

THE RELATIONSHIP OF RELIGIOSITY TO VICARIOUS POSTTRAUMATIC GROWTH  
IN LAW ENFORCEMENT OFFICERS

By

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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### ABSTRACT

This study's primary purpose was to examine how a law enforcement officer's (LEO's) religiosity might predict their production of vicarious posttraumatic growth (VPTG). There has been limited research regarding religiosity and VPTG within law enforcement (LE). This study sought to expand the knowledge base regarding LEOs, religiosity, and VPTG. Eighty-eight law enforcement officers from an Upper Midwest state completed the survey. The current study utilized the Posttraumatic Growth Inventory–Expanded (PTGI-X) to assess for VPTG and the Centrality of Religiosity Scale (CRS) to evaluate individual religiosity. This study was informed by the theory of posttraumatic growth (PTG) (Tedeschi & Calhoun, 1996). A review of the literature that encompassed LEOs, spirituality, religion, PTG, and VPTG, along with divergent concepts about the study of PTG was undertaken. A simple bivariate regression was performed to detect if LEOs' religiosity predicts VPTG. According to the analysis, religiosity was predictive of VPTG.

*Keywords:* law enforcement, vicarious posttraumatic growth, religiosity

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**List of Abbreviations**

American Psychiatric Association (APA)

Analysis of Variance (ANOVA)

Burnout (BO)

Centrality of Religiosity Scale (CRS)

Compassion Fatigue (CF)

Compassion Stress (CS)

Confidence Interval (CI)

Dependent Variable (DV)

Diagnostic and Statistical Manual of Mental Disorders–5th Edition (DSM-5)

Employee Assistance Programs (EAPs)

Fraternal Order of Police (FOP)

Independent Variable (IV)

Internal Review Board (IRB)

Intimate Partner Violence (IPV)

Hypothalamic–Pituitary–Adrenal Axis (HPA)

Law Enforcement (LE)

Law Enforcement Officer (LEO)

Law Enforcement Officers (LEOs)

Mean (*M*)

Multivariate Analysis of Variance (MANOVA)

Multivariate Analysis of Covariance (MANCOVA)

Number (*N*)



Personal Growth Initiative (PGI)

Police Complex Spiral Trauma (PCST)

Police Family Liaison Officers (PFLOs)

Post-Ecstatic Growth (PEG)

Posttraumatic Growth (PTG)

Posttraumatic Depreciation (PTD)

Posttraumatic Growth Inventory (PTGI)

Posttraumatic Growth Inventory–42 (PTGI-42)

Posttraumatic Growth Inventory–Expanded (PTGI-X)

Posttraumatic Stress (PTS)

Posttraumatic Stress Disorder (PTSD)

Posttraumatic Stress Symptoms (PTSS)

Prisoners of War (POW)

Psychology & Behavioral Sciences Collection (EBSCO)

Repetitive Thought (RT)

Secondary Posttraumatic Growth (SPG)

Secondary Traumatic Stress (STS)

Secondary Traumatic Stress Reaction (STSR)

Standard Deviation (*SD*)

Statistical Package for the Social Sciences (SPSS)

Stress Related Growth Scale–Revised (SRGS-R)

United Kingdom (U.K.)

United States (U.S.)

Vicarious Posttraumatic Growth (VPTG)

Vicarious Trauma (VT)

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

This study investigated the hypothesized effect of religiosity on law enforcement officers' (LEOs) vicarious posttraumatic growth (VPTG). Because of the vicarious trauma (VT) that LEOs encounter, crises can occur, leading them to experience secondary traumatic stress (STS), and yet at the same time, they can also experience vicarious posttraumatic growth (VPTG). This chapter includes a discussion of the background of the problem, a statement about the problem, the purpose and significance of this study, the research question, definitions of terms, and the study's research design.

### **Background**

Law enforcement officers (LEOs) put their lives on the line every day that they put on the uniform. LEOs can experience many different types of hazards protecting the public. There are various ways LEOs are exposed to traumatic events: by experiencing it firsthand themselves, or vicariously through observation of others going through them, or listening to the traumatic and life-changing experiences of others. Traumatic and life-changing events experienced vicariously can create crises in law enforcement (LE) severe enough for LEOs to experience secondary traumatic stress (STS). However, some potentially positive things can come from experiencing crises due to work-related events, such as posttraumatic growth (PTG) or vicarious posttraumatic growth (VPTG). Religiosity is one aspect of individuals' lives that can be positive and/or negative, depending on their experiences with religiosity (Koenig, 2018). One part of law enforcement that has been neglected in the research is religiosity and how religiosity might influence an officer's vicarious posttraumatic growth.

First responders can include LEOs, those who are or were in the armed forces, firefighters, as well as those in emergency professions, to name a few (Friedman, 2015; Ogińska-Bulik, 2015; Velazquez & Hernandez, 2019). LEOs are men and women who have dedicated their lives to serve and protect the communities where they live and are a significant part of the first responder community, those who run towards traumatic events and not away from them, exposing them to substantial levels of stress (Burke, 2017). According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*) from the American Psychiatric Association (APA, 2013), a traumatic event includes exposure to actual or threatened events, such as serious injury, death, or sexual violence. These exposures can occur directly with a traumatic event or vicariously through learning about such events, especially when loved ones or close friends are involved. Trauma can also include repeated or extreme exposure to such circumstances or event details (APA, 2013). LEOs as a population are different from the general civilian population in the sense that they routinely experience traumatic events as a regular part of their job, as well as a greater diversity of traumatic events compared to the general populace (Chopko & Schwartz, 2013; Velazquez & Hernandez, 2019). The job of LE also exposes LEOs to individuals who experience traumatic and significant life-changing events.

Because of their exposure to traumatic events, a term that will be used interchangeably with critical incidents, LEOs can experience different cognitive and emotive issues, such as posttraumatic stress disorder (PTSD), posttraumatic stress (PTS) and posttraumatic stress symptoms (PTSS), and depression, among other psychological disorders (Chopko et al., 2013). Individuals have tried to deal with these psychological and emotional issues through adherence to different types of spirituality and/or religions.

A majority of the world's population believe in spirituality or some type of religion (Koenig et al., 2012; Maoz & Henderson, 2013). For this paper, the term "religiosity" will represent the concepts of no religious or spiritual beliefs to having high religious or spiritual beliefs. This study's primary purpose was to investigate the relationship of religiosity, specifically to VPTG in LEOs. The term religiosity will be explained more fully later.

In the United States (U.S.), nearly half of all Americans can expect to experience a traumatic or life-changing event in their lifetime (Friedman, 2015). Law enforcement officers have been found to typically experience at least one traumatic event within their first five years on the job, if not sooner, and most likely will experience multiple personal traumatic events throughout their careers (Chopko & Schwartz, 2013; Burke, 2019; Kirschman et al., 2015). When LEOs experience traumatic stress they can learn both negative and positive coping skills to help them deal with and overcome the emotions and cognitions from those experiences. Some of the negative coping skills can include, but are not limited to, the use of alcohol, tobacco, anger, increased irritability, aggressiveness with others including family members, along with thoughts of suicide and suicide attempts (Can & Hendy, 2014; Craun et al., 2014; Kirschman et al., 2015; Leino et al., 2011; Ménard & Arter, 2013; Warren, 2015). The use of negative coping strategies can lead to problems at home, at work, and with the general public, affecting LEO job performance (Burke, 2019; MacEachern et al., 2011). One of the consequences of utilizing negative coping skills can be a decrease in compassion towards others and themselves (Burke, 2019; Can & Hendy, 2014). Another outcome can be LEOs leaving LE because they cannot handle the traumatic stress effectively (Burke, 2019). When LEOs and other first responders work with individuals who have been exposed to traumatic and/or life-changing events, hearing those stories and even watching those individuals can negatively affect LEOs (Kang et al., 2018;

Manning-Jones et al., 2015), leading to secondary traumatic stress (STS) and other mental health concerns, which can affect or be affected by their religiosity.

### **Religiosity**

Spirituality and/or religion are two concepts that are sometimes used interchangeably and two concepts that can be difficult to define (de Meezenbroek et al., 2012; Hodgson & Carey, 2017; Koenig, 2008; Oman, 2013; Puchalski et al., 2009). Definitions for religion and spirituality can lack consistency and acceptance in psychology, as well as the use or pursuit of those contexts with clients (Paul, 2005). In a 2005 article in *Psychology Today*, Pamela Paul wrote that more people in America looked to religious counselors for help instead of what she called “plain old psychotherapy.” Individuals looked for religious/spiritual help in different places, such as Bible-based treatment centers, pastoral counselors, and ecumenical Christian counselors, to name a few (Paul, 2005). Oman (2013) suggests that when researchers desire to define religion or spirituality, they should seek definitions that best fit their context or topic and not necessarily focus on finding the most correct definition. When it comes to understanding religion and spirituality, represented by religiosity in this study, there has been an increased desire to know and understand these concepts, how they are similar as well as different, and how they can or should be used by mental health professionals (Pargament et al., 1990).

In his 2018 book, *Religion and Mental Health: Research and Clinical Applications*, Dr. Harold Koenig, a researching leader in the concepts of spirituality and religious beliefs, states that the terms “religion” and “spirituality” used to be related to one another, but that today there are growing differences. Religious individuals used to be called spiritual, which was an indication they were more religious than perhaps others. Today, however, some individuals can report being spiritual without any connection to a particular religion or any religious beliefs for

that matter (Koenig, 2018). According to Koenig, sometimes participation in a religion can lead to mental health issues such as low self-esteem, guilt, and shame when individuals have difficulty living up to the standards of their religious beliefs. At the same time, religious participation can lead to positive mental health, as their religious worldview can give them hope in dire circumstances. This can help individuals find meaning in their different life experiences as their like-minded believers encourage them, and they feel the love and support of their particular divine authority (Koenig, 2018).

According to Koenig (2018), there is a generally accepted definition for religion, both within and without academia, allowing for a reasonably easy discussion about religion, including a common understanding. Most, if not all, religions can be delineated and tested based on their particular behaviors and beliefs (Koenig, 2018). At the same time, the meaning of spirituality does not enjoy the same widespread agreement (Koenig, 2018). Part of the problem researchers have had in agreeing upon a standard definition for spirituality is the proposed definitions tend to have the same constructs as mental health, muddying the waters when assessing spirituality and mental health at the same time (Koenig, 2018). However, part of the problem is how researchers and clinicians have used the term, making it a challenge to find one they can both agree upon. Some have tried to tie spirituality to what is sacred, but sacred can be very different for each person. Sacredness today may be connected with a transcendent or divine being, or not. All of this makes today's spirituality highly subjective and hard to test for researchers (Koenig, 2018).

Koenig's definition of religion is as follows:

Beliefs, practices, and rituals related to the "transcendent," where the transcendent is that which relates to the mystical, supernatural, or God in Western religious traditions, or to Brahman, Ultimate Truth, Ultimate Reality, or practices leading to Enlightenment, in

Eastern traditions. Religion may also involve beliefs about spirits, angels, or demons. Usually religion involves specific beliefs about the life after death and rules to guide personal behaviors and interactions with others during this life. Religion is often organized and practiced within a community, but it can also be practiced alone and in private, outside of an institution, such as personal beliefs about and commitment to the transcendent and private activities such as prayer, meditation, and scripture study. Thus, the term religion is not limited to organized religion, religious affiliation or religious attendance. Central to its definition, though, is that religion is rooted in an established tradition that arises out of a group of people with common beliefs and practices concerning the transcendent (2018, p. 13).

Koenig's definition of spirituality is as follows:

Spirituality is distinguished from its consequences—human values, morals, meaning, purpose, peace, connectedness to others, feelings of awe and wonder—by its link to the transcendent. The transcendent is that which is outside of the self, and yet also within the self—and in Western traditions is called God, Allah, HaShem, or a Higher Power, and in Eastern traditions is called Ultimate Truth or Reality, Brahman, the Dharma or Buddha. Spirituality is intimately connected to religion, and in fact, lies at its core. Spirituality is a process that involves traveling along the path that leads from non-consideration of the transcendent, to a decision not to believe, to the struggle of questioning, to a decision to believe, to the struggle of conforming life to that belief, to devotion and worship of the transcendent, and ultimately, to surrender of the person's will to the will of the transcendent as understood by the individual and their religious community (2018, p. 15).



The study of religion has been around for quite some time, with increased attention to spirituality only coming recently. From the 1970s until about the 2000s, there was a doubling of article citations regarding religion (Oman, 2013). As for spirituality, there was an even more significant increase in articles regarding the subject between the 1970s and the 2000s, increasing in number about 40 times during that timeframe in peer-reviewed journals (Oman, 2013). Huber and Huber (2012), the creators of the Centrality of Religiosity Scale (CRS), the assessment tool used for the current study, do not seek to give a general definition of spirituality or religion. Still, they provide a five-fold foundation for researching religiosity within individuals that seeks to provide assent to individuals' psychological aspects. Briefly, they state there are five core dimensions to religiosity: public and private practice, intellectual and ideological dimensions, and experiential (Huber & Huber, 2012). These are explored further in chapter two. For this study, religiosity represents religion and spirituality, the main terms represented in the literature. However, at times, the terms religion or spirituality will be used to ease reading and differentiate between the two concepts.

Even though there may be a plethora of research regarding religiosity, there is a dearth of research exploring religiosity's role in law enforcement (Chopko et al., 2016). Something that Chopko et al. did find is that when LEOs are active in their religiosity, it has helped them to avoid using alcohol as a negative coping mechanism when dealing with traumatic stress. Also, a study by Charles et al. (2014) revealed that religiosity was not merely an emotion but was part of brain functioning, which would seem to suggest it is something that could be taught and encouraged to help LEOs process the adverse and traumatic events they experience on an almost daily basis. How religiosity defends against the damaging effects of traumatic events that LEOs experience is encouraging and needs to be explored in future research (Charles et al., 2014).

**Posttraumatic Growth and Vicarious Posttraumatic Growth**

Posttraumatic growth (PTG) and vicarious posttraumatic growth (VPTG), sometimes called secondary posttraumatic growth (SPG), are both by-products that can develop within individuals after personally experiencing a traumatic or life-changing event, producing PTG, or watching or hearing about it secondhand, producing VPTG (Arnold et al., 2005; Kashdan & Kane, 2011; Kjellenberg et al., 2014; Kunst et al., 2017; Manning-Jones et al., 2015; Tedeschi & Calhoun, 1996; Tedeschi et al., 2018). PTG, VPTG, and SPG can essentially be used interchangeably; the only difference being the precipitating event of either primary exposure (PTG) or secondary exposure (VPTG; SPG) (Kjellenberg et al., 2014; Kunst et al., 2017; Manning-Jones et al., 2015; Tedeschi et al., 2018). According to Tedeschi and Calhoun (1996), PTG can develop within individuals in three specific areas, namely their “life philosophy, their self-perception, and in their interpersonal relationships” (p. 456). This growth can then be seen in five specific ways that individuals can experience, and be seen and corroborated by others close to them (Tedeschi et al., 2018). The five areas listed by Tedeschi and Calhoun (1996) with the addition of “existential change” in recent years include the following: a greater appreciation for life; improvement in interpersonal relationships; positive change or growth in spiritual/existential beliefs; discovery of new possibilities; and greater personal strength (Tedeschi et al., 2018).

As this researcher tried to explain PTG to different individuals, such as family members, other pastors and chaplains, LEOs, and laypeople at church, almost to a person they had never heard of it, let alone been trained in what it is, and yet most of the individuals appeared intrigued by the concept. After explaining the central precepts of PTG many were able to recall their own PTG experiences, even though they did not understand at the time what they were experiencing. This suggests that if individuals, such as LEOs, could be trained in the concepts of PTG, they too

might be able to identify different elements of PTG in their own lives from past traumatic/critical incidents. Perhaps this might give them a different and more positive perspective on those traumatic events, instead of viewing those events from a purely negative standpoint.

This researcher has been a chaplain with a local law enforcement department for nearly four years and has been a pastor and pastoral counselor for over 28 years. This researcher has helped different individuals work through their experiences of significant life-changing and traumatic events. The idea of assisting LEOs in recognizing the PTG in their experiences, giving them a different and hopefully more positive perspective on those traumas helped in choosing LEOs as the population of interest. Interacting with the local police department as a chaplain, this researcher has seen some of the things LEOs have seen, and heard some of the things they have heard. Some have shared how different traumatic events and working with individuals who have experienced life-changing traumatic events have shaped who they are today, and not always for the better. This researcher has heard how officers have responded to a child's death and how they can still vividly remember details from that call even more than a decade later. As a pastor and a chaplain, this researcher wants to help LEOs effectively and healthily process what they have experienced from both primary and secondary exposures. LEOs give so much to their communities; this researcher hopes to give something back.

### **Summary**

Traumatic and life-changing events cannot be ignored by LEOs, nor can they be avoided. LEOs have taken an oath to serve and protect the communities where they live. Sometimes that means stopping someone from speeding. Sometimes it means rescuing a child who has been severely abused or holding the body of a child who has been killed or died from other means. Sometimes it is to help a pregnant mother deliver her child because no one else is there to do so.

Each of these situations can carry an element of stress, some more than others, all for different reasons. When LEOs encounter situations that challenge what they believe, it can shatter their preconceived ideas about themselves, others, even the world around them (Tedeschi et al., 2018). If the challenges to those beliefs allows them to find meaning from them, it could lead to positive things, like PTG or VPTG. At the same time, there may be another factor within LEOs, religiosity, that could influence their experience of VPTG. The theory of posttraumatic growth can help discover how each of these factors affects individuals, including LEOs.

Tedeschi and Calhoun created the theory of post-traumatic growth in 1995. They have consistently defined PTG as “positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances” (Tedeschi et al., 2018, p. 3). Part of the PTG model states for individuals to experience growth they must experience, witness, or hear about a traumatic or significant life-changing event that then leads to a reexamination of their assumptions regarding themselves, those around them, and the world in general (Tedeschi & Calhoun, 1995; Tedeschi et al., 2018). Without a challenge to those beliefs due to a traumatic or life-changing event, PTG and VPTG cannot be experienced. It is essential for individuals to understand that to experience PTG they do not need to experience psychological dysfunction (Smith et al., 2017), including a diagnosis of PTSD.

### **Problem Statement**

The purpose of this study was to examine the possible influence that religiosity might have upon LEOs’ experiences of VPTG. LEOs daily face challenges in their interactions with the public they serve. As part of the group called first responders, they are highly trained not to avoid traumatic events but to run towards critical incidents, natural disasters, and those needing emergency care (Rutkow et al., 2011). LEOs are trained to do their job with integrity, self-

sacrifice, and dedication to the job and public they serve, even when faced with personal threats (Papazoglou & Chopko, 2017). However, even though they are trained to handle traumatic and significant life-changing events, LEOs are still susceptible to experiencing PTSS and even PTSD because of the adverse effects attached to such events (Chopko et al., 2018).

There has been limited research that included vicarious posttraumatic growth (VPTG), some that has included religiosity, and some that has included LEOs (Carboon et al., 2005; Chopko et al., 2016; McGrath, 2011; Tedeschi et al., 2018), but no studies were found that included all three of these factors. Therefore, studies are needed that include the three factors of LEOs, religiosity, and VPTG. When officers work with individuals who experience life-changing or traumatic events, those interactions can produce challenges to the officers' belief systems, leading to a susceptibility of developing STS if they cannot find meaning in those experiences. As a result, those traumatic experiences can negatively affect their interpersonal relationships with the general public, their spouse, significant others, and even their children (Craun et al., 2015; Figley, 1995). At the same time, when officers experience STS, it can also lead to burnout (BO), which can lead to a premature departure from LE (Turgoose et al., 2017). According to the literature, religiosity can help individuals find meaning and purpose and express their connectedness to others and their world (Puchalski et al., 2009). Studies need to include religiosity because it is a fundamental part of most of the world's population and should not be neglected or ignored (Koenig et al., 2012; Maoz & Henderson, 2013).

