shootings, natural disasters, etc.?

- None
- 1-3
- 4-6
- 7 +

What type of support does your organization/church provide? (select all that apply)

- Mental health workshops/ Trainings on vicarious trauma
- Mental health workshops/ Trainings on moral injury
- Debriefing after deployments
- Weekly check-ins

- Support groups
- Counseling
- Financial support
- Other type of training/support
- No support

APPENDIX I: VICARIOUS TRAUMA SCALE

[REDACTED]

APPENDIX J: MIESS-C

[REDACTED]

APPENDIX K: BRIEF RCOPE

[REDACTED]

APPENDIX L: PTSD CHECKLIST FOR DSM-5 (PCL-5)

[REDACTED]