Something connected with religiosity and mental health with military personnel and LEOs is moral suffering, which can include moral injury and moral distress. Moral injury and moral distress can be connected with PTSD, compassion fatigue (CF), and other negative effects of traumatization such as depression and panic disorder (Papazoglou & Chopko, 2017). Moral

injury can occur in individuals when they experience events that appear to compromise their passionately held beliefs and worldviews about themselves and the world around them (Papazoglou & Chopko, 2017). When individuals encounter moral injury, they can experience shame, guilt, issues with forgiveness, and even self-harm (Papazoglou & Chopko, 2017). One of the most challenging and moral injury-producing experiences LEOs can have is direct involvement in the death or injury of another human being, particularly a fellow officer, leading to feelings of shame and guilt (Papazoglou & Chopko, 2017). Moral injury can have a religious and/or spiritual aspect because it tends to reflect a compromise of one's previously held core beliefs, which can be spiritually or religiously connected (Carey et al., 2016). When individuals experience moral injury or compromise to such beliefs, it makes sense that a religious or spiritual support person, such as a chaplain, would be a person they could turn to for help (Carey et al., 2016). LEOs' religiosity can be encouraged or compromised, depending on how they process what they have experienced. VPTG is also influenced by traumatic events and their interpretation (Carey et al., 2016). However, the problem again is that no studies were found in the current literature by this researcher that included all the factors of religiosity and/or spirituality, VPTG, and LEOs. Since previous research noted earlier by Puchalski et al. (2009) determined that religiosity can help people find meaning and purpose, research is needed to investigate the possible influence that religiosity might have upon a LEOs experience of VPTG.

### **Purpose Statement**

This study aimed to expand the current knowledge base connected with LEOs and their experiences of religiosity and VPTG. A bivariate regression model (simply called "regression" going forward) was used because it allowed for one independent or predictor variable, such as religiosity, and one dependent or criterion variable, such as VPTG (Foltz, 2013; Warner, 2013).

A regression was the best statistical model to detect if a variable could predict any variance in the dependent outcome variable (Foltz, 2013; Warner, 2013).

One purpose of this study was to give LEOs the tools they needed to experience the ultimate benefits of PTG or VPTG. One such benefit would be helping other officers or the general population understand and experience their own PTG or VPTG (Tedeschi & McNally, 2011). Another purpose was to help LEOs find meaning in their secondary or vicarious exposure to trauma. This study specifically investigated the relationship of religiosity to VPTG in the lives of LEOs. The results revealed the need for training in religiosity and VPTG, both at the academy level and continuing education training. The literature showed the effectiveness of training in general (Burke, 2017; Chopko, 2010, 2011; Chopko & Schwartz, 2012; Horswill, 2017; Ogińska-Bulik, 2015; Rogers, 2014; Roland, 2011; Smith & Charles, 2010; Tedeschi & McNally, 2011; Williams et al., 2010), and would seem to suggest that training LEOs in religiosity and VPTG could also be effective. Such training could help LEOs find meaning and purpose and connect with those around them in healthier ways (Puchalski et al., 2009).

### **Significance of the Study**

This study's significance was the ability to show that an active religiosity can be a predictive factor in the lives of LEOs, influencing their ability to experience VPTG. This was important because when LEOs have their beliefs challenged or even obliterated, it can negatively impact their ability to perceive positive growth in their lives after a traumatic event (Tedeschi & Calhoun, 1996; Tedeschi et al., 2018). This study showed the need for training in religiosity and VPTG so that LEOs can utilize the information to develop a stronger religiosity and the ability to recognize and/or perceive VPTG. According to Tedeschi et al. (2018), people involved in religious or spiritual pursuits can prepare themselves ahead of a traumatic event to experience

PTG and are more likely to report PTG than those who do not practice any religion or spirituality. Religious beliefs can trigger PTG when those beliefs are shaken by life-changing or traumatic events, causing cognitive processing that can lead to PTG (Tedeschi et al., 2018). Based on the results of this study, LEOs may gain a better understanding of how religiosity impacts their production of VPTG, leading to improvements in their job experience, and help them remain on the job for a longer period of time, not departing LE prematurely due to emotional or psychological issues. This study puts into the hands of counselors and other mental health professionals, including chaplains, the information they need to encourage LEOs in the areas of their religiosity and VPTG. Even though some mental health professionals may not be trained or feel comfortable in discussing their client's religiosity (Sullivan et al., 2014), this study helps them understand that the religiosity of LEOs is essential and needs to be encouraged, not ignored (Feemster, 2009; Leighton, 2011; Malmin, 2013; Pargament et al., 1990).

### **Research Question**

**RQ1:** Does law enforcement officers' religiosity predict vicarious posttraumatic growth?

### **Definitions**

1. *Law Enforcement Officers* (LEOs) – Law enforcement officers are those individuals who have sworn an oath to support the Constitution of the United States, as well as their own state constitutions, and to enforce the laws, while also protecting the citizens of their jurisdictions ("Types of Police," n.d.). They include local police officers, sheriff deputies, and state highway patrol officers (Reaves, 2015).
2. The *Centrality of Religiosity Scale* (CRS) is able to place participants into three separate groups on a scale from 1.0 to 5.0: 1.0 to 2.0 = non-religious, 2.1 to 3.9 = religious, and 4.0 to 5.0 = highly-religious (Huber & Huber, 2012). The CRS can assess whether



individuals are active or not in five core theoretical dimensions of spiritual beliefs, such as: private practice, public practice, ideology, intellectual, and religious experience (Huber & Huber, 2012). It is possible to combine the *non-religious* with the *religious* group, thereby creating two contrast groups, *non-religious* and *highly-religious* (S. Huber, personal communication, January 16, 2020).

3. *Posttraumatic Stress Symptoms* (PTSS) – Posttraumatic stress symptoms can include mood swings, irritability, lack of concentration, hypervigilance, and sleep problems (Chopko, 2010).
4. *Posttraumatic Stress Disorder* (PTSD) – Posttraumatic stress disorder is a mental health diagnosis that can occur when individuals experience traumatic events and is evidenced by hyperarousal, avoidance, and intrusive thoughts, emotional numbness, being easily startled, and sleep issues (Horwitz, 2018). The trauma needs to be something outside of the individual, such as rape, combat, natural disasters, assaults, and not the result of a character defect (Horwitz, 2018).
5. *Posttraumatic Growth* (PTG) – Posttraumatic growth is “positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances” (Tedeschi et al., 2018, p. 3). There are three main categories where individuals can perceive such growth. Those categories are “changes in self-perception, changes in interpersonal relationships, and a changed philosophy of life” (Tedeschi & Calhoun, 1996, p. 456). This is measured by the PTGI-X (Tedeschi et al., 2018).
6. *Posttraumatic Growth Inventory* (PTGI) – The PTGI is the most widely used assessment tool for discovering PTG and VPTG (Tedeschi et al., 2018). The PTGI assesses for growth in five areas of an individual’s life, including “appreciation of life, personal

strength, new opportunities, relating with others, and spiritual change” (Tedeschi et al., 2018, p. 26).

7. *Posttraumatic Growth Inventory–Expanded* (PTGI-X) – The Posttraumatic Growth Inventory–Expanded is the latest version of the Posttraumatic Growth Inventory (PTGI) assessment tool for assessing PTG (Tedeschi et al., 2018). The PTGI-X expands the spiritual change factor to include “existential change” since many people worldwide do not affiliate with any particular spirituality, religiosity, or religion (Tedeschi et al., 2018, p. 93).
8. *Religiosity* – For this study, religiosity is a combination of religion, religious, non-religious, and spirituality. At the beginning of this study, there was no consensus for defining these terms. Religiosity for this paper was assessed using the CRS (Huber & Huber, 2012).
9. *Secondary Traumatic Stress* (STS) – Secondary traumatic stress is experienced as a part of one’s job when individuals have experienced stressful and/or traumatic events as a part of their vocation. STS is also a second aspect of compassion fatigue (CF) (Stamm, 2010). The symptoms of STS can be similar to posttraumatic stress disorder (PTSD) symptoms (Figley, 1995; Stamm, 2010). Symptoms can include intrusive memories or images, sleep problems, and seeking to avoid anything or anyone that might trigger traumatic memories (Figley, 1995; Stamm, 2010). According to Stamm (2010) and Figley (1995), STS is sometimes used interchangeably with vicarious trauma, as well as CF (Figley, 1995; Stamm, 2010).
10. *Vicarious Posttraumatic Growth* (VPTG) – Vicarious posttraumatic growth is similar to PTG. Still, it is produced by the secondhand experience of trauma that can occur when

working with those who have directly experienced a traumatic or life-changing event (Kang et al., 2018; Manning-Jones et al., 2015; Tedeschi et al., 2018).

### **Summary**

Law enforcement officers are sworn to protect and serve civilians. In the course of that happening, they can experience events that challenge their beliefs about themselves and the world around them. LEOs have been trained to respond to traumatic/critical incidents, but sometimes their training is not sufficient to ward off the negative psychological and emotional consequences that can come from those events (Burke, 2017; Chae & Boyle, 2013; Chopko, 2010 & 2011; Rogers, 2014). As stated previously, the ability to find meaning and purpose in life and express connectedness to others is a vital function of religiosity (Puchalski et al., 2009). It should be explored and not ignored by the social sciences. The purpose of this study was to examine the possible predictability that religiosity might have on the production of VPTG among LEOs. The literature suggested that training at the academy level or during continuing education in religiosity and VPTG might help mitigate traumatic events' adverse effects (Charles et al., 2014; Malmin, 2013). The literature also suggested that training to understand and recognize PTG, and therefore VPTG, after experiencing a traumatic event or hearing about a traumatic event can help mitigate the harmful effects of said events, as PTG has shown to have positive benefits when individuals have been educated in the different precepts of PTG (Shakespeare-Finch et al., 2014; Shochet et al., 2011; Tedeschi & McNally, 2011). The current study expands the knowledge about the importance religiosity can play in the development of VPTG in the lives of LEOs.

## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

The purpose of this study was to examine how religiosity predicts the production of vicarious posttraumatic growth (VPTG) within law enforcement officers (LEOs). LEOs are a unique population regarding factors such as their culture and the number and severity of the traumas they can experience, both firsthand and/or vicariously. Because of their exposure to such traumas, they are prime candidates to experience posttraumatic stress disorder (PTSD) or its symptoms, as well as posttraumatic growth (PTG) and/or VPTG. Chapter two reviews the theoretical or conceptual framework of the study and discusses the related literature.

### **Methods of Searching**

This author searched within PsychNET, with the keywords “police officers,” “secondary traumatic stress,” and “posttraumatic growth,” with one result, an article by Kunst et al. (2017). “Police officers” was replaced with “law enforcement,” with no items found containing those words in the title. A similar search was performed by this author in the Psychology & Behavioral Sciences Collection (EBSCO), with zero hits. When this researcher searched in APA PsychNET for “law enforcement,” “posttraumatic growth,” “secondary traumatic stress,” and “religion” or “spirituality,” no items were found. The same search was performed within the Psychology & Behavioral Sciences Collection (EBSCO), with zero results.

### **Conceptual or Theoretical Framework**

#### **Posttraumatic Growth**

Since the term posttraumatic growth (PTG) was coined by Tedeschi and Calhoun (1996), they have consistently given the same definition for this theory. They define PTG as “positive psychological changes experienced as a result of the struggle with traumatic or highly

challenging life circumstances” (Tedeschi et al., 2018, p. 3). One reason for the growth occurring in individuals’ lives is they experience something that tests what they believe is true about their own lives, and the result of that testing experience is PTG (Tedeschi et al., 2018). PTG is measured using the Posttraumatic Growth Inventory (PTGI) (Johnson & Boals, 2015; Tedeschi & Calhoun, 1996). The PTGI was the first assessment scale created to measure whether individuals perceived any benefits after experiencing many different traumatic and significant life-changing events. This was when most mental health professionals identified negative aspects of traumas within clients and alleviated symptoms based on those negative aspects. Very little was being done to assess if anything positive was attached to those traumatic events (Tedeschi & Calhoun, 1996). The PTGI came about because Tedeschi & Calhoun (1996) sought to discover perceived benefits due to individuals experiencing traumatic events.

From the beginning of the PTGI, there has been a question about “illusory” positive effects versus real change within individuals (Tedeschi & Calhoun, 1996). Contrary to some who believe that self-report measures such as the PTGI can lead to illusory PTG (Jayawickreme & Blackie, 2016), the results have consistently shown that respondents who have experienced traumatic events have reported their changes are quite real, and those reports were then corroborated by the additional assessment performed by significant others (Shakespeare-Finch & Barrington, 2012; Shakespeare-Finch & Enders, 2008; Taubman-Ben-Ari et al., 2011; Tedeschi & Calhoun, 1996; Tedeschi et al., 2018). Simultaneously, the type of event may play a factor in the production of actual PTG or illusory PTG. According to Boals and Schuler (2019), when comparing different scales that assess for PTG, the PTGI may not be as discerning of actual PTG as the Stress Related Growth Scale–Revised (SRGS-R), when it comes to a small distressing event, such as experiencing a cracked cell phone screen. With this finding, Boals and Shuler

believe that illusory PTG may be more common when using the PTGI versus the SRGS-R.

However, most of the research participants reported either experiencing small levels of PTG or less (83%) or no PTG at all (34%), whether it was the PTGI or the SRGS-R (Boals & Schuler, 2019). This is good because those scores should have been low for such a non-traumatic event as a cracked cell phone screen. This means that for most people who do use either assessment tool, their scores can be considered legitimate experiences of PTG (Boals & Schuler, 2019).

Simultaneously, researchers must be aware that some participants could also be experiencing illusory PTG, so participant scores need to be viewed with that information in mind.

Individuals who experience critical incidents/traumatic events, or highly challenging life circumstances, who are then able to find some kind of meaning and/or benefit from those experiences, also appear to experience comfort (Tedeschi & Calhoun, 1996). Tedeschi and Calhoun (1996) believe that the PTGI can assist mental health professionals in helping their clients to discover PTG as well as hope and comfort post-trauma. If the PTGI can help clients and research participants feel like they are wiser post-trauma, that they can develop some kind of positive meaning from the trauma and also create a new normal and live more confidently, then Tedeschi and Calhoun (1996) have assisted victims of significant, life-changing, and traumatic events in finding hope, comfort, and positive growth in their lives. This can be seen in a foundational construct of PTG, the constructivist perspective of life, where individuals can conceive new ways of thinking, allowing them to gain greater knowledge about themselves and their experiences (Tedeschi et al., 2018). This enables them to create new perspectives about those events, their lives, and the world around them (Tedeschi et al., 2018). This change is seen in the five factors of PTG.

The five factors of PTG developed initially by Tedeschi and Calhoun (1996) include the following: spiritual changes, greater perceived personal strength, positive changes in how individuals relate to other people, seeing new possibilities in their life, and a greater appreciation of life. Recently there was an addition made to the spiritual change factor. The spiritual change factor now includes existential change (Tedeschi et al., 2017, 2018). This change was made to include the many individuals around the world who do not claim or adhere to any particular religion or spirituality, but who can still experience a change in their philosophy of life and those who may have existential questions (Tedeschi et al., 2018). The study of existentialism both in psychology and philosophy has helped mental health professionals to better understand PTG in regards to how individuals think about their lives in a general sense, as well as how traumatic experiences can bring suffering into their lives, and the need for individuals to somehow find meaning in their suffering (Tedeschi et al., 2018). Trauma and suffering go hand in hand and cannot be separated, although what is traumatic for one person may not be traumatic for another.

According to Tedeschi and Calhoun (2004), trauma is not just defined by what happens to individuals; trauma is also about how events affect their assumptions, schemas, and the way they think or conceptualize, allowing them to reconstruct those schemas and assumptions. Some have thought that for individuals to experience PTG, there needed to be some extraordinary traumatic events in their lives. However, if one follows the previously given definition of PTG by Tedeschi et al. (2018), individuals do not need to go through a near-death experience or qualify for a diagnosis of posttraumatic stress disorder (PTSD), based on the *DSM-5* (APA, 2013), to experience PTG or VPTG.

At the same time, for an event to qualify as a PTG-causing event, it does need to be life-altering and highly stressful for those individuals (Tedeschi et al., 2018). What is most important

in deciding what events may be traumatic in the sense that they potentially develop PTG is different for each individual. Therefore, it is essential to understand that what might be traumatic and life-changing for one person may not affect others in the same way (Johnson & Boals, 2015; Tedeschi et al., 2018). When it comes to trauma, each person responds or views it differently, according to the posttraumatic growth model (Calhoun, Tedeschi, et al., 2010). Individuals will define how powerful an event is based on how significantly it challenges their worldview, schemas, and ideas about themselves and others. Challenges to individuals' assumptive worlds about the future, about how others should behave and live, can affect how individuals perceive their traumatic event (Calhoun, Tedeschi, et al., 2010). It is also essential to differentiate between normal everyday stressors and those that are more drastic and those events that will promote life change, schema change, and assumption change (Tedeschi et al., 2018), things that researchers seek to assess in their participants.

When researchers are looking for PTG in their subjects, they are not looking for changes or coping strategies immediately following an event but instead look for changes in how individuals behave, feel, and think in the days, weeks, months, or even years after a trauma or series of traumas have occurred (McCanlies et al., 2014; Tedeschi et al., 2018). The reason changes occur in individuals' post-trauma is that what they experienced was so life-changing they could not go back to the way they were pre-trauma, pre-life-changing experience (Tedeschi et al., 2018). This life-changing way of behaving, thinking, and feeling post-trauma separates PTG from other types of cognitive and affective constructs, such as resilience, recovery, or resistance (Meichenbaum, 2012; Tedeschi et al., 2018). According to Meichenbaum (2012), resilience includes some of the following traits: the ability to adapt and overcome adversity; to experience challenging situations while adjusting well to them; to grow and thrive while going



through adversities; and to be able to endure significant trauma. Resilience, recovery, or a return to baseline all have similar things in common: individuals going back to the way they were or never really changing in the first place. Growth connotes change (Tedeschi et al., 2018). Resilience and recovery imply a lack of growth, a lack of change, and a return to baseline. For PTG to be present, there must be change, positive change; there must be a transformation in how they act, feel, and think.

According to Meichenbaum (2012), resilience comes from two Latin words, *salire*, which means to jump or leap, and *resilire*, which means to spring back. This is another difference between resilience and PTG, because in PTG individuals do not go back to the way they were; they grow, move forward, and make changes in their lives (Tedeschi et al., 2018). When individuals experience critical incidents and traumas, the majority, upwards of 70%, show resilience, which means only about 30% will experience adverse life-changing effects (Meichenbaum, 2012). Besides, Meichenbaum states that when individuals have a history of experiencing moderate amounts of significant, life-changing events, they show less susceptibility to responding negatively to future traumas. Those individuals are also better able to handle distress, maintain higher satisfaction with their lives, and higher functionality in their lives in general than those who have not gone through life experiencing moderately stressful events and those who reported no traumatic experiences (Meichenbaum, 2012).

Tedeschi et al. (2018) define resilience as something that allows individuals to bounce back from a traumatic event and resist the adverse outcomes of the event without enduring long-term adverse effects associated with the trauma. On the contrary, PTG is both an outcome and a process where individuals struggle with the traumatic event and its adverse impact (Tedeschi et al., 2018). According to Tedeschi et al., PTG is differentiated from resilience in the fact that PTG

is something that is assessed for in individuals days or even years after experiencing the trauma. Those individuals develop new ways of coping, new ways of behaving, new ways of thinking, and feeling. They cannot return to how they were before, to what would be considered baseline functionality. If PTG is experienced, it is not because individuals have resisted the trauma's harmful effects. This is a critical difference between the two concepts of PTG and resilience (Tedeschi et al., 2018). Tedeschi et al. agree with Meichenbaum (2012) that most people who experience traumatic events are not negatively affected by them for life. Instead, most are resilient to the trauma, recover from the trauma, or experience growth. Therefore, according to Tedeschi et al., growth is separate and different from recovery and resilience.

In the latest PTG model, Tedeschi et al. (2018) diagram what happens when individuals experience potentially disruptive (or seismic) events. Two things can initially occur regarding assumptions by said individuals concerning their core beliefs. The first includes assumptive core beliefs being challenged. When core beliefs are challenged, it can lead to emotional distress and/or rumination being increased within individuals, which can then lead to things like redirecting rumination, reassessing goals, and deliberate rumination, which can all change the individual's schemas and life narratives (Tedeschi et al., 2018). Deliberate rumination has been positively correlated with PTG in other studies (Zhou & Wu, 2016). It is natural or good for individuals to think about the trauma they have experienced, not just once, but over and over again, deliberately ruminating on the trauma, using PTS memories to help find meaning for what happened (Joseph, 2013). When this meaning-making occurs, individuals can then use those memories, learning how to incorporate them into their lives, creating a new normal, a new narrative (Joseph, 2013). Meaning-making in the light of stressful and traumatic events is how PTG is produced in individuals' lives (Park, 2010; Tedeschi et al., 2018). These processes can

then lead to the acceptance that their life has been changed by the trauma and ongoing or intermittent distress due to the trauma. Both acceptance and distress can lead to changes in one or all of the five significant factors of PTG (relationship with others; new possibilities; personal strength; spiritual-existential change; appreciation of life) to varying degrees (Tedeschi et al., 2018). Once PTG is experienced, individuals can become more resilient, based on the newest PTG model found in Tedeschi et al., along with a changed narrative, increased wisdom, compassion, expanded coping repertoires, and service acts, among other positive attributes (2018).

The second thing the latest PTG model shows is that assumptive core beliefs can provide context for the traumatic event being experienced (Tedeschi et al., 2018). When individuals experience trauma and/or a significant life-changing event and can view it in context according to their core beliefs, those core beliefs are not challenged, but enforced or strengthened, helping individuals make meaning out of what has happened. When this takes place, emotional distress is then alleviated, resulting in resilience. When individuals experience resilience in this way, they do not experience PTG, but they do experience a sense of well-being. However, the well-being is not growth or significant personal change, which one would expect PTG to produce (Tedeschi et al., 2018). Dissimilarly, Meichenbaum (2012) believes that PTG can result from individuals experiencing resilience through what he calls “A Resilience Reintegration Program.” Meichenbaum states other results that can come from that program are psychological and physical well-being occurring. Meichenbaum believes that PTG occurs when individuals experience significant crises in life and can see positive results because of said crises, which would agree with the definition found in Tedeschi et al. (2018). Meichenbaum (2012), in agreement with Tedeschi et al. (2018), states that emotional distress is a precursor to

experiencing growth and that it can take several months before that change is evident to the individual or others. For PTG to occur, a significant life event or trauma must be experienced.

Immediately following a traumatic event, there may be times when individuals experience negative intrusive ruminations, as well as intrusive images and cognitions. When individuals comprehend that what they experienced does not conform to their assumptions about the world and themselves, this can lead to a search for new ways to view their world, leaving behind past core beliefs. According to Chopko (2008), individuals may need to experience persistent levels of distress for them to be able to experience and perceive PTG. Meanwhile, suppose individuals recover too quickly from a traumatic event. In that case, they may not experience the cognitive processes necessary for PTG development. They may go back to their original assumptions (Chopko, 2008), which would indicate resilience occurring and not PTG. This is where deliberate, repetitive thought can help produce PTG.

When someone has event-related deliberate, repetitive thoughts, it means they can control those thoughts, contrary to intrusive, repetitive thoughts, which cannot be controlled (Allbaugh et al., 2016). Deliberate, repetitive thought (RT), along with intrusive RT, were both found to be positively correlated with PTG (Allbaugh et al., 2016). PTG was also found to be positively correlated with PTSS (Allbaugh et al., 2016). Brooding and reflecting are subtypes of trait-like RT, which is thinking more generally about life overall. In contrast, as used by Tedeschi et al. (2018), rumination is when individuals focus on a specific event. Tedeschi et al. (2018) believe that their kind of rumination is essential to helping individuals find a resolution to their traumas, make meaning of their traumatic events, and solve problems associated with life-changing and traumatic events. Allbaugh et al. (2016) found that when it came to predicting PTG in their research, brooding RT and intrusive RT could not do so. At the same time, deliberate RT and

reflecting RT were able to predict PTG (Allbaugh et al., 2016). When it came to deliberate RT, they found it to be a positive main effect for predicting PTG, but reflecting was not seen as a positive main effect. Deliberate RT was found to negatively predict depressive symptoms, meaning that when individuals utilized deliberate RT, their depressive symptoms lessened (Allbaugh et al., 2016). This means that deliberate RT might have a dual role to play, helping individuals experience growth and decreasing their depressive symptomatology. At least this was the case with the research participants used in this study who had experienced interpersonal violence (Allbaugh et al., 2016). This study confirms what other studies have found regarding intentional and focused repetitive thoughts, such as rumination and deliberate RT, that such RT can help individuals experience PTG because of their experiences (Allbaugh et al., 2016). Allbaugh et al. also found that highly traumatic events that become central to an individual's identity can strongly predict PTG and distress at the same time. Another predictor of growth after traumatic events appears to be compatible with PTG, called personal growth initiative (PGI).

PGI encompasses four main factors, such as the following: planfulness, readiness for change, intentional behavior, and using resources (Shigemoto et al., 2016). The first two, readiness for change and planfulness, are considered cognitive traits of PGI, whereas the last two, using resources and intentional behavior, are behavioral traits of PGI. All of these traits are considered to be things individuals can learn and then intentionally apply to their lives (Shigemoto et al., 2016). According to Shigemoto et al. (2016), PGI can be an essential aspect of a person's ability to decrease PTS and increase PTG. PGI includes deliberate rumination, making it compatible with the PTG model to increase PTG and avoid intrusive rumination, helping individuals reduce PTS (Shigemoto et al., 2016). A significant finding of Shigemoto et al. (2016) was how the behavioral aspects of PGI were strongly correlated with PTG, while the cognitive

elements were not. This would seem to suggest that individuals who actively seek to change after a traumatic event may utilize an essential component of PTG, deliberate rumination, which promotes PTG, versus those who simply use the cognitive aspects of PGI. This might be important for therapists because it encourages the idea of supporting individuals in their pursuit of deliberate rumination, rather than ignoring such rumination, even though it may initially be more distressful for their clients (Shigemoto et al., 2016). Something that needs to be discussed is the types of critical incidents that people can experience. When comparing LEOs to the general public, the traumatic events the general public usually experiences can be very different from what LEOs experience.

Chopko et al. (2018) believe that when LEOs experience traumatic events that directly involve a threat to themselves, they have a greater aptitude to develop PTG through PTSD symptoms indirectly. Those events that are a direct threat to LEOs that can produce higher PTSD symptoms appear to have a greater association with higher or more significant PTG levels (Chopko et al., 2018; Chopko et al., 2019). Trauma severity and the frequency of experiencing traumas can influence the production of PTG (Chopko et al., 2019). However, trauma severity appears to affect the production of PTG to a greater extent than trauma frequency (Chopko et al., 2019). This lends credence to the idea that it is essential to assess how often individuals experience traumatic events and the severity of said events. When individuals experience a traumatic event, how they view the severity of the trauma has a more significant impact on how they perceive their PTG than how they may have considered such trauma before experiencing it for themselves (Chopko et al., 2019). In other words, when trauma is experienced personally, versus simply observing the trauma happening to someone else, the post-trauma distress experienced by those individuals affects their perception of their own PTG more than their

perception of the severity of the specific trauma before they experienced it. When it comes to the experience and diagnosis of PTG, mental health professionals need to know what PTG is and what can contribute to the perception of PTG in their clients.

At this point, there does not seem to be a direct correlation between the type of trauma that LEOs experience and their development of PTG (Chopko et al., 2018). If such an association could be found, it might help mental health professionals to predict how their clients might respond if they experienced certain traumatic or life-changing events. This knowledge could potentially improve how clinicians work with their clients, pointing them towards the best interventions for specific types of mental health issues (Chopko et al., 2018). That being said, one of the best aspects of a mental health professional's openness to their clients experiencing PTG is their openness to the possibility of growth within those clients, instead of merely focusing on any declines or deficits (Zoellner & Maercker, 2006). Those clinicians familiar with the PTG model and theory need to be cognizant of when clients are processing what happened and help them recognize that PTG may be occurring (Chopko, 2010). When this happens, mental health professionals are functioning as expert companions.

According to Tedeschi et al. (2018), clinicians need to see themselves as expert companions, conscious of where their clients are in the recovery process, allowing them to move at their own pace. When clinicians want to help clients who have experienced traumatic events, they must be careful they do not push those clients to do so, while at the same time being doubtful that PTG is actually occurring and is not just something they are imagining (Tedeschi et al., 2018). Tedeschi (2011) articulates several different principles that clinicians need to follow while working with trauma survivors to be the best expert companions they can be. Mental health professionals need to show the utmost respect for those they are working with,

understanding they are survivors of traumas and life-changing events, while at the same time being aware that their interactions can change them as clinicians (Tedeschi, 2011). Putting themselves in the place of being a learner and not just the expert is also vital for clinicians' effectiveness with clients (Tedeschi, 2011). Understanding how life-changing events can affect their clients and their client's relationships is also essential and should not be overlooked.

Clinicians need to be aware that LEO interpersonal relationships can sometimes be complicated (Koch, 2010). Yet, at the same time, those complicated relationships can also lead to increased PTG (Chopko, 2010). Conversely, when mental health concerns are not adequately addressed, they can severely affect interpersonal relationships (Papazoglou & Andersen, 2014). With complicated relationships, clinicians may help their clients by teaching them more effective communication skills (Chopko, 2010), as good communication is the foundation of any healthy relationship. Sometimes, LEO relationships affected by traumatic events do not reflect close, interpersonal relationships, but rather relationships with the public. Sometimes these relationships can be very damaging.

Some traumatic experiences may involve the legal system, the media, and social media, which are not always favorable to LEOs (Chopko, 2010). Clinicians need to recognize this is a real possibility for their LE clients. As a result, these negative experiences can lead to increased PTG within clients due to the additional cognitive processing they may experience because of them. This may be partly due to the challenges to their worldview assumptions, which means they need to create new schemas to replace the now dysfunctional ones regarding the general public, media, and legal system (Chopko, 2010).

Much of therapy in the past has focused on helping clients move past or alleviate the negative symptoms attached to their adversity instead of assisting clients in moving forward into



new ways of thinking. Clinicians who believe in PTG should be more inclined to look for PTG in their clients, helping clients see the positives in their lives because of their traumatic or life-changing experiences (Zoellner & Maercker, 2006). One way that clients can move forward is to write about the memories of their traumatic events, as this can help them process cognitions and emotions and promote PTG (Chopko, 2010). Being aware of PTG, and therefore VPTG, can be important for clients moving forward in their post-trauma lives.

Being aware of potential PTG can help clients rethink how they view what they went through. Traumatic experiences can make deep impressions on those who experience them, and sometimes those events can include life or death situations (Zoellner & Maercker, 2006). When individuals survive life or death situations, those situations can forever influence how individuals view things, such as creating a greater appreciation for life, one of the core factors of PTG (Zoellner & Maercker, 2006). However, just because individuals may develop PTG does not mean they will have a decrease in any PTS or PTSD symptomatology (Chopko et al., 2019), which is concurrent with other research regarding the production of PTG (Meichenbaum, 2012; Tedeschi et al., 2018). Chopko et al. (2019) state this lack of reduced symptomatology could be due to illusory PTG, a claim that others have made (Lowe et al., 2013; Sumalla et al., 2009). At the same time, it is not unusual for individuals to experience more than one life-changing or traumatic event throughout their lives.

What should not be lost in the research of PTG and LEOs is the idea that some will not experience just one life-changing, life-altering traumatic experience. Instead, they can often go through subsequent traumas that can contribute to their PTG and affect how long PTG lasts (Tedeschi et al., 2018). Traumas are typically not experienced in a vacuum or as isolated incidents, especially with individuals like LEOs. They can experience traumatic or critical

incidents monthly, weekly, or even daily, simply because of their profession (Tedeschi et al., 2018). Some individuals may view these multiple experiences of life-changing traumatic events as a form of suffering, and they might be right. However, suffering from a religiosity standpoint is not always harmful or deleterious but can be positive.

All the world's major religions, including Christianity, Hinduism, Islam, Buddhism, and Judaism, promote the idea that everyone in the world will experience suffering at some point in their lives and that growth can be a result of suffering (Meichenbaum, 2012). When individuals experience stress due to suffering, it can be a catalyst for PTG. Individuals can experience both PTG and traumatic stress at the same time (Meichenbaum, 2012). Just because individuals experience PTG does not mean they will not experience anxiety, or they will somehow have a reduction in their posttraumatic stress symptoms (Meichenbaum, 2012; Chopko et al., 2019). Good can come out of the struggle individuals experience in their trauma and stress, such as improved interpersonal relationships, an improved intrapersonal outlook, a greater sense of meaning in their life, courage, and a more positive outlook on life (Meichenbaum, 2012).

Religiosity and spirituality are essential in the lives of many people around the world. Therefore, when assessing PTG, individuals' spirituality and/or religious backgrounds are fundamental concepts or factors that should be evaluated and valued. An association between individuals reporting PTG and religiosity was seen as significant in different studies (Abu-Raiya et al., 2011; Gerber et al., 2011). In a study by Chopko and Schwartz (2009), research participants perceived higher levels of PTG when they believed they were putting forth an effort to grow in their religiosity. This finding would seem to suggest that when mental health professionals are working with trauma survivors, it would be prudent to include their religiosity

as a part of the counseling process. With this in mind, religiosity can affect many different aspects of individuals' lives.

When it comes to religion or religiosity, PTG domains have been found to have positive associations with different religious factors, such as daily spiritual experiences, organizational religiousness, religious/spiritual coping, private religious practices, and forgiveness (Currier et al., 2013; Tedeschi et al., 2018). When individuals have been trespassed against by someone else, being able to forgive the other person was a significant factor in their ability to experience PTG (Tedeschi et al., 2018). Also, those who are religious who engage in religious activities, might have an easier time experiencing PTG and experience PTG traits at higher levels than those who are non-religious (Currier et al., 2013). Religion or religious affiliation can trigger PTG in individuals (Tedeschi et al., 2018). PTG can be activated when individuals experience traumatic events that challenge their assumptions about life, including religious assumptions and core beliefs. These kinds of experiences can shake individuals' religious foundations to the point they are ripe for PTG to be triggered, allowing them to redefine their assumptions. Religiosity can also be connected to PTG as an outcome of a traumatic experience, producing growth in an area that may have been dormant or non-existent pre-trauma (Tedeschi et al., 2018).

An essential aspect of experiencing an increase in religiosity is the encouragement individuals can receive from others with similar beliefs (Tedeschi et al., 2018). It is essential today for individuals to feel like they belong somewhere, that others accept them, and religious communities can play a crucial role in that taking place. As a pastor, this author has seen support from an individual's church community help them through challenging times. On more than one occasion, people have come into this author's office and explained how the support of their Christian "family" had made a considerable difference in their recovery from traumatic and life-

changing events. This engagement with people of like-minded faith, and encouragement from them, can be considered positive religious coping.

When individuals use positive religious coping after experiencing a critical incident or traumatic event, it can increase the PTG spiritual-existential change factor (Tedeschi et al., 2018). When this occurs, it can increase the perception that God or their higher power is a more significant part of their lives. Some of the behavioral changes that can coincide with this increase in spirituality is seeking forgiveness, seeking support from God or their higher power, along with a positive evaluation of what they genuinely believe about their religion or spirituality (Tedeschi et al., 2018).

In a study involving Israeli police critical incident first responders, the vast majority of the participants stated their belief in God helped them manage their emotions during the critical incident (Geiger, 2016). They felt a connection to God and believed He was directing them in their God-given mission and that He gave them the strength and ability to continue to do what they needed to do. Some even believed they were ordained by God to do what they were doing. Meaning-making was made possible with these participants as they recounted what they remembered going on around them externally, as well as within them internally. This included the sounds, smells, and thoughts they experienced, allowing challenges to their assumptions about their core beliefs (Geiger, 2016). As previously mentioned, for PTG to occur, there needs to be an awareness of what has happened in their lives. Realizing that the schemas and goals they once had are no longer functional and need to be replaced with new ones is a central and foundational aspect of experiencing PTG (Chopko & Schwartz, 2009; Tedeschi et al., 2018). When individuals experience traumatic and life-changing events, it will typically challenge their assumptions about the world around them, their assumptions about others, and their assumptions

about themselves (Chopko, 2008; Tedeschi & Calhoun, 1996; Tedeschi et al., 2018). When those assumptions, also called beliefs, are challenged, individuals seek to find meaning from the events that caused such an internal disruption (Chopko, 2008; Tedeschi & Calhoun, 1996; Tedeschi et al., 2018).

When individuals experience persistent levels of distress due to traumatic and critical incidents and seek to find meaning in those distressing events, it is a prime opportunity for them to experience PTG (Chopko, 2008; Chopko et al., 2016; Tedeschi & Calhoun, 1996; Tedeschi et al., 2018). Chopko (2008) observed that when individuals recovered too quickly from trauma, and their assumptions or beliefs were not challenged strongly enough, the cognitive processes necessary for PTG to occur were not activated, meaning PTG could not be perceived. This would seem to be more indicative of resilience happening and not PTG (Tedeschi et al., 2018). Further, it needs to be understood that resilience can occur without PTG. Resilience can also be a byproduct of PTG where individuals can become more resilient because they have experienced growth in different areas of their lives (Tedeschi et al., 2018). However, that resilience must occur in the wake of the next trauma or life-changing event.

It is essential to understand that PTG happens to people after an event, not during an event, like resilience. It is about the changes that occur post-event, whether a few days or even a few years later (McCanlies et al., 2014; Tedeschi et al., 2018). PTG is not about short-term but long-term changes in individuals due to experiencing a traumatic or life-changing event (McCanlies et al., 2014; Tedeschi et al., 2018). When individuals experience and perceive PTG, they are usually looking back, finding meaning in their experiences, anywhere from a few days to a few years earlier. PTG occurs because those individuals cannot return to the way things were before the events happened; they cannot return to what Tedeschi et al. (2018) call baseline

functioning. Because they cannot return and behave the way they used to, they must discover new ways of feeling, acting, and thinking. This is one distinct way PTG is different from resilience because resilience is usually about getting back to baseline functioning. It is about learning how to resist giving in to the negative consequences of a traumatic event. If someone is resilient to trauma, they do not need to experience PTG because they have recovered from their experience and do not need to change or grow (Meichenbaum, 2012; Tedeschi et al., 2018).

### **Related Literature**

The related literature includes many different aspects of law enforcement officers (LEOs), posttraumatic growth (PTG), vicarious posttraumatic growth (VPTG), and secondary traumatic stress (STS). There are aspects of LEOs that are unique to them, including their culture, their risk factors, LE trauma, and how stress affects them, including organizational and operational stress. Different coping strategies utilized by LEOs have been helpful, and others not. There are various physical and mental health consequences that LEOs can encounter due to the stress and trauma they experience. At the same time, the experience of PTG and VPTG, along with some opposing views on PTG are discussed. Secondary traumatic stress (STS) is considered, and how the combination of STS, PTG, and LEOs are found in the current literature.

### **Law Enforcement Officers**

Law enforcement officers (LEOs) are part of a group called first responders, including those who are emergency personnel, firefighters, and members of the armed forces (Friedman, 2015; Gentry et al., 2018; Ogińska-Bulik, 2015). In 2008 there were about 765,000 state and local law enforcement (LE) full-time sworn personnel, which included police departments, sheriff's departments, and state highway patrol officers (Reaves, 2011). Local police departments accounted for the largest group, representing over 60% of the total number (Reaves, 2011).

Sheriff's departments employed about 24% of the total number (Reaves, 2011). About 49% of the local police departments employed less than ten full-time sworn officers (Reaves, 2011). In the census of 2008, about 17,985 state and local LE agencies had at least one full-time sworn officer or some part-time officers that equaled one full-time officer (Reaves, 2011). This total included 12,501 police departments, 3,063 sheriff's departments, 50 primary state law enforcement (i.e., highway patrol), 1,733 special jurisdiction agencies, and 683 other agencies, which were mostly county constable offices in the state of Texas (Reaves, 2011). The number of full-time sworn employees for local police departments in 2008 was 461,063, and the number in sheriff's departments was 353,461. The full-time employees in primary state LE agencies totaled 93,148 (Reaves, 2011).

In contrast, as of June 30, 2016, about 701,000 were full-time sworn officers (Hyland & Davis, 2019), nearly 65,000 fewer officers than in 2008 (Reaves, 2011). Of the 701,000 officers, 468,000 were employed in local police departments (Hyland & Davis, 2019). The general-purpose law enforcement (LE) agencies would include "municipal, county, and regional police departments; most sheriffs' offices; and primary state and highway patrol agencies" (Hyland & Davis, 2019, p. 1). In 2016, the sheriff's departments employed about 173,354 sworn full-time officers (Hyland & Davis, 2019), compared to the 182,979 number in 2008 (Reaves, 2011). In 2016 there were 59,645 full-time sworn primary state officers (Hyland & Davis, 2019), compared to 60,772 in 2008 (Reaves, 2011). Each of these groups saw decreases in full-time sworn personnel between 2008 and 2016. Comparatively, between 2004 and 2008, each group saw significant increases in full-time sworn personnel (Reaves, 2011). Each LE community has its own stories of how LEOs live with the stressors they experience both on and off duty.

The website [policeone.com](http://policeone.com) shares stories written by experts and educators in their chosen professions called Uniform Stories. One of the articles, “5 stresses cops deal with that non-cops should know about,” talks about the following: 1) how they daily prepare for battle; 2) why the cop attitude stays even off duty; 3) living life in a fishbowl; 4) how LEOs have a front seat to observe despair in others; 5) and how LEOs can ride the incident rollercoaster. Most individuals in the general public will never know the sacrifices that LEOs make every day. The general public can have misperceptions about what LEOs do and who the person is behind the badge. LEOs must prepare themselves for anything to happen on any given day because they never know what the next call will entail (“5 stresses,” n.d.). Because of that uncertainty, LEOs wear items that the general population does not. LEOs wear bullet-proof equipment and wear weapons from non-lethal to lethal because they must be ready to fight, sometimes for their lives and sometimes for the lives of others they do not even know, very similar to a nation’s military forces.

Burke (2017) states that LE departments are similar to paramilitary organizations, charged with keeping the peace, sometimes utilizing deadly force like the military. They have a huge responsibility to protect and serve the public. Occasionally, they must use whatever means necessary to catch criminals, as long as they do not break the law themselves (Burke, 2017). Often LEOs can view themselves and everyone else with an “us versus them” mentality because no one outside of the police culture can genuinely understand them and what they have to deal with daily (Burke, 2017). One of those cultural differences between LEOs and the general public is that every day can be the last day LEOs put on their uniform.

Every two to three days in the last few years, an LEO has lost their life in the line of duty. Many, if not most, LEOs who begin their chosen profession are never told how their lives will be



changed, and not always for the better, because of their occupation (“5 stresses,” n.d.). These stressors can include the fact that LEOs are never off-duty. No matter where they are, they position themselves to have the best view of the room and any doors so they can see everyone and everything happening around them. While this is happening, they can cognitively be going through many different scenarios that might occur, just in case something does happen, so they can be ready for action (“5 stresses,” n.d.). Stress and trauma can play significant parts in LEOs’ lives, resulting from their personal experiences with trauma or others’ experiences with trauma.

In the U.S. alone, nearly half of the population can expect to experience trauma, something that can change their lives forever (Friedman, 2015). Some individuals work in professions that lend themselves to numerous traumatic experiences, such as LE, the armed forces, emergency personnel, and firefighters (Friedman, 2015). Law enforcement can include police officers, sheriff deputies, and primary state and highway patrol officers (Chopko et al., 2018, 19; Hyland & Davis, 2019; Kirschman et al., 2015; Reaves, 2011, 2015; Weir et al., 2012). The largest group of law enforcement officers encompasses police officers, as reflected in the literature. A majority of research articles often singled out police, even as they used the term “law enforcement officers” most of the time throughout their writings. Because of the many different and dangerous aspects of their job, LEOs can not only experience more traumas but more diverse traumas than the general population (Arble & Arnetz, 2017; Chopko, 2010; Chopko & Schwartz, 2012, 2013; Chopko et al., 2018; Smith & Charles, 2010). Sometimes, those dangers can create stressors for LEOs related to themselves and even their loved ones (Evans et al., 2013).

LEOs can experience critical and traumatic incidents at any given moment, and those events can be very stressful and dangerous and can come without warning (Burke, 2017; Roland,

2011; Violanti, 2015; Weir et al., 2012). Some events happen during a LE shift that can be especially traumatic and stress producing, such as violence towards themselves and others, hostage situations, as well as shootings involving themselves or others, to name a few (Burke, 2017; Violanti, 2015). LEOs face other stressors, like not feeling supported by the administration or peers, being emotionally exhausted, shift work, trouble sleeping, long hours, along with the effects of previous traumas (Burke, 2017; Chae & Boyle, 2013; Ma et al., 2015; Violanti, 2015; Violanti et al., 2017). It is not always intense stressors that can be problematic; sometimes, it can be the accumulation of insignificant life stressors that happen over and over again. The experience of such stressors can send individuals over the edge and put them at an increased risk of suicidal ideation and damage their effectiveness in serving the public (Chae & Boyle, 2013). At the same time, stressors can also be experienced by LEOs while off duty.

Issues at home, whether with a spouse, children, or a significant other, can produce stress that can interfere with the job (Chae & Boyle, 2013). These interpersonal stressors from those at home can happen at any time, even while LEOs are on the job. When it comes to suicidal ideation, more than likely, it will not be one significant event that creates the right circumstances for LEOs to think about harming themselves. It will most likely be the accumulation of daily low-stress situations intermingled with some high-stress conditions (Chae & Boyle, 2013).

### **Law Enforcement Culture**

LEOs, along with their family members, represent a very different subculture from the general population (Kirschman et al., 2015). This culture represents those who are willing to do things that others are not, putting themselves at risk every time they put on the uniform (Kirschman et al., 2015). Law enforcement tends to be a macho subculture that does not feel like they should need to ask for help, and officers can even look down on other officers who do seek

help (Burke, 2017; Geiger, 2016). The police subculture seeks to avoid emotions during traumatic events, inhibiting their ability to discern what emotions they might be experiencing at the moment. Such feelings can increase their anxiety and other negative cognitive functioning, such as PTSD symptoms (Arble et al., 2018; Williams et al., 2010), including intrusive thoughts, nightmares, interpersonal problems, avoidance, and arousal (Gentry et al., 2018), leading LEOs to need to feel in control both at home and on the job.

Something that LEOs see as being a good officer is the ability to remain in control of one's emotions, being able to be in charge and yet calm at the same time in the face of a critical incident (Evans et al., 2013; Williams, Ciarrochi, & Deane, 2010). However, this control, including numbness or a lack of feelings, can decrease their capacity to name some emotions, which can then increase their felt distress (Williams et al., 2010). The police subculture is one of toughness and authority, necessary for many of the situations they face (Chopko, 2011). This toughness can lead to difficulties in many contexts. Interpersonal relationships can be complicated for LEOs even without traumatic events, just due to their subculture of keeping their thoughts and emotions to themselves, not even sharing them with significant others, which can create conflicts in those relationships (Chopko, 2010).

According to Burke (2017), law enforcement culture can have the following characteristics: "solidarity, authoritarianism, suspicion, conservatism, cynicism, and bias" (p. 5). These elements can lead to stress within the organization and without—spilling over into the general population, even into LE homes, leading to intimate partner violence. Intimate partner violence (IPV) can be a serious problem in the law enforcement culture. Some officers can have a hard time separating the authority they need to exert on the job from how they treat their

significant others (Burke, 2017). Being in charge, both at home and on the job is a substantial aspect of the LE culture.

The idea of being in charge is also evident in the context of when, where, and to whom LEOs talk about a traumatic event (Evans et al., 2013). When it comes to whom they would speak, the person needs to be someone the LEO trusts implicitly and is familiar enough with the person to know that whatever is shared will remain between them and will be shared with no one else (Evans et al., 2013). This need for confidentiality is essential, whether it is a co-worker or someone outside of LE. Officers recognize that some relationships, particularly close relationships outside of work, need good communication to help them continue to function and be healthy (Evans et al., 2013). In contrast, most LEOs believe that the general public will never understand what it is like being in LE, and therefore LEOs tend to keep their experiences to themselves (Smith & Charles, 2010). At the same time, talking with co-workers who have gone through similar experiences seems to help LEOs realize they are not the only ones going through difficulties due to the traumas they experience. They realize they are not crazy or losing their minds, nor do they need to feel ashamed for what they are experiencing cognitively and emotively (Evans et al., 2013). As already stated, LEOs need to feel they are in control, and that control does not stop with their thoughts and emotions. The need for control also extends to interactions with the general public.

No matter where LEOs serve, they all face similar challenges regarding factors such as crime, politics, and how the public they serve views them (Gutshall et al., 2017). No matter what events LEOs encounter, the public expects them to handle themselves with calmness and self-control, whether it is a routine traffic stop or a person strung-out on drugs (Gutshall et al., 2017). Not only are they to be in control, they must also have a perfect memory of every aspect of the

event, knowing the public will hold them accountable for their recollection (Gutshall et al., 2017), a standard the general public would never have for themselves. Officers are trained to treat everyone with dignity and respect, even if they do not believe those individuals deserve it (Chopko, 2011). Officers never know when or from where violence towards them may come, which means they must remain hypervigilant at times (Chopko, 2011; Smith & Charles, 2010). LEOs have been compared to military personnel because, like the military, there are times when LEOs must be aggressive and other times when they must keep the peace while at the same time showing no weakness or disrespect (Chopko, 2011). Both the military and law enforcement have codes of honor, self-control, and self-discipline that define who they are, what they do, and how they do it. The abilities to de-escalate situations and know when the use of force is necessary are needed both in LE and the military, including serving the general public (Chopko, 2011). Dealing with the general public daily is what LEOs do, but that does not mean it is easy.

### **Risk Factors for LEOs**

Because of the nature of their jobs, LEOs face risks that the general public does not. Many times, people are not aware of these risk factors. Despite the risks, many men and women choose to become LEOs and do so for many different reasons. According to Smith and Charles (2010), two reasons include the following: to make a difference in their communities and because they view LE as a “calling.” Even though they desire to help and make a difference in their communities, many soon realize that being a LEOs is a thankless job at times, with people hating them personally for no reason. There is a significant amount of crisis and confrontation that comes with the job, which can lead many LEOs to feel abused by the general public in physical and mental ways (Smith & Charles, 2010). Another risk factor is dealing with suicides, both within and outside the department.

Dealing with completed suicides can be one of the more challenging aspects of being a LEOs. Part of the difficulty is that LEOs cannot make sense of why someone would kill themselves (Koch, 2010). LEOs also have a problem making meaning out of suicides, making it difficult for them to process and move beyond the event. To cope with critical incidents, LEOs need to make sense or meaning out of what they experience (Koch, 2010). Police suicide is a genuine issue for LEOs today. Certain factors can contribute to LEOs experiencing suicidal ideation, which are the thoughts and plans about wanting to end a person's life (Chae & Boyle, 2013). Whether it is an individual contemplating suicide for themselves or dealing with the suicide of a fellow officer, both are difficult and put a strain on LEOs (Burke, 2017). When LEOs are having difficulties on the job, at home, drinking too much alcohol, believing that civilians have a negative view of them, or are frustrated with a perceived lack of justice in the courts, they are at an increased risk for committing suicide (Burke, 2017; Chae & Boyle, 2013). Burke (2017) found five factors that LEOs experience which can contribute to police suicide, including the following: shift work, experiencing critical incidents, organization stress, the use and abuse of alcohol, and relationship issues. Other factors that can increase resilience and stem police suicide include the following: peer counseling, use of effective coping strategies while working, support from family and significant others, and support from peers (Burke, 2017). Suicide, however, is just one type of trauma that LEOs experience.

No matter what type of traumatic event LEOs may be called to, all critical incidents take an emotional toll (Borelli, 2015). The compounding and accumulating of traumatic events (Borelli, 2015) throughout their career can lead to declines in different areas of their lives, including some aspects of their personalities (Leigh Wills & Schuldberg, 2016). Some of those personality factors include self-control, making a good impression, empathy, well-being, and

independence (Leigh Wills & Schuldberg, 2016). If this is true, it suggests that as LEOs progress through their careers and experience more traumatic events, the compounding of such chronic exposure could influence the decline of the five personality factors just described. This compounding could impact how they interact with their families and the general population in negative ways, particularly in the area of trust (Craun et al., 2015). When LEOs lose trust in others, it is not always just with the general population; it can extend to their interactions with their children, significant others, spouses, and friends (Craun et al., 2015). This lack of trust can even affect LEOs intrapersonally, disrupting their deeply held beliefs.

Continual exposure to traumatic events is a real aspect of law enforcement. Such vulnerabilities can contribute to LEOs having positive correlations with PTSD, PTS, and their symptoms (Smith & Charles, 2010). LEOs, like the military, can experience hypervigilance, never knowing where danger may come from, which can contribute to their lack of trusting the general public, as well as feeling like there is minimal support from the people they serve (Smith & Charles, 2010).

LEOs face risks every day on the job, such as vehicle accidents, being shot at or killed, physically aggressive individuals, as well as having accusations made against them by individuals who are not happy with them for a multitude of reasons (Burke, 2017). LEOs need the support of the civilian populations they serve if they hope to be more effective, which can be difficult when LEOs have to arrest or give citations to those breaking the law. Sometimes those civilians can make the life of LEOs very difficult, and yet LEOs must remain in control of their emotions and treat everyone with respect (Burke, 2017).

It needs to be mentioned that LEOs can also experience traumatic events off the job, in their immediate and extended families, and these events can also contribute to LEO stress if they

are not dealt with appropriately (Papazoglou, 2013). Issues at home can affect an officer's work, just as work issues can affect things at home (Papazoglou, 2013). All of these risks and personal experiences can create stress in the lives of LEOs.

### **Law Enforcement Stress**

In his book *Stress in Policing: Sources, Consequences and Interventions*, Burke (2017) quotes Sergeant Robin Klein, from the Long Beach California Police Department, as saying, "It probably won't be a bullet that strikes an officer down, but the effects of chronic stress" (p. 3). Part of the stress of being a LEOs is that some civilians do not appreciate what LEOs have to do and can come to resent them for just doing their jobs (Burke, 2017). Civilians cannot understand the occupational stressors that LEOs experience, which are different from traumatic or critical incident stressors. Some occupational stressors inherent in LE are a lack of support from a superior or supervisor, an uncertainty that their equipment will perform adequately, and having to be on different, sometimes rotating shifts (Papazoglou & Andersen, 2014). These occupational stressors can negatively affect LEOs mental health (Papazoglou & Andersen, 2014).

Two of the most frequently named top stressors for LEOs from an occupational standpoint are working with children and working with their personal family members who are victims (Craun et al., 2015; Borelli, 2015; MacEachern et al., 2011). Such incidents are prime examples of what can lead to secondary traumatic stress (STS) in LEOs (Craun et al., 2015). When LEOs encounter calls that involve children, it can create difficulties for them cognitively and emotionally at home in their interpersonal relationships with their children and significant others (Craun et al., 2015). Male LEOs reported higher STS levels than female LEOs working with child abuse victims and experiencing uneasiness with their own children (Craun et al., 2015). When LEOs come across child abuse victims, such as victims of sexual abuse, it can



create uneasiness for them in their interactions with their children, such as wanting to show them affection. This uneasiness comes from their involvement in learning how child abuse offenders groom their victims, and LEOs not wanting to do the same thing with their children. As a police chaplain, this researcher can add that LEOs never forget the scenes where they have had to deal with a child's death, no matter the circumstances. Whether by abuse, accident, or homicide, officers have relayed they do not forget what they have seen, heard, or smelled. Many adverse effects can be attached to stressors experienced on the job.

Although first responders such as LEOs and other helping professionals have always experienced the adverse effects of the stress involved in helping during natural disasters and mass violence, it was the terrorist attacks of 9/11 that helped increase the interest and the knowledge of these adverse effects (Gentry et al., 2018). Such adverse effects can include the following: vicarious trauma (VT), burnout (BO), shared trauma, compassion fatigue (CF), and secondary traumatic stress (STS) (Gentry et al., 2018).

Vicarious trauma (VT) occurs when helpers hear about traumatic events that have been experienced by those they are helping (Gentry et al., 2018). The term is vicarious because the effects come from secondary exposure to trauma. When helpers hear these horrific stories, it can lead to perversions of their worldviews, attacking what they initially thought they knew and believed about themselves and those around them, which can also alter the meanings they had about life (Gentry et al., 2018). How individuals think about and perceive things' meanings is very important and can affect for better or worse how they view their interactions with others. At times, memories of earlier traumatic events experienced by helpers can be triggered, leading them to possibly relive those events or connect the pain from those events to what they are hearing and experiencing now by listening to trauma survivors (Gentry et al., 2018). Burnout is

another negative effect of stress. As discussed later, organizational stress was the largest reason found for burnout within LE (Bishopp et al., 2018).

Burnout (BO) can occur when individuals are not able to do what they desire to do in their job, which can create a sense of loss or hopelessness, along with feelings of failure, which can lead to lower job satisfaction (Cocker & Joss, 2016; Stamm, 2010). According to Figley (1995) and Stamm (2010), individuals are most susceptible to experiencing CF when they are emotionally exhausted due to what is happening on the job. Burnout usually takes time to develop and is, therefore, not due to the experience of a single traumatic event (Figley, 1995; Stamm, 2010). Burnout is a real possibility with LEOs because they can experience emotional exhaustion and overload because of repeated exposure to job stressors, many of which include emotional interactions with the general public (Papazoglou & Andersen, 2014). This can lead to LEOs experiencing relational problems and wanting to quit if they do not deal effectively with these trauma-related emotional stressors (Figley, 1995). LEOs and other first responder occupations are not always prepared to encounter the emotional toll that trauma work can entail. (Figley, 1995). Along with BO, LEOs can also experience shared trauma.

Shared trauma can contribute to helpers being negatively affected, where helpers experience the same traumatic event as those they are serving (Gentry et al., 2018). When this happens, helpers have to learn how to cope with their trauma feelings and cognitions while at the same time helping others who may be experiencing similar issues (Gentry et al., 2018). Shared trauma can create unique problems compared to other trauma effects, such as boundary issues and confidentiality issues, negatively affecting the helpers' relationships with those they serve (Gentry et al., 2018). When helpers and those they serve have the same experiences, it can be challenging to separate their own memories from others' memories, and it can create issues

about who can help the helpers (Gentry et al., 2018). These types of experiences can also contribute to the production of compassion fatigue (CF).

Compassion fatigue is just as it sounds. Helpers can develop CF because, in a sense, they start caring too much (Gentry et al., 2018). When individuals experience CF, some of the outcomes include the following: missed work; lack of empathy and sympathy; irritability and anger; lack of job satisfaction; negative coping strategies like the abuse of drugs and/or alcohol; and a reduced ability to make right decisions while serving others (Cocker & Joss, 2016). When helpers want to help and yet cannot seem to help enough, they can experience hopelessness and symptoms of posttraumatic stress (PTS) (Gentry et al., 2018). At the same time, something similar to CF, but a little different is secondary traumatic stress.

Secondary traumatic stress (STS) occurs when helpers are indirectly exposed to a traumatic event that someone else experiences firsthand, considered secondary exposure (Craun et al., 2015; Gentry et al., 2018; Stamm, 2010). STS is a byproduct of helpers experiencing empathy for survivors and wanting to help survivors overcome what they have experienced (Gentry et al., 2018; Stamm, 2010). Secondary traumatic stress (STS) can occur when helpers cannot care for survivors the way they want to or are unable to save individuals from traumas, leading those helpers to experience distress and shame (Cocker & Joss, 2016). According to Stamm (2010), STS and BO are both factors in CF but should be viewed as separate trauma exposure results. STS, BO, and CF can all increase the longer officers remain in their careers, suggesting that LE organizations should invest in training their officers about each of these concepts, believing such training might increase their longevity in LE (Turgoose et al., 2017).

### **Organizational and Operational Stress**

There are two basic types of stress that Burke (2017) identifies: organizational and operational. Organizational stress refers to stressors that can come from authoritarian administrators—the paramilitary organizational structure—including an overabundance of paperwork. Operational stress refers to stressors that can come from being on the job with civilians, dangers that are part of the job, the fear that can accompany those dangers, and the apathy that can develop over time. Violanti et al. (2017) state it a little differently, saying that there are generally two areas of LE work that create stress for officers. The first area described by Violanti et al. is job content, and the second area is job context. “Job content” includes the following: shift work, overtime, court work, long work hours, work schedules, traumatic events, and threats to psychological and physiological health (Violanti et al., 2017). “Job context” includes the following: organizational stressors, such as management, supervisors, and other officers’ behavior (Violanti et al., 2017).

One aspect of organizational stress (Burke, 2017), or job context stress (Violanti et al., 2017), can be friction between patrol officers and those in administration, with a very top-down decision-making culture where the administration has numerous procedures and rules that are unquestioned, but not always understood (Burke, 2017; Shane, 2010). Organizational stressors can be more critical than operational stressors, as reported by police officers, in increasing psychological health concerns (Deschênes et al., 2018). Officers said emotional support in the workplace, or the lack thereof, contributed to mental health issues more than the stressors they experienced performing their LEO duties (Deschênes et al., 2018). Based on their findings, Deschênes et al. (2018) suggest that LE departments place greater emphasis on leadership support to help decrease mental health issues, which could potentially help reduce absenteeism due to such concerns. Bishopp et al. (2018) found that organizational stress significantly

influenced the experience of anger in LEOs. Shane (2010) and Lucas et al. (2012) both contend that the stressors LEOs experience due to inefficient organizational structures and politics are more significant than the stressors they experience doing their job, the operational stressors (Burke, 2017) and job content stressors (Violanti et al., 2017).

According to Ma et al. (2015), LEOs reported having more stress due to administrative and/or professional pressures than the operational stressors experienced on the street, a finding supported by Warren (2015). Because operational stressors of LEOs are unavoidable (because they are the reason LEOs have a job in the first place), anything that could lessen organizational stress could be significant in reducing the overall stress level of LEOs (Ma et al., 2015).

Another organizational stressor for LEOs is long work hours (Burke, 2017). Many LEOs do shift work that can be detrimental to family life and work-life because they continuously adjust to different shifts (Burke, 2017; Ma et al., 2015). Some LEOs also work overtime, including working double shifts or working 24 hours straight if they are working a case. Long work hours can contribute to IPV, sleep issues, and health risks (Burke, 2017; Ma et al., 2015).

For better or worse, most if not all, LE departments use a hierarchy-type organizational structure. Someone needs to be in charge, and others need to be below that in-charge individual reporting to them, and on down it goes. This type of organizational structure will most likely not be going away any time soon. Those who can live within a hierarchical organizational structure have reported less stress than those who struggle with this type of leadership (Aeppli, 2017). When officers can accept their department's authority structure, that it is and will always be hierarchical, they tend to experience less stress than those who do not (Aeppli, 2017). Those individuals who chafe under authority and refuse to accept direction and correction from their

supervisors will tend to experience more significant work-related stress than those who do not (Aeppli, 2017; Figley, 1995).

There are different aspects of organizational stressors considered to produce work-role overload in LE departments, such as not having enough time to complete assigned tasks (Duxbury et al., 2015). When LE departments are under-staffed, this can add to the work-role overload stress. Officers are given multiple assignments, but not always direction on which to prioritize, adding to organizational stress (Duxbury et al., 2014). LEOs can find themselves trying to please several different entities that are vying for their help and/or attention, such as the police chief, the media, their immediate supervisors, and the general public they serve (Duxbury et al., 2014). These competing entities can contribute to the stress of work-role overload and lead to psychological and emotional issues (Duxbury et al., 2014).

LE organizations can either contribute to work-role related stress or function as a protector against such stress, depending on whether or not the organization allows LEOs to maintain manageable work schedules without undue time pressures (Duxbury et al., 2014). LEOs report that it is easier to handle the operational stressors, the actual police work with the general public, than to handle organizational stressors and management (Duxbury et al., 2014).

Organizational stressors can be found in any work environment, while operational stressors can be specific to LE (Duxbury et al., 2014). In the study by Duxbury et al. (2014), the only work-role overload stressor antecedent that was operational was the responsibility or expectations put upon them by the court system (Duxbury et al., 2014). Other stressors, such as time pressures, understaffing, competing demands, and organizational culture, can be experienced by anyone who works within an organization of any type (Duxbury et al., 2014). Beyond work-load overload and organizational stressors, there are also operational, or job content, stressors.

One operational stressor connected with organizational stress is shift work. Non-day shift LEOs can encounter more domestic disturbances and committals of felonies than day shift officers (Ma et al., 2015). These events can also increase their appearances in court, which could occur just after getting off their night shift or even on their day off (Ma et al., 2015), increasing their stress because of losing sleep and/or family time. Another operational stressor can be interacting with mentally ill patients if officers have not received enough training on working with this unique population, particularly on how to de-escalate situations (Burke, 2017). Some other operational stressors can include natural disasters, working undercover, being shot, being accused of excessive force or some other inappropriate behavior, and vehicle accidents, to name a few (Burke, 2017).

Something that could be a part of both organizational and operational stressors is something called cross-group threat. Cross-group threat is where officers of different cultural groups and even genders can have a difficult time working together (Andersen & Papazoglou, 2014). Cross-group relationships that are tenuous and even viewed as threatening can affect how LEOs function together. If cross-groups do not learn how to work together, it can negatively affect all involved; even the community they serve can be negatively affected (Andersen & Papazoglou, 2014). LE departments need to do whatever they can to increase positive interactions between cross-group officers for the good of morale and increased job effectiveness (Andersen & Papazoglou, 2014). Operational stressors, organizational stressors, and cross-group relationships are all aspects of being in law enforcement that are impossible to avoid altogether. The same can be said of different types of trauma.

### **Law Enforcement Trauma**

One constant that LEOs can count on is traumatic events. LEOs are different from most populations because they routinely experience many and varied traumatic events due to their job (Chopko, 2010; Chopko & Schwartz, 2012; Papazoglou & Tuttle, 2018). Whether they experience trauma personally or by helping others, violence, death, and different types of suffering are continually taking place (Smith & Charles, 2010). Meichenbaum (2012) states that in North America alone, about 20% of individuals will go through a trauma in any given year and that throughout a lifetime, about 60% of individuals will go through a critical incident, such as a severe illness, a significant loss of some kind, a natural disaster, or be the victim in an interpersonal relationship.

Even though a high number of individuals may experience significant trauma in their lifetime, only a small percentage of them will develop posttraumatic stress disorder (PTSD); a larger percentage will simply develop PTSS (Friedman, 2015). Joseph (2013) believes that PTS is a natural phenomenon that individuals experience after a traumatic, life-changing event that is not bad but can lead to a journey of change. For individuals to experience such change, they need to discover new ways of understanding their world, find meaning in the event, and find effective ways to share what happened to them (Joseph, 2013).

Trauma can be a single catastrophic event or several events where individuals can feel like their lives have been threatened or where they can be witnesses to others experiencing life-threatening events, such as sexual and/or physical harm, or even death (Friedman, 2015). Trauma can also occur when individuals observe others, such as family members or significant others, being exposed to significant events, sometimes repeatedly, called indirect exposure to trauma or vicarious trauma (Gentry et al., 2018). Indirect exposure can occur with loved ones of LEOs, firefighters, and other first responders (Friedman, 2015). The traumas that LEOs experience will



remain with them for the rest of their lives, and they never really get over those events. Traumas can accumulate over time and take their toll (Smith & Charles, 2010).

It is a given in psychological circles today that when individuals experience traumatic events, they are susceptible to significant mental suffering (Joseph, 2013). Critical incidents, traumas, and other significant life-changing events can lead to individuals experiencing great interpersonal stress that can last indefinitely. Although not everyone who experiences such events will develop PTSD, many will experience some level of PTSS. Some LEOs can develop PTSD and its symptomatology due to the numerous traumatic events they experience or witness (Burke, 2017; Gentry et al., 2018). Some critical incidents that LEOs are involved with deal with children, including child injury, abuse, and death. Some officers deal with the physical attacks and/or deaths of fellow officers, which can have long-term adverse effects for those left behind (Burke, 2017). On any given day, LEOs can also deal with deaths and accidents involving the general public, which can accumulate and have compounded effects, adding to their stress and susceptibility to psychological issues (Burke, 2017). As a result, working through the stress reactions from traumatic events is not always comfortable or pain-free.

Mediating LEOs' feelings regarding traumatic events such as suicides can be difficult. Sometimes, their training does not prepare them for their feelings of anger, frustration, and helplessness in the aftermath of traumatic events (Koch, 2010). It is difficult when LEOs feel helpless because they have been trained to serve and protect, act, and take control of situations, and yet sometimes there is nothing LEOs can do but pick up the pieces (Koch, 2010). They have been trained, to some extent, not to allow traumatic events to affect them because it is just part of what they do (Koch, 2010), but that is not realistic. Every traumatic event LEOs experience sticks with them and changes them somewhat, impacting them intrapersonally (Koch, 2010).

Each call-out can affect individuals differently (Lucas et al., 2012). LEOs can receive many different kinds of call-outs during a single shift, not to mention throughout their careers (Papazoglou, 2013). LEOs can view an older person at the end stages of life, help deliver a newborn baby, and arrest a violent drug dealer, all during the same shift (Papazoglou, 2013). Sometimes these acts of service happen instantly, while others can be anticipatory because it may take a few minutes to arrive on the scene (Papazoglou, 2013).

Papazoglou (2013) states that these types of traumas can and should be viewed as prolonged exposure because of the nature and potential longevity of the LE career, spanning 20 years or more. LEOs can experience direct and indirect, sometimes called vicarious trauma, as well as trauma that can vary as far as tension, time, and frequency (Papazoglou, 2013). When individuals experience trauma, it can disturb different aspects of their inner selves, such as their religiosity, identity, and views about the world around them; these are things that give context to their lives (Figley, 1995). Without context, individuals do not know what to think about themselves and others, disrupting interpersonal relationships. Without context, emotions can be challenging to control. Vicarious traumatization can lead to similar experiences. An individual's context, or frame of reference, lets them know who they are. Their identity in the world encompasses their religiosity, what they believe about the divine or meaning of life. It also informs them of what they believe about the world around them. These are the things that can be the most shaken when trauma is experienced (Figley, 1995).

Vicarious trauma has led Papazoglou (2013) to introduce a new concept for LE traumatic experiences called "police complex spiral trauma" (PCST). Papazoglou (2013) shares a visual representation of PCST that shows a spiral that starts at the beginning of a career that can have either small or large spirals, sometimes with spirals spaced further apart, and some that are closer

together. To visually represent the cumulative aspect of PCST, the spiral starts small but gradually becomes larger, the longer the officer serves (Papazoglou, 2013). The spirals that are closer together depict the number of traumatic events or the frequency of the events the officer has experienced (Papazoglou, 2013). The cumulative effect of the traumas experienced by LEOs becomes denser and wider if there are no interventions to help the officer deal with the traumas because every trauma, again either direct or vicarious, contributes over time to the adverse effects on the officer's mental health (Papazoglou, 2013). According to Arble and Arnetz (2017), when individuals, such as first responders, are exposed to cumulative stress, it can lessen their desire to seek help from others, utilize healthy coping strategies, and decrease their overall well-being. At the same time, LEOs can seek to implement different coping mechanisms to help them deal with traumatic events. Sometimes these coping mechanisms are helpful; often, they are not.

### **Law Enforcement Coping Mechanisms**

One type of active or positive coping is the process of talking about what has happened to the LEO, allowing them, at their own pace, to re-experience specific critical incidents along with the emotions attached to them, which can lead to PTG (Chae & Boyle, 2013). Kashdan and Kane (2011) reported they believed it was beneficial for individuals to be willing to interact with their distressing images, cognitions, and emotions after their traumatic experience to help promote the production of PTG. This process can help LEOs find meaning in their traumas, which can then redefine what occurred, challenging their previously held worldviews, which can prepare them to deal more effectively with traumas in the future (Chae & Boyle, 2013; Kashdan & Kane, 2011). Experiencing PTG because of a traumatic event can give something back to LEOs that they need: control over the situation (Chae & Boyle, 2013). Something that helps LEOs to have a sense of control over life stressors and traumatic events is the pursuit of PTG, which includes

using positive active coping strategies instead of alcohol, where LEOs recognize where the stress is coming from and have a specific plan on how to deal with the stressor (Chae & Boyle, 2013). This is contrary to avoiding the stressors where individuals do not acknowledge their existence, which then prevents positive ways of dealing with them (Chae & Boyle, 2013).

Suppose LEOs are not successful in dealing effectively with their stressors through positive coping strategies. In those cases, the stressors can affect their home life and work performance, leading to BO and lack of motivation, along with other cognitive concerns (Burke, 2017). To help them try to deal with the different stressors they can experience, both traumatic and non-traumatic, LEOs may turn to negative coping strategies such as suppressing their feelings and cognitions (Kirschman et al., 2013).

The LEO culture can sometimes make it difficult for them to manage stress in healthy ways. Some LEOs can utilize positive coping mechanisms to help their interpersonal relationships, such as better communication (Smith & Charles, 2010). Some use exercise to help cope with work stressors, while others utilize spiritual support to help them cope with operational stress. There are also destructive coping mechanisms used such as humor, mentally checking out, and not allowing themselves to express their feelings (Smith & Charles, 2010). Simultaneously, some officers view humor as a safe way to talk about their traumatic experiences (Geiger, 2016) or a coping mechanism that helps them relieve stress (Craun & Bourke, 2015).

LEOs have rarely used humor at the expense of those they considered victims (Craun & Bourke, 2015). However, they have utilized humor at the expense of offenders and jokes that have sexual innuendoes (Craun & Bourke, 2015). If LEOs use humor at the cost of victims, which is a rarity, they tend to have significantly higher secondary traumatic stress (STS) scores

(Craun & Bourke, 2015). Other officers should keep this in mind when working with fellow officers, because this can be a “red flag” that those officers using such humor may be suffering from STS and could benefit from some type of intervention.

According to Craun and Bourke (2015), those research participants who used humor at the expense of victims showed the same magnitude of stress as those who reportedly had increased the amount of alcohol they drank over the last 12 months. This seems to suggest that those who are currently consuming more alcohol than they did a year ago, and those who use humor at the expense of victims, should be considered for interventions due to the possibility they are experiencing significant levels of STS (Craun & Bourke, 2015). It was found that those individuals who reported using humor at the expense of human behavior in general, and society in general, also reported higher levels of STS, but not as high as those who used humor at the expense of victims (Craun & Bourke, 2015). Craun et al. (2014) discovered that when individuals used “lighthearted” humor, they reported lower STS scores.

Sometimes officers use “black humor” to overcome the adverse cognitive effects of trauma, which helped to bring a sense of camaraderie between the officers (Geiger, 2016), something non-officers would not understand. This has been called “gallows” humor by some (Figley, 2002). This type of humor can be found in many first responder communities. It is used in place of directly talking about the feelings and emotions of those involved. Humor can help professionals deal with difficult situations without becoming emotionally involved (Figley, 2002). When those in the helping professions use humor during or after a traumatic event, it is usually done outside the civilians’ hearing because they believe the civilians would not understand. Humor at such difficult times is thought to help increase the bonding that needs to occur within helping organizations—a way to increase socialization within such departments

(Figley, 2002). According to Armstrong et al. (2016), this type of interaction between those considered first responders is typical and integral to helping those individuals experience PTG. Even though humor can help individuals deal with difficult situations, LEOs will often say nothing about what they are experiencing.

Not expressing themselves lends itself to the LEO subculture of not sharing thoughts and feelings with those outside the subculture because those individuals would not understand (Smith & Charles, 2010). LEO culture can also be very cliquish, with LEOs tending to stick together both on the job and off. This dependence on one another can prevent them from outside associations (Smith & Charles, 2010). At the same time, LEOs are taught to keep their emotions to themselves, which can contribute to their lack of seeking help from mental health professionals or other support services whether inside or outside of the department (Chopko et al., 2018; Smith & Charles, 2010; Velazquez & Hernandez, 2019). Avoidance or ignoring stress appears to be a favorite way for LEOs to deal with or not deal with stressors (Chae & Boyle, 2013).

According to Arble and Arnetz (2017), Arble et al. (2018), and Ballenger et al. (2011), when individuals utilize avoidance coping strategies, they do not seek to address the stress in healthy or helpful ways but rather avoid dealing with it, with things such as increased alcohol consumption or other substances, which ultimately lead to a decrease in overall health. Avoidance coping can also include hiding from one's emotions. The danger of avoiding one's feelings is the tendency to do so more and more in the future, to the point that it becomes almost impossible to express oneself in a healthy way (Arble & Arnetz, 2017). When individuals are allowed to avoid the memories and emotions attached to past traumatic and life-changing events, it can establish an unhealthy pattern that can increase their fears, even when those fears do not

warrant such responses, making them more significant than they are (Kashdan & Kane, 2011). Such avoidance can then prevent them from developing life meaning from such events, limiting their ability to overcome the negative cognitions and emotions attached to them, hindering their production of PTG, and limiting their ability to be resilient going forward (Kashdan & Kane, 2011). Officers who engage in approach-based coping, that is, those who purposefully do not avoid the thoughts and/or feeling connected to their traumas, appear to have better psychological and physical outcomes versus those who try to avoid those thoughts and feelings (Arble et al., 2018). These positive outcomes include a greater sense of personal well-being and reporting higher PTG scores, which is congruent with the findings of Tedeschi et al. (2018), that ruminating or thinking about what has happened is necessary to produce PTG.

Ménard and Arter (2013) were able to find significant indirect and direct associations between avoidant and negative coping strategies with LEOs that included excessive alcohol use and the symptoms of PTSD when associated with critical incidents. Their alcohol use was not associated with social stressors and critical incidents, but there were direct and indirect associations between social stressors and PTSD symptoms. This seems to say that the well-being of LEOs is not just connected with the number and type of traumatic events they experience; there appears to be a connection between their available social supports and the coping strategies they may utilize (Ménard & Arter, 2013). It seems that if officers use positive coping strategies and reach out to their social supports, there is less dependence on avoidant and negative coping strategies such as excessive alcohol use and experiencing less PTSD symptomatology.

Social support is significant for LEOs, whether it comes from those at home or peers and superiors on the job (Chae & Boyle, 2013; Evans et al., 2013). Arble et al. (2018) found that those who experienced good social support from those around them reported higher levels of

PTG. Those officers who were married or had a significant other were at a lower risk for suicidal ideation as well as cognitive and depressive disorders (Chae & Boyle, 2013). Some LEOs would rather talk to someone outside of their department, like a spouse or significant other, about things that influence them in negative ways (Evans et al., 2013). Simultaneously, some LEOs do not talk about negative things with someone outside of work because they want to protect them from those experiences (Evans et al., 2013). The point is, LEOs need someone to talk to, whether that is someone inside or outside of their departments; they need someone they can trust, someone who cares for them, and will keep the information they share confidential. It is equally vital that LEOs do not feel judged or condemned for the traumatic events they share with trusted individuals (Evans et al., 2013). Although LEOs may use social support as a positive coping strategy, it is also true that they can use alcohol as a negative coping strategy.

### **LEOs and Alcohol**

Chopko et al. (2013) studied LEOs and their consumption of alcohol. According to their results, 77.5% of the LEOs in their study did not report a risk of alcohol problems, while 20.4% admitted to binge drinking when they did drink. Binge drinking is generally understood to mean drinking five or more alcoholic beverages at one time. The percentage found by Chopko et al. (2013) was lower than a general survey of U.S. Caucasian males, which was reportedly 34.6 percent, but higher than that reported for Caucasian female drinkers, 15.6%, in the general U.S. population (Naimi et al., 2003, as reported in Chopko et al., 2013).

The main stressors that can lead LEOs to drink are PTSD avoidance symptoms and subjective work-related distress due to traumatic experiences (Chopko et al., 2013). Feelings of depression and interpersonal relationship issues have also been associated with alcohol consumption, but not to the degree of the two previously mentioned reasons. As individuals



experience subjective distress and avoidance symptoms (Warren, 2015) increasing in their lives due to increases in work-related traumas, their alcohol consumption can increase to hazardous levels. Their alcohol dependence can also increase as their depression, work-related traumatic stress, and avoidance increase. Chopko et al. (2013) found a direct association between alcohol dependence in LEOs and their experiences of interpersonal relationship issues leading to higher stress levels.

LEOs have been found to use alcohol as a negative coping strategy for occupational stress (Grubb et al., 2015; Warren, 2015). Alcohol and drug misuse and abuse are the most commonly seen negative coping strategies used by LEOs to help reduce stress in their lives (Grubb et al., 2015) along with increased sexual activity (Warren, 2015). In the midst of all of these negative strategies, some positive coping strategies include exercise and practicing their spirituality (Warren, 2015). Twenty-four percent of the participants in the Warren (2015) study admitted to drinking too much alcohol to avoid dealing with the stress from traumatic events and being overly forceful with others. The forcefulness could even be against fellow officers. Warren found that LEOs, when confronted by another LEO, will most likely not back down and might even become aggressive towards their coworkers, both verbally and physically. When it came to alcohol consumption, nearly half of the participants reported consuming more alcohol than they had initially desired to at times. Six of those participants felt guilty about how much alcohol they drank and their memory loss during their drinking. As has been mentioned earlier, control is a significant issue for LEOs. Sometimes using alcohol or even aggressive behavior can be ways for LEOs to assert control over those around them (Chae & Boyle, 2013). Another negative result of using alcohol consumption as a negative coping strategy is that it may prevent many LEOs from developing PTG (Chopko et al., 2019). Notwithstanding negative coping strategies,

like excessive alcohol consumption, there are some positive coping strategies LEOs can use to help them overcome negative stressors.

### **Social Support**

Social support, particularly from family, can create positive outcomes for LEOs, including decreased burnout and stress (Louw, 2014). Support from LEO supervisors is also necessary and should not be ignored, as it can help prevent or reduce burnout and stress (Louw, 2014). LEOs need social interaction with other officers, and management would be wise to encourage such interaction and create opportunities for it (Louw, 2014). Something else that LE departments can do to help officers deal with stress is to assist them with getting professional counseling. However, even if they provide professional help, officers are not always mandated to use it and are often reluctant to do so.

Employee Assistance Programs (EAPs) are offered in many LE organizations; however, they are often not used due to different factors (Burke, 2017). One factor is the macho subculture of LE, where officers view asking for help as a weakness, which can harm working relationships. Another factor is that officers may not trust the EAP providers, questioning their confidentiality because they work for both the employee and the employer. Nevertheless, when EAPs are utilized, they have proven to be cost-effective (Burke, 2017). For example, when individuals have used the program, there has been a good return for every dollar spent. That positive return can be seen in fewer medical costs, increased productivity on the job, fewer days missed on the job, fewer work-related accidents, greater officer retention, greater staff morale, fewer disability claims, and fewer officer firings (Burke, 2017). Whatever types of stress and trauma that LEOs experience, even if vicariously, there can still be physical and mental health consequences.

### **Physical and Mental Health Consequences of Stress and Trauma**

The most significant risk to the health and well-being of LEOs is traumatic events, namely from homicide, vehicle accidents, and suicide (Tiesman et al., 2010). When individuals experience stress on the job, they are more susceptible to depression and other cognitive issues, along with heart issues (Lucas et al., 2012), and LEOs are no exception (Violanti, 2014). Fatal heart attacks in the LE population were at seven percent from the years 2000 to 2010, according to the Law Enforcement Officers Memorial Fund (2011, as reported in Violanti, 2014). Because of this high rate of fatal heart attacks on the job, it was resolved that officers who experienced a deadly heart attack, or stroke, while exerting themselves on the job were eligible for death benefits, as stated in the “Hometown Heroes Act” by Congress in 2003 (Violanti, 2014).

Although LEOs may encounter numerous traumatic events, they do not always receive the help they need post-trauma, even if assistance is provided, sometimes free of charge (Chopko, 2010; Geiger, 2016). This is often due to the stigma attached to seeking help and the fear that their department leadership and fellow officers may learn about them seeking assistance (Geiger, 2016; Warren, 2015; Papazoglou & Tuttle, 2018). In a systematic review of the literature, Jones (2017) found that first responders have been known to suffer from different mental health concerns such as anxiety, suicidality, PTSD, excessive alcohol use, depression, and sleep issues, sometimes at even higher rates than the public they serve. Because of the stigma attached to seeking out mental health professionals, Jones (2017) believes that first responders should be given regular physical examinations and periodic psychiatric evaluations. Even though many LE organizations provide mental health counseling through EAPs, many LEOs avoid what is offered through the department or seek help from outside sources in the hopes of concealing interventions. Some departments may also provide defusings or debriefings post-trauma to help those involved, giving them a way to talk about what happened in a more

controlled environment (Chopko, 2010). These can also be used to provide psychoeducation to officers, helping them understand normal and abnormal ways of coping with trauma and encouragement to seek help if necessary.

There can be several physical and psychological consequences due to exposure to different stress types, including suicidal ideation, PTSD symptomatology, and depression (Violanti et al., 2017). LEOs and their families can also pay the price, such as a lack of sleep due to changing shift work, affecting the entire family. Family time can also be affected due to changing work schedules, which can lead to stress in those close relationships because of missed special events (Violanti et al., 2017). Also, how LEOs can be viewed negatively by some individuals in the general population affects officers and can affect their families, leading to added stress levels for all involved (Violanti et al., 2017). Individuals, such as LEOs, who experience significant traumas, can develop PTSD and/or its symptoms (Chopko, 2010; Violanti et al., 2017). Those who experience PTSD and/or its symptoms can develop both physiological and psychological issues (Violanti, 2015). Those who have reported experiencing PTSD and/or its symptoms have also reported health issues such as major depression, endocrine disorders, eating disorders, and somatic complaints that could and could not be explained medically, not to mention cardiovascular disease.

Violanti (2015) states that the hypothalamic–pituitary–adrenal axis (HPA) and the autonomic nervous system are the physiological systems most often studied regarding stress. When these systems are activated for limited amounts of time, it is believed that individuals are responding to the stressors in adaptive ways (Violanti, 2015). However, when these systems are activated, and individuals are not able to bring their reactions under control, it is believed that individuals are responding in maladaptive and, therefore, harmful ways (Violanti, 2015). Cortisol

is released by the body when it comes under stress; it is an excellent biological marker to test when assessing individuals for undue stress levels. When cortisol levels are too high, this can lead to physiological issues such as hypertension, cardiovascular disease, diabetes, and infectious diseases because the body's immune system is compromised by lengthy exposure to stressors (Violanti, 2015). This shows that pre-training that could lessen the severity of these systems' activation would be beneficial cognitively and somatically. As difficult and debilitating as the physiological effects can be, the psychological effects can be just as incapacitating.

The job of law enforcement officers is hazardous to their physical as well as psychological lives. There is an extremely high possibility for them to be exposed to traumatic events, not just occasionally, but even daily (Komarovskaya et al., 2011). That is the nature of the job. Two-thirds of those LEOs who participated in the Komarovskaya et al. (2011) study stated they believed their life was in jeopardy during at least one of their on-the-job traumatic events. Ten percent of those surveyed reported that within the first three years of service, they were faced with either killing or seriously injuring someone (Komarovskaya et al., 2011). This is a significantly smaller percentage than those who reported a career exposure to those same scenarios. At the same time, LEOs can downplay these interactions with civilians because they are afraid that others might not understand what they experience as LEOs. This also factors into what is referred to as a "code of silence" (Komarovskaya et al., 2011). The way that some in society feel about law enforcement officers and the potential mistreatment of civilians could also be a factor in not revealing accurate numbers of traumatic events experienced by LEOs.

When LEOs find the need to use deadly force, which can result in serious injury or even killing another person, they open themselves up to potential mental health issues that can include depression and PTSD symptomatology, which speaks to the importance of departments

providing those officers with interventions that can reduce such symptoms (Komarovskaya et al., 2011). With the current perspectives of civilians and the media, these actions receive a lot of attention, which does not usually bode well for the officers involved. Seriously injuring someone or even killing them was a high predictor for those officers to experience PTSD symptoms, even if their life was in danger, regardless of their ethnicity, relationship status, gender, or age (Komarovskaya et al., 2011). When police officers did report killing or seriously injuring someone while performing their duties, those acts were significantly associated with PTSD symptoms, as well as somewhat associated with depression (Komarovskaya et al., 2011). It is essential that LEOs who have seriously injured or killed someone take steps to talk about those experiences in a healthy way (Komarovskaya et al., 2011). These types of incidents can lead to what some researchers have called traumatic stress.

Traumatic stress is another type of stress that can be damaging to mental health. LEOs can experience a wide array of scenarios, not only during their career but even within the span of one shift, such as giving someone a speeding ticket and then being called to a scene where a child has died, and many others of varying degrees of trauma (Papazoglou & Andersen, 2014). Each call carries its own level of stress and potential to be compounded with other stressful calls. Some calls can trigger the memories of similar previously experienced calls, even from years or decades before, where officers can remember very distinct details and emotional reactions. With traumatic stress can come chronic stress, which can bring other issues that can affect an officer's daily wellness experience. This can decrease their effectiveness on the job as well as how they interact with others. It can negatively impact their religiosity, commitment, self-worth, and sense of honor (Papazoglou & Andersen, 2014).

LEOs can also experience long-term, cumulative, and complex trauma throughout a career, and some careers can last up to three decades (Papazoglou & Andersen, 2014). These risks can create not only physical issues but also cognitive issues. Some of the unhealthy effects that LEOs can experience can be from their own activities, such as unprotected sex and excessive alcohol use. Even though alcohol can be a maladaptive coping mechanism, it is sanctioned by police culture (Arble et al., 2018). Because drinking alcohol can be a part of the police culture, it can lead to alcohol abuse without others recognizing, knowing, or intervening (Papazoglou & Andersen, 2014). This same police subculture also carries a stigma against seeking help from mental health professionals, which can prolong officers' emotional and cognitive issues (Geiger, 2016; Papazoglou & Andersen, 2014). A mental health issue or concern for LEOs can lead to dismissal from their jobs, which might contribute to their lack of candidness about mental health challenges (Velazquez & Hernandez, 2019).

LEOs have reported that they have a negative attitude towards seeking out professional help for cognitive issues because they believe the general public has a negative view of those who seek treatment from mental health professionals (Karaffa & Koch, 2016). Karaffa and Koch (2016), along with Velazquez and Hernandez (2019), suggest that training at the academy and with active-duty officers as a part of ongoing training should be used to address the stigma that officers have about seeking help from mental health professionals and to aid officers in seeing the legitimacy of mental health treatments. LEOs who have utilized mental health professionals' assistance could tell their story of how they were helped by the service and what it was like seeing a counselor. This can aid in removing the stigma attached to counseling (Karaffa & Koch, 2016). It is vital that officers who promote seeking help be respected throughout the department, to give their message legitimacy (Karaffa & Koch, 2016).

Karaffa and Koch (2016) discovered a phenomenon called pluralistic ignorance. Officers believed that their co-workers were more against seeking help from mental health professionals than the co-workers actually were, propagating the idea that all officers are against seeking mental health professionals when, in fact, they are not. More than half of the 248 officer participants reported voluntarily engaging in some type of counseling, in particular individual and/or family counseling, and viewed such counseling as a positive experience. This goes against the idea that most officers are against such interventions. This type of information could encourage officers to reach out to others for help, either peer support teams, mental health professionals, or even chaplains. If LEOs do not seek help for their cognitive and emotive concerns, more significant psychological issues could ensue.

Up to 35% of LEOs can experience PTSS at least once during their careers, and between 10 and 19% can develop PTSD (Haugen et al., 2012). When LEOs do not have their cognitive issues addressed, those issues can lead to interpersonal relationship problems (Papazoglou & Andersen, 2014; Velazquez & Hernandez, 2019). Over their careers, because they have experienced numerous traumatic events, LEOs can have issues with sleeping and experience chronic diseases (Papazoglou & Andersen, 2014). They can also experience irritability, anxiety, depression, headaches, and other cognitive problems (Papazoglou & Andersen, 2014). Although this may be true, some things can help prepare LEOs mentally before they begin their careers.

When LE recruits participate in training, they are instructed not to allow their personal feelings or emotions to override what they are learning, hoping that this suppression might mitigate potential BO (Papazoglou & Andersen, 2014). Although this practice might help officers do their jobs better during an actual crisis, it can prevent them from seeking help after a crisis has occurred (Papazoglou & Andersen, 2014). Hindering the access of emotions and



cognitions during or after traumatic events can prevent officers from experiencing resilience (Papazoglou & Andersen, 2014), and possibly PTG. On the other hand, today's recruits could benefit from training that emphasizes the normalcy of using mental health professionals for cognitive and emotive concerns and approaching those who are a part of a peer support team in their departments (Papazoglou, 2013), along with chaplains.

Papazoglou and Andersen (2014) promote the idea that when police recruits receive student-centered training, it can increase their sense of belonging, acceptance, and connection with their fellow officers and counter some of the negative aspects that can be a part of the LE subculture, such as the stigma of getting help from mental health professions. It is vitally important that LE departments train their officers to understand the benefits of seeking help for their cognitive concerns instead of avoiding the issue altogether, thereby increasing the perceived stigma attached to seeking such help (Velazquez & Hernandez, 2019). When recruits develop a relationship with their trainers, this relationship can aid in establishing a new paradigm regarding seeking help after critical incidents, one that encourages reaching out to mental health professionals, chaplains, and peer support individuals, which can increase their resilience (Papazoglou & Andersen, 2014) and possibly PTG.

Papazoglou and Andersen (2014) propose three topics that should be used in police recruit training: one, psychoeducation about how exposure to trauma can affect an individual's physical and cognitive health; two, removing the stigma from seeking help after a critical incident, what the normal reactions can be to trauma, and that seeking help is a sign of strength, not weakness; and three, helping recruits understand just how important and useful it can be to seek help from groups such as peer support teams and other alternative programs. As police recruits are exposed to positive aspects of seeking help from either peer support, mental health

professionals, chaplains, or others, the more natural it will become, and the stigmas attached to such groups and individuals will become less and less. This can ensure LEOs are more prepared to deal with trauma and stress in more positive ways (Papazoglou & Andersen, 2014). In like manner, LEOs religiosity can also influence how they deal with trauma and stress.

### **Religiosity and Law Enforcement Officers**

Through traumatic experiences, those who are religious can have those beliefs challenged, sometimes resulting in their religious beliefs fading over time (Smith & Charles, 2010). Smith and Charles give suggestions on how to change the police subculture to be more open to religiosity, including police chaplains who can give support and religious counseling. Many law enforcement departments support the mental and physical aspects of LEOs. Still, they can neglect the spiritual aspect, which needs to change if departments want to support the whole person. When departments support their officers' spiritual aspects, they can expect to gain rewards, such as fewer sick days, fewer early medical retirements, fewer suicides, and less turnover (Smith & Charles, 2010). Those departments can also increase officer effectiveness as well as help officers be more empathic towards civilians. LE organizations need to make sure that their officers are not just ready mentally and physically; they need to do all they can to prepare them spiritually for their daily interactions (Smith & Charles, 2010). At the same time, Chopko and Schwartz (2012) discovered that posttraumatic distress was not significantly related to increased efforts to develop religiosity, which was unusual since Chopko and Schwartz (2009) found that PTG was significantly related and predicted by one's efforts at increasing religiosity in LEOs. Redman (2008) also discovered that one effective way that some individuals have learned to manage stress was to have an active religiosity. Similarly, other positives can occur when LEOs practice different aspects of their religiosity.

Being able to readjust after a life-changing traumatic event is one aspect of resilience, along with the capacity to find purpose in one's life after a trauma (Glenn, 2014). When individuals desire to understand and find meaning in their life experiences, their religiosity is one place they go to find such answers (Glenn, 2014; Park, 2010). Individuals who desire to understand who they are from a religiosity standpoint need to reflect on what religiosity means to them and how religiosity will be lived out in their lives. Religiosity may not always involve any particular religion, but it can, along with what individuals value and how they act in everyday life (Glenn, 2014). When it comes to religion and spirituality, there has been an increased desire to understand each topic and how they are both similar and different.

In one of the most extensive and recent studies regarding religiosity, LEOs, and physical health, Chopko et al. (2016) found that those LEOs who practiced religiosity were essentially no different from those who did not practice any kind of religiosity regarding better physical or psychological health. This finding was different from what Chopko et al. (2016) found in the empirical and theoretical literature. Contrary to what one might have thought, Chopko et al. (2016) found that those officers who reported spiritual growth had more significant psychological distress versus less psychological stress in their personal relationships and life in general, but this did not include work stress. This study did not support the idea that if officers practiced religiosity, their stress, both traumatic and occupational, would be lessened (Chopko et al., 2016). The only positive health condition connected to an active religiosity was a reduction in alcohol use as a negative coping strategy (Chopko et al., 2016).

In their study, Chopko et al. (2016) found two predictors that exclusively and significantly led to spiritual growth; those factors were subjective traumatic stress and the practice of religiosity. This study did not show any PTSD symptomatology predicting PTG in the

participants, showing there must be other factors beyond PTSD symptoms and the diagnostic criteria studied that led to spiritual growth (Chopko et al., 2016). The stressors that LEOs experience can lead to them broadening their world-views and helping them discover meaning in their traumas—both of which are factors in assisting individuals in experiencing PTG. Even when religiosity is not a factor, LEOs can demonstrate high levels of compassion, restraint, and professionalism on the job, which can be very inspiring to those around them (Borelli, 2015; Smith & Charles, 2010). Coupled with that, they can be sacrificial and benevolent as they choose to serve their communities. According to Smith and Charles (2010), research into LE religiosity is paltry and needs to gain interest in the research community. If this is going to happen, it will make sense for researchers to utilize a standard definition for religion, spirituality, and religiosity so that everyone can be on the same page in a sense, comparing similar concepts.

When it comes to religiosity, it is difficult to find a consensus definition upon which everyone in the research field can agree. Therefore, many researchers adopt a broad interpretation of religiosity and point out the differences between spirituality and religion (Smith & Charles, 2010). According to Smith and Charles, religiosity can be a search for meaning and purpose and a connection to something outside of oneself. Because individuals come from varied spiritual backgrounds, it is perhaps best to maintain a broader definition of religiosity to encompass more individuals' experiences. This is where the *Centrality of Religiosity* scale can be useful.

Some LEOs having an active religiosity utilize this part of themselves to operate at a higher level, holding themselves to a higher standard than perhaps those with no religiosity (Smith & Charles, 2010). When some officers experienced violence, a crisis, and/or extreme suffering due to their job that could have driven them to walk away from their religiosity, they

grew in their religiosity instead. Those traumatic experiences challenged what they believed, causing them to search and define what was genuinely sacred to them, helping them and their communities to change for the better. The stories of LEOs who have an active religiosity confirm what moral integrity, a desire to serve, and compassion represent. Each of the officers believed their religiosity helped them be the best officers they could be and better serve their communities (Smith & Charles, 2010).

According to Smith and Charles (2010), religiosity and LE have much in common. For example, both have a sense of community and service. The American participants in the Smith and Charles study all believed that the work in law enforcement was assisted by their religiosity, especially their ability to process all of the negative experiences they faced caused by others. Some participants stated it was their religiosity that helped them process or let go of the “why” behind different people’s deaths because they realized they could not answer why it happened and could only leave it in a higher power’s hands. Some officers believed their spirituality helped protect them from injury or enabled them to experience peace when they should not have had peace. They were also able to grow in their religiosity despite the evil they encountered (Smith & Charles, 2010).

When LEOs can access their religiosity, they open themselves up to different possibilities. One such possibility includes using their religiosity to respond to civilians differently from those who may not have an active religiosity. Also, religiosity can help officers find meaning and purpose in what they do and in their traumatic experiences on the job (Smith & Charles, 2010). There is a need for further research into the religiosity of LEOs, seeking to discover how spiritual/religious intelligence factors into police work and how to find meaning for police and the communities they serve when the unthinkable occurs (Smith & Charles, 2010).

When officers utilize their religiosity, they can better cope with the traumas, stress, and evil they deal with on a sometimes-daily basis (Smith & Charles, 2010). While this may be true, police culture tends to limit the expression of what officers are feeling, even limiting their spiritual exploration of different events. Smith and Charles believe that this limiting of officers' spiritual/religious aspects is detrimental because it limits religiosity's potential benefits. Some LE organizations employ police chaplains to help with the spiritual aspects of LEOs. As good as this can be, it is not sufficient in and of itself. Smith and Charles believe there needs to be a spiritual dimension that is department-wide, that affects how the organization functions as a whole, and not just a small segment of it, which might lead to a greater search for meaning in LEOs' lives.

Sometimes hurting individuals seek new or renewed involvement in their religiosity. When this happens, a renewed attention to their essential human nature can occur, along with a desire to improve themselves and find meaning for their lives (Redman, 2008). When searching for religiosity, some see a connection to a higher power, the Christian God, some other transcendent being, or just something greater than they are (Redman, 2008). Some individuals search for meaning in their traumatic pasts or current lives, believing that they are not sufficient to discern meaning themselves (Redman, 2008). When individuals experience difficult and traumatic events, they can be more inclined to abuse different substances and other people. On a positive note, sometimes those seeking to move away from their addictions to alcohol or drugs can often pursue a renewed sense of religiosity (Redman, 2008). When individuals become aware their actions have hurt others, they can also explore redemption for the pain they inflicted. One of the avenues of finding redemption is through spiritual/religious processes that help change the offending individuals from the inside. When they desire to hurt themselves or others

in the future, they have internal resources to prevent that from happening (Redman, 2008).

Sometimes individuals can experience life-threatening traumatic events. After renewing their religiosity, they can conclude they were somehow saved by something greater than themselves, outside of themselves, such as God, and that they now need to repay that divine entity for keeping them from dying (Redman, 2008). Something that is needed in all of these different religious or spiritual interactions—either with God, a higher power, or other people—is trust.

After being abused or maltreated by human beings, and sometimes spiritual or religious entities, some people can develop a severe lack of trust in others, including God (Redman, 2008). At the same time, after placing their trust in a religious community or their renewed religiosity, many traumatized individuals have learned to trust others and God once more, as well as allowed themselves to feel compassion for others (Redman, 2008). As individuals explore their religiosity, they can understand they do have something to offer, that they can contribute to society (Redman, 2008). One aspect of living a spiritual life is helping others find their own spirituality and helping them understand they do not have to remain bound to their pasts but can find freedom and redemption to move forward with their lives (Redman, 2008). When it comes to religiosity, mental health professionals need to be willing to explore this aspect of their clients' lives and not ignore it.

Mental health professionals need to consciously be aware their clients may have some aspect of religiosity that can be addressed in counseling and understand how religiosity can help clients better handle life's challenges (Redman, 2008). Religiosity has a lot to offer clients in processing stressful and traumatic experiences and can also help those clients grow as human beings. Religiosity can be a way for those who have withdrawn from society and close relationships to begin reintegrating themselves into such relationships once again, as they

experience acceptance in spiritual and religious activities. For some individuals seeking to leave behind addictions and negative behaviors, spiritual/religious interventions may benefit them more than traditional counseling interventions (Redman, 2008). Traditional counseling may not give them what religiosity can, a new foundation from which to grow. Religiosity can provide avenues for growth based on traditions and beliefs that are outside or beyond individuals. Religiosity gives them standards for living their lives for others, for their higher power or God, and not for themselves, which most likely brought them to the negative place they found themselves in before seeking help. As LEOs learn to trust mental health professionals they can learn to extend that same kind of trust to others in society, including themselves (Redman, 2008). LEOs can lose trust in themselves when they realize they have made choices that were not in their best interests and were very harmful, even contrary to their own beliefs. Religious/spiritual coping can be beneficial when other strategies have not been helpful.

Individuals' religiosity can be an excellent resource to go to when dealing with traumatic and/or stressful life events (Gerber et al., 2011). For example, many individuals can view the world through a religious/spiritual lens, using that lens to help them understand the world around them and guide them in everyday choices. Religious coping has multiple facets that make it a unique coping mechanism, such as explanations for why things happen, a support network individuals can rely upon, and different established ways for individuals to go about challenging their assumptions about life (Gerber et al., 2011).

Gerber et al. (2011) found that when individuals utilized positive religious coping, it was related to their ability to produce PTG. Simultaneously, when individuals used negative religious coping, it was likely to produce PTSD symptoms. Different positive religious coping styles can include seeing the stressor through religious glasses as something potentially beneficial, seeking



spiritual support from others, and granting forgiveness (Gerber et al., 2011). Negative religious coping can include having discontentment in their religiosity or finding their religiosity as non-satisfying, believing God is punishing them with adverse life events, and blaming the devil for life's stressors (Gerber et al., 2011).

As already mentioned, religion and spirituality are not necessarily the same thing in many people's minds, which is why this paper uses the term "religiosity" to encompass the concepts of both religion and spirituality, along with non-belief. In reality, some individuals can abhor religion and yet align themselves with a type of spirituality and/or different religions along with seeking attachment to other beings (McGrath, 2011). Theistic religions in Western societies seek relationship and attachment to something divine, whereas Eastern religions tend to seek attachment to a guru or other human teacher. Each of these types seeks transcendence through those relationships (McGrath, 2011). When it comes to religiosity and mental health, as far as LEOs are concerned, professionals need to see the two concepts should be explored together, especially if clients bring it up independently. In a similar vein, religiosity and PTG are concepts that should also be explored together.

When first responders intentionally sought to increase their religiosity, an increase in PTG was observed (Chopko & Schwartz, 2009). This finding would suggest that when mental health professionals work with trauma survivors, it would be prudent to include their religiosity as a part of the counseling process. Religiosity and PTG can be seen as complementing one another, as religiosity seeks transcendence through goals (McGrath, 2011). One of the five factors of PTG is positive change in spirituality-existentialism, where spirituality-existentialism can be seen in individuals seeking transcendence separate from their traumatic event, which can come about through goals and priorities set by them (McGrath, 2011). When individuals

experience trauma in their lives, it can demolish their core beliefs about themselves, others, and their world (McGrath, 2011; Tedeschi et al., 2018). When this destruction of core beliefs occurs, it can lead to questioning if life has any meaning, if what individuals are doing is worthwhile or makes a difference, or if there is any justice in the world, among other important questions (McGrath, 2011). When these core beliefs, these assumptions about life and the world, are challenged and meaning is found in them, PTG has occurred (McGrath, 2011; Tedeschi et al., 2018). They do not forget the trauma they experienced but incorporate it into their lives as part of their new normal and a new life narrative (McGrath, 2011; Tedeschi et al., 2018). The same can be said for Christians and those who do not believe in Christ as their Savior.

There are difficulties in life for Christians, such as suffering and pain, that can teach them many things like humility and Christlikeness. God seeks to produce character in individuals and not just protect them from adverse life events (Tan, 2013). With this in mind, Christians should understand that PTG can and will come into their lives, not through a lack of pain and suffering, but because of pain and suffering, not through wholeness but brokenness (Tan, 2013). Research done by Harris et al. (2010) studied non-clergy church attenders in Midwestern American Christian churches. They found those who had experienced a traumatic life-event were able to utilize prayer to take their minds off of the traumas, helping them to concentrate and create internal peace, which also helped promote PTG in their lives.

For PTG to occur, there needs to be an awareness of what the individual has experienced (Tedeschi et al., 2018). Individuals need to be able to process their former assumptions to make meaning out of what happened, creating new goals and schemas because the traumatic experience has challenged their previous goals and schemas to the point they no longer work (Chopko & Schwartz, 2009; Tedeschi et al., 2018). For many, being active in their religiosity is

one way they make sense of the traumatic life-changing events they experience (Glen, 2014). This is one path that leads to experiencing and perceiving PTG (Chopko et al., 2016).

Just because researchers may seek to discover growth that has taken place in individuals' lives due to traumatic experiences does not mean they do not also recognize the distresses that their participants experience post-trauma (Tedeschi et al., 2018). Even after experiencing extraordinarily traumatic and life-changing events, many individuals can identify different types of growth in their lives that actually help them recover from critical incidents, both in the short-term and long-term (Tedeschi et al., 2018). This phenomenon is called PTG.

### **Positive and Negative Events and PTG**

Leppma et al. (2018) found that officers who experienced stressful life events that were both high in number and significance also experienced higher PTG scores. An individual's PTG scores were also moderated by the three factors studied by Leppma et al. (2018): social support, gratitude, and satisfaction with life. When officers experienced higher scores in these three areas, they also experienced higher levels of PTG. Something that separates the Leppma et al. study from most others is how they did not seek to look at PTG only concerning officers' experiences with trauma. They sought to discover if PTG was related to negative and positive life events to determine if individuals could see both types as stressful, not just the negative ones. The research by Leppma et al. revealed a linear relationship between PTG and stressful life changes, both positive and negative. The less stressful the change, the less PTG was perceived; the more stressful the change, the greater their PTG perception (Leppma et al., 2018).

It appears that with some individuals, when their stressful life events increase in both severity and number, so can their experiences and perceptions of PTG (Leppma et al., 2018), which was especially evident for LEOs who perceived to have higher levels of gratitude. When

Leppma et al. assessed LEOs satisfaction with life, perceived gratitude, and interpersonal support, they discovered those three factors moderated how much their stressful life events affected their PTG. The study by Leppma et al. (2018) supports the idea that LEOs who receive positive social support, including interpersonal counseling after experiencing traumatic events, tend to report greater PTG. If LE departments desire to increase their officers' longevity and effectiveness, they need to promote mental health professionals' helpfulness, who could be sources of positive social support, and oppose the stigma attached to such help (Leppma et al., 2018). As stated previously, even though clients may experience PTG, it does not mean they will not experience STS or PTSD symptomatology. Furthermore, just because someone experiences PTSD symptoms or STS does not mean they will perceive PTG.

It appears that when individuals experience less PTSD symptoms, they do not usually report experiencing PTG (McCanlies et al., 2014). Trying to find a relationship between PTG and distress is a complex issue that Tedeschi and Calhoun (1996) also dealt with in their research. It cannot be proven that just because individuals experience PTG, they will also experience positive psychological health (McCanlies et al., 2014). However, it does seem that individuals can experience both positive and negative aspects of a traumatic event in their lives at the same time. That being the case, counselors need to be aware of this possibility, so they can help their clients process the different positive and negative feelings and cognitions associated with their traumatic and life-changing events (McCanlies et al., 2014; Shakespeare-Finch & Lurie-Beck, 2014). In other words, PTG in individuals does not necessarily alleviate PTSD symptoms or other psychological issues.

The finding that PTG does not mitigate PTSD symptomatology may lead some to believe that PTG does not actually exist. On the other hand, Chopko et al. (2019) believe it is possible

that the level of PTG was not high enough or perhaps did not last long enough to realize a decrease in symptomatology. Another thought regarding the lack of diminished psychological distress is that maybe it is possible that when trauma is experienced on a more frequent basis, such as LE might experience versus the general public, the frequency of exposure might lessen the ability of PTG to diminish those adverse psychological effects (Chopko et al.). Chopko et al. did not find any significant differences between cognitive or behavioral PTG. When different health variables were assessed, only alcohol was not found to be significantly associated with PTG. This finding could mean that PTG may not positively affect negative post-traumatic functioning, such as coping methods that include drinking too much alcohol, even though PTG may improve cognitive coping skills. Even though PTG may not always be able to positively affect different types of functioning, some things can positively affect PTSD symptoms and the perception of PTG.

Social support can play a significant role in reducing PTSD symptomatology and the production of PTG. Emergency service workers who experience traumatic events tend to develop PTS symptomatology (Ogińska-Bulik, 2015). Ogińska-Bulik (2015) found that 61.2% of respondents reported average to high levels of PTS symptoms (p. 124). Even though individuals such as first responders can be exposed to traumatic events that can produce PTS symptoms, they are also able to develop significant benefits from the same traumatic events (Ogińska-Bulik, 2015). Some of those positive benefits include the five factors of PTG developed initially by Tedeschi and Calhoun (1996). Simultaneously, not everyone experiences PTG at the same level, even if they experience the same traumatic or life-changing events, including health issues.

Ogińska-Bulik (2015) found low levels of PTG in almost 40% of respondents, an average level of PTG in 34.5% of respondents, and a high level of PTG in 26% of respondents (p. 134).

These numbers are comparable to a similar study with firefighters (Ogińska-Bulik & Kaflik-Pieróg, 2013). Still, they are much lower than studies with cardiac surgery patients (Ogińska-Bulik & Juczeński, 2012) and breast reduction surgery patients diagnosed with breast cancer (Ogińska-Bulik, 2010). Ogińska-Bulik (2015) believes this reveals those who experience traumatic events having to do with somatic issues have higher growth potential than those who experience traumatic events on an on-going basis due to their jobs. If this is true, then perhaps it is because first responders such as LEOs and firefighters have been better prepared to deal with traumatic events due to their training and repeated exposure, versus individuals who experience surprising and unexpected health concerns (Ogińska-Bulik, 2015).

At the same time, those individuals who had good support from co-workers were able to report greater PTG (Ogińska-Bulik, 2015). Those first responders who reported good support from their supervisors also had less PTS symptoms (Ogińska-Bulik, 2015). This support appears to be a good buffer for first responders, limiting the adverse effects they might experience from traumatic events, especially regarding arousal and intrusive symptoms of PTS (Ogińska-Bulik, 2015). Meanwhile, support from co-workers seems to be even better than support from supervisors, helping first responders to perceive growth in their relationships with others and their self-perceptions, mostly if the PTSD symptoms were average-to-high in severity (Ogińska-Bulik, 2015). It appears social support, no matter what kind, is vital to the healing process when working with trauma survivors (Ogińska-Bulik, 2015). Supervisors of first responders need education in offering social support to those under their oversight, with the understanding that providing such support helps to reduce potential PTSD symptoms and distress (Ogińska-Bulik, 2015). Simultaneously, all first responders need education in the PTG potential they can offer to their co-workers by giving them positive social support after traumatic events (Ogińska-Bulik,

2015). In like manner, how individuals view or feel about their jobs can also influence the production of PTG.

When LEOs can help others during a traumatic event, they can experience a sense of job satisfaction, increasing their possibility of experiencing growth (Chopko, 2011). Also, Craun et al. (2015) found that when LEOs were able to see their jobs as having a positive impact on their family relationships, they reported lower STS scores. It is possible this positive job outlook was a result of officers experiencing PTG, perhaps without even realizing it or trying to seek PTG.

PTG can be conceptualized as both an outcome to achieve and a process to go through (Tedeschi et al., 2018). When individuals are looking at positive reappraisals in their lives, that is PTG as a process. When individuals are looking at positive and lasting changes that have taken place, those are PTG outcomes. PTG has been studied to find many different positive results with individuals, including biological, behavioral, cognitive, and emotional. According to Tedeschi et al., the PTG outcomes for the PTGI-X include the following: personal strength, relating to others, new possibilities, appreciation of life, and spiritual/existential change (2018).

### **PTG Outcomes**

When it comes to the PTG outcome personal strength, individuals can experience such things as a sense of self-reliance, being a victor instead of a victim, and discovering newfound strength being a survivor, despite experiencing traumatic events (Tedeschi et al., 2018).

Individuals can find this internal strength, developing external behaviors to complement what has happened within them. Relating to others is another outcome of PTG. This outcome can include feeling more positive towards others, having greater personal connections with other people, and feeling more compassion (Tedeschi et al., 2018). As with personal strength, there can also be external behaviors connected to relating to others, such as a greater willingness to

allow others to help, including an ability and desire to express one's emotions with others. This can include a greater desire to spend time with others and an ability to share with them how much they are appreciated and loved (Tedeschi et al., 2018).

Another factor of PTG is new possibilities. When individuals experience new possibilities in their lives, they feel they can step out of their comfort zones and try something different (Tedeschi et al., 2018). Appreciation of life is a fourth factor that can be found in individuals' PTG. Sometimes this is evidenced by individuals not taking things or people in their lives for granted (Tedeschi et al., 2018). Individuals who have experienced a life-threatening illness or natural disaster, for example, may find themselves slowing down and smelling the roses in a sense, realizing that life is not just about work and being busy. It is also about acknowledging relationships and alleviating stressors (Tedeschi et al., 2018). The fifth domain of PTG is spiritual-existential change (p. 93). This factor is not just for spiritual or religious people, but for anyone who experiences changes in their philosophy of life or who have existential questions (Tedeschi et al., 2017, 2018).

There are many avenues by which individuals can experience PTG. However, one thing that must be present in each of them is a challenge to what individuals have believed about their core beliefs and assumptions about the world around them (Lowe et al., 2013; Tedeschi et al., 2018). Although many people who experience traumatic events do sometimes develop posttraumatic stress symptoms (PTSS), the presence of PTG has not always alleviated PTSS (Tedeschi et al., 2018). Both PTSS and PTG can co-exist together and be experienced by individuals simultaneously (Tedeschi et al., 2018). An essential aspect of PTG is that harmful or problematic elements within individuals due to their trauma should not be ignored. Individuals need to understand that PTG can co-exist with these negative consequences (Shakespeare-Finch



& de Dassel, 2009). Something else that needs to be understood is that PTG can also be experienced vicariously or secondhand.

### **Vicarious PTG**

Vicarious posttraumatic growth (VPTG) (Armstrong et al., 2014; Arnold et al., 2005; Manning-Jones et al., 2015; Tedeschi et al., 2018) is positive growth experienced when individuals have been exposed to vicarious trauma and are then able to see the five areas first promoted by Tedeschi and Calhoun (1996). Vicarious traumatic exposure occurs when individuals do not personally experience traumatic events. Still, they are affected by such circumstances when they hear the traumatic details or when they are around others who were directly involved (Manning-Jones et al., 2015).

According to Arnold et al. (2005), VPTG can be different than PTG in one sense because some therapists found themselves becoming more open to different types of spirituality rather than increasing in their own spirituality (Arnold et al., 2005). Another difference seen between VPTG and PTG was when some individuals reported a generalized resiliency for the human spirit versus just experiencing a sense of greater personal strength, which would be typical for PTG (Arnold et al., 2005). This would seem to suggest that individuals who self-report VPTG may not be as internally affected as those who self-report PTG (Manning-Jones et al., 2015). This finding was supported by Wu et al. (2019), who found those directly affected by a traumatic event reported significantly higher prevalence of moderate-to-high PTG versus those who reported indirect exposure to trauma. At the same time, the vast majority of professionals interviewed by Arnold et al. (2005) all reported increases in such personal traits as empathy, insight, tolerance, compassion, and sensitivity, which they attributed to their work with trauma

survivors (Arnold et al., 2005). These positive changes reportedly helped them be better mental health professionals and could be signs of VPTG.

Spiritual introspection, including an increase in awareness, depth, and activity of spiritual matters, was another by-product experienced by over three-quarters of the participants (Arnold et al., 2005). Some mental health professionals reported they experienced spiritual or existential growth by viewing PTG in a client's spiritual/existential beliefs. One of the most commonly reported positive experiences mental health professionals have reported when working with trauma survivors is the opportunity to watch their clients experience PTG (Arnold et al., 2005).

Although PTG and VPTG are positive aspects of experiencing or hearing about a traumatic/critical event, they are not well understood by the general population. When this researcher would try to explain PTG to individuals, almost to a person they had never heard of it, let alone been trained in what it is, and yet nearly every individual appeared to be fascinated by it. Some were able to describe experiencing PTG after a traumatic event had occurred in their lives. However, after an explanation, they seemed to recall their own PTG easily. This suggests that if individuals, such as LEOs, could be trained in PTG, they too might be able to identify different elements of PTG in their own lives from past traumatic/critical incidents. Perhaps this could give them a different and more positive perspective on those traumatic events, instead of viewing those events from a purely negative standpoint. When assessing for PTG or VPTG, researchers also need to keep in mind that prior traumas experienced by individuals, even as children, might affect their perception of PTG or VPTG today.

### **Prior Trauma and PTG**

Burke and Shakespeare-Finch (2011) did a longitudinal research study of recruit police officers, assessing them on their first day at the academy and then 12 months into their full-time

status. In the study, Burke and Shakespeare-Finch found that officers who had experienced a significant trauma before joining the force, and those who had experienced such a trauma plus vicarious trauma while working as LEOs, all scored higher on the PTGI than officers who had not experienced trauma before joining or those who had only experienced trauma while on the job. It is possible that prior trauma experience might help LEOs move through the distress of a traumatic event quicker than those who have not had previous trauma experience, which can help them work through challenges to their worldview assumptions quickly (Burke & Shakespeare-Finch, 2011). When individuals experience a pre-work trauma plus an operational trauma, the combination appears to help LEOs adapt more quickly to subsequent traumas (Burke & Shakespeare-Finch, 2011).

When LEOs have a pre-work trauma experience and have been successful in the meaning-making and comprehension processes of that pre-work trauma, they may experience resilience in the face of operational traumas (Burke & Shakespeare-Finch, 2011). Burke and Shakespeare-Finch's research suggests that when recruits receive socialization into police culture and appropriate training to cope with critical incidents effectively, they can better deal with traumatic operational events in more positive ways. One result from the Burke and Shakespeare-Finch research was that those who reported no pre-employment trauma and those who did not experience any operational trauma were still able to report some degree of positive change on the PTGI. They suggest it was the act of becoming a police officer that was significant enough to challenge their worldview assumptions to produce some PTG (Burke & Shakespeare-Finch, 2011). The results of perceived PTG without experiencing a traumatic event that would significantly challenge their assumptions questions whether such traumas are necessary to experience personal growth. One might wonder if significant life changes, even proposed

positive ones like a new job or moving to a new state, would be enough to trigger schematic changes in individuals. These results seem to point in that direction.

Research by Roepke (2013) in this vein also seems to support this idea of positive significant life experiences promoting PTG. Roepke calls it post-ecstatic growth (PEG). PEG involves growth that comes from non-traumatic events, but rather positive events. PEG's five positive areas or experiences involve the following: positive emotions, engagement, relationships, meaning, and accomplishments (Roepke, 2013). The factors involved in PEG are very similar to PTG, but there are only four of them in PTG: meaning in life, spiritual change, relationships, and self-esteem (Roepke, 2013).

Even though daily challenges and stressful events may not produce PTG in and of themselves, Tedeschi et al. (2018) believe the accumulating effect may begin the processes that can lead to PTG, such as effortful rumination and self-perception challenges. Even positive changes in individuals' lives can lead to processes that can develop PTG (Tedeschi et al., 2018). The key to PTG being experienced after these types of events is that said events must be strong enough, life-challenging enough, to produce the necessary changes that can be observed as something different from ordinary maturation life-transitions (Tedeschi et al., 2018). Even though a lot of research promotes the positive aspects of PTG and VPTG, some research has opposing views on PTG, and therefore VPTG.

### **Negative Views on PTG**

Not everyone who studies posttraumatic growth (PTG) has an entirely positive outlook on the subject. Lahav et al. (2016) believe that PTG can lead people to not work through their traumas, calling PTG an "avoidance-based defense mechanism." In a study of wives of former prisoners of war (POWs), Lahav et al. found those wives who reported experiencing the highest

levels of PTG also reported experiencing higher levels of PTSS. They also complained of more physical issues, which appears contrary to the idea that positive thinking can help individuals feel better, not worse. It was suggested by Lahav et al. that individuals who are close to those who have experienced traumatic events, such as being a POW or other significant trauma, may experience traumas of their own, similar to or equal to vicarious or secondary trauma.

It is possible that the experience of PTG could occur because individuals are seeking to cope with the critical incidents they or their loved ones have experienced (Lahav et al., 2016). If this is true, it could be a way for significant others to disengage from the family and relationship losses due to what their loved one has gone through. It is possible that the growths posited by the wives of ex-POWs may not be real, but instead be idealism, a way to overcome or avoid the negativity happening around them because their husbands suffered significant traumas and brought those home with them, similar to what LEOs may do after particularly traumatic shifts. Lahav et al. suggest that PTG, or the belief in growth that might not be valid, could increase PTSS because things are not actually better, increasing somatization and impeding their ability to experience good physical health.

When researching the effect of perceived growth versus actual growth regarding distress, Frazier et al. (2009) did not find a correlation between decreased distress and PTG. Instead, they found a correlation between an increase in distress and PTG. However, Frazier et al. did find an association between a decrease in distress and actual growth. At the same time, they discovered that positive reinterpretation coping was strongly associated with perceived growth and was not associated with real growth. According to Frazier et al., the self-report PTGI scale does not seem to assess actual growth in an individual pre-trauma to post-trauma. Based on these results, Frazier et al. suggest that perceived growth and real growth are two different processes and that

using self-report scales may measure perceived growth, but not actual growth or change within individuals. Therefore, Frazier et al. do not promote self-report measures when seeking to discover PTG. The only exception found by Frazier et al. dealt with perceived change in religious commitment. With religious commitment, the PTGI assessed actual change and found such change related to more distress in individuals not less, along with the individuals using more positive reinterpretation coping skills (Frazier et al., 2009).

Some of the most negative views on PTG come from Jayawickreme and Blackie (2016). Jayawickreme and Blackie promote the idea that individuals who experienced traumatic events and then reported experiencing PTG has not been proven conclusively from research. Even if you believe that you or others you know have experienced what you understand to be clear examples of PTG due to critical incidents, Jayawickreme and Blackie do not consider that to be enough to definitively say the growth experienced will stay with individuals throughout their lives. The theory of PTG states that for individuals to experience PTG, they need to see changes in how they think, feel, and behave, which Jayawickreme and Blackie argue are changes in their personalities. According to Jayawickreme and Blackie, most of the studies done on PTG have been cross-sectional, using self-report measures that assess past trauma. Jayawickreme and Blackie do not believe these types of studies effectively test meaningful hypotheses that can determine what they call the “nature and predictors of growth” (Introduction, para. 7).

Jayawickreme and Blackie (2016) argue that when a person experiences a critical incident, their emotions, cognitions, and actions should be changed in the short-term and long-term. They suggest that if PTG has indeed occurred, and individuals have experienced changes in their personalities, one should be able to measure those changes today and in the future. Jayawickreme and Blackie report they have seen PTG and other positive psychology constructs

evidenced in populations who have experienced civil war and genocide. They have reportedly observed how these constructs have contributed to individuals recovering from such traumatic events, benefiting their rehabilitation in the short-term and long-term. However, they do not want to overstate such constructs' importance without better testing measures for long-term growth. They believe that some may benefit in the short-term after a critical incident, experiencing PTG, only to revert to the way they were before their experience with the critical incident. They report that if individuals experience PTG even in the short-term, which helps them navigate the critical incident and allowing them to handle the cognitive stressors more effectively, this is a good thing. Conversely, if the individuals do not experience long-term PTG moving forward in their lives and revert to a previous way of dealing with stressors, they would say that counselors should not oversell the idea that PTG is a permanent change that occurs (Jayawickreme & Blackie, 2016). However, Jayawickreme and Blackie do see how PTG can be congruent with Christianity.

Christianity believes that individuals need to experience difficult circumstances in their lives if they are to grow and mature as human beings and in their faith in God (Jayawickreme & Blackie, 2016). The Christian Bible shares many stories of how God, Who is all-knowing and all-loving, allows His followers to experience different humbling trials in their lives to develop positive character traits, teaching them humility and not arrogance (Jayawickreme & Blackie, 2016). Hebrews 12:6–13 is a passage of scripture that explains this phenomenon exceptionally well. The New Living Translation states it thus:

“For the LORD disciplines those He loves, and He punishes each one He accepts as His child.” As you endure this divine discipline, remember that God is treating you as His own children. Who ever heard of a child who is never disciplined by its father? If God

doesn't discipline you as He does all of His children, it means that you are illegitimate and are not really His children at all. Since we respected our earthly fathers who disciplined us, shouldn't we submit even more to the discipline of the Father of our spirits, and live forever? For our earthly fathers disciplined us for a few years, doing the best they knew how. But God's discipline is always good for us, so that we might share in His holiness. No discipline is enjoyable while it is happening—it's painful! But afterward there will be a peaceful harvest of right living for those who are trained in this way. So take a new grip with your tired hands and strengthen your weak knees. Mark out a straight path for your feet so that those who are weak and lame will not fall but become strong.

Another way that the Christian Bible encourages adversity is when individuals experience difficult trials when performing a Christian service; for example, preaching to the lost or just living their lives in ways contrary to the world around them, thereby incurring rebuke or ridicule (Jayawickreme & Blackie, 2016). Sometimes just doing the right thing, from a biblical perspective, can bring hardship. The Apostle Paul's life was replete with trials, tribulations, and beatings because he preached Christ (2 Corinthians 12:7–10). True Christianity is not something that is void of trauma in the believer's life; trials and hardships are things that are to be expected. Those moments of adversity in a Christian's life promote godly character qualities that cannot be gained in other ways. The Lord Jesus Christ is the ultimate example for Christians. If He experienced trials and hardships, undoubtedly His followers will as well. He said they would. As they do, they can look to Jesus as their strength to endure those troubles (2 Corinthians 4:8, 10, 12, 16).



Jayawickreme and Blackie (2016) state that it is difficult to prove causality regarding PTG. Research cannot show that a specific traumatic event is solely responsible for individuals experiencing PTG. They make the case that there are currently no ways to definitively and empirically assess how PTG occurs. According to Jayawickreme and Blackie, what is needed are longitudinal studies that are not reliant on self-report instruments and that also utilize baseline data collection of individuals before they experience traumas. Jayawickreme and Blackie offer alternative explanations instead of PTG for the benefits individuals experience post-trauma. Those benefits are included in the following themes: “(1) self-enhancement, (2) an active coping effort, (3) the violation of post-event recovery expectations, and finally (4) personality characteristics and cultural scripts” (Jayawickreme & Blackie, 2016, Chapter 3. “Can we Trust Current Findings on PTG,” para. 2).

To try to bring some kind of consistency in research methods, Jayawickreme and Blackie give some additional suggestions.

Participants must attempt the following five steps for each item on these questionnaires: (1) deduce current-standing on the dimension, (2) recall prior standing on the dimension before the event had occurred, (3) compare these standings, (4) calculate the degree of change, and finally, (5) evaluate how much of the change was due to the traumatic event (Jayawickreme & Blackie, 2016, Chapter 3. “Can We Trust Current Findings on PTG,” para. 5).

A potential limitation of the PTGI, according to Jayawickreme and Blackie, is that it only assesses positive changes in individuals and neglects possible negative changes. They believe this neglect is positive change bias. Consequently, they suggest that negative change responses should be added to existing PTG assessment tools to correct this bias. This has already been

accomplished with one assessment tool. Baker et al. (2008) created the Posttraumatic Growth Inventory-42 (PTGI-42), which has 21 items from the original PTGI, and then matches 21 negatively worded items that can measure what they call posttraumatic depreciation (PTD).

One of the best things that researchers could do to help bring some consistency and reproducibility to research would be to have individuals do a pre-trauma assessment for PTG, establishing a baseline for the different scales (Jayawickreme & Blackie, 2016). However, this is not always possible, or pragmatic, for everyone, nor is it cost-effective. No one knows when or if they will experience a traumatic or life-changing event; therefore, it does not make sense to perform a pre-trauma assessment for the general population (Jayawickreme & Blackie, 2016). However, this might be possible with specific population groups such as first responders because the likelihood of them experiencing a traumatic event is relatively high.

Another idea that could benefit researchers would be to collect corroborating reports from those who are familiar with the individual who experienced the traumatic event (Jayawickreme & Blackie, 2016). This may be one way to overcome using strictly self-reporting retrospective measures. Asking others to report on possible personality changes for an individual can be very beneficial and accurate, without having to rely solely on self-reporting. Asking others who knew the individual before and then after the critical incident is a viable option to gain data about the individual when a pre-incident assessment is not possible or available. This evaluation tends to have better results when those asked to corroborate data confirm they are very close to the individual (Jayawickreme & Blackie, 2016). This was also something Tedeschi et al. (2018) proposed and found useful in assessing PTG change in those who experienced traumatic life-changing events.

It should be noted that this is not necessarily 100% accurate, as corroborators could merely be passing on what they have heard from the trauma survivor and not what they have personally observed (Jayawickreme & Blackie, 2016). Simultaneously, the trauma survivor may be experiencing internal growth that is not always visible to others, which would make it impossible for others to corroborate (Jayawickreme & Blackie, 2016). Although there may be some disagreement regarding PTG and its assessment and perception, there appears to be quite a bit of agreement regarding the adverse effects of STS.

### **Secondary Traumatic Stress**

LEOs and other trauma workers may not limit their exposure to traumatic or critical events because it is part of their job description, unlike the general population who can normally decide if they will get involved in a traumatic event or not (Figley, 1995). Sometimes LEOs and other first responders can experience traumatic events they never imagined could occur (Figley, 1995). These adverse effects produce secondary traumatic stress (STS) (Figley, 1995). LEOs and other trauma workers must get help in dealing with STS because if they do not, there can be severe and long-term effects ranging from issues on the job to losing their jobs to suicide and other psychological problems (Figley, 1995).

When researchers are looking at the possible negative effects that can occur in individuals who experience critical and traumatic events, the most common language used to describe those results includes vicarious traumatization, compassion fatigue (CF), burnout (BO), and secondary traumatic stress (STS) (Gentry et al., 2018; Sodeke-Gregson et al., 2013). According to Sodeke-Gregson et al., when individuals experience STS, even though they did not experience the trauma firsthand, they can develop the same symptoms as posttraumatic stress disorder (PTSD), which Gentry et al. (2013) found regarding those experiencing CF. This can be

an acute reaction to what they have heard from those they have helped (Sodeke-Gregson et al., 2013). On the other hand, vicarious trauma may not be an acute reaction, but rather something that develops over time because of working with multiple trauma survivors (Sodeke-Gregson et al., 2013). Vicarious trauma can lead to VPTG. LEOs can experience many traumatic and critical events while on the job throughout their careers (Andersen & Papazoglou, 2015). New York City police department psychologist Rudofossi (2009) states that LEOs can experience anywhere from 10 to 900 traumatic events throughout their careers, which could potentially be highly stressful to the officers. Within those highly stressful events, officers tend to be the ones tasked with providing support to those affected, relying on their ability to empathize with survivors to bring some comfort to the afflicted (Rudofossi, 2009). LEOs can experience these traumatic events firsthand, secondhand, or even a combination of the two. Simultaneously, how they encounter them can lead LEOs to be negatively affected by those experiences.

In his seminal work on compassion fatigue and secondary traumatic stress (STS), Charles Figley (1995) starts by stating that for those who care for others, who serve others, it is inevitable that at some point they will be negatively affected by what they do. According to Figley (1995, 1999) secondary traumatic stress (STS), secondary traumatic stress disorder (STSD), compassion stress (CS), and compassion fatigue (CF) have all been used somewhat interchangeably. Simultaneously, Stamm (2010) states that compassion fatigue (CF), vicarious trauma (VT), and secondary traumatic stress (STS) are terms that have been used to define the adverse effects of stress, and there is very little difference in how they are used. Also, Figley compares CF with STSD and states that both are the equivalent of PTSD. However, with all of this in mind, for uniformity, secondary traumatic stress (STS) will focus on negative stress-related issues used in this paper, along with the fact that STS can lead to VPTG, the main factor in this study.

According to Figley (1999), CF, CS, and STS are what one would expect to happen when individuals have been exposed to traumatic information, and these conditions do not need to be career-ending conditions but are in fact “predictable, treatable, and preventable” (p. 4). Whatever name you want to place on this phenomenon, it should be noted that all of these conditions are considered part of the “cost of caring” by Figley (1999). Because individuals, such as LEOs, mental health professionals, and others, care about those who are victims, they open themselves up to the possibility of experiencing STS and even CF (Figley, 1999, 2002). Those who serve and care for others cannot help but be affected by the stories relayed to them. Those helpers can then experience similar effects as those suffering from the experience of a traumatic event, including similar pain and fear (Figley, 1995, 1999). Those who care the most can also experience the most CS because of what they have heard from those they serve (Figley, 1995).

As helpers listen to what survivors have experienced, it can affect several areas of their lives, such as how they view and interact with the general population, their families, and even how they view themselves (Figley, 1995). Just as those survivors may experience nightmares, intrusive thoughts, and anxiety due to their critical incidents, helpers can share the same symptoms. Just as survivors need someone who can come alongside them and help them process what they have gone through, helpers sometimes need similar assistance. That is the result of STS (Figley, 1995). CF can then occur as helping individuals listen to survivors’ stories and are subsequently negatively affected cognitively and emotionally because of what they heard and because they want to help the survivors (Figley, 1995, 2002).

Some have also seen STS as BO (Figley, 1995). Burnout on the job can occur when individuals become emotionally, mentally, and physically exhausted because of the job requirements. The most common reason for BO to occur is emotional exhaustion. According to

Figley, BO does not happen overnight but comes on gradually over time. Secondary traumatic stress (STS), however, can come on rapidly (Figley, 1995). Something that differentiates CF from BO is that individuals can recover from CF more quickly (Figley, 1995). With CF, individuals can be bogged down by confusion and feeling helpless, without others to support them (Figley, 1995). Simultaneously, it can be challenging to find an explanation for STS or CF, making it difficult to place the blame for STS on any one particular source (Figley, 1995).

Different aspects of crisis workers' lives can contribute to the creation of STS and CF. Some of the contributing factors are social, individual, traumatic or critical incidents, community, and organizational (Figley, 1995). Another unique factor that can contribute is when helpers overidentify with the survivors they are working with, either seeing themselves or someone close to them in those survivors and their stories. Sometimes having a previous history of emotional or cognitive issues can be contributing factors when a crisis worker experiences a traumatic event (Figley, 1995).

When LEOs work with specific populations, such as those who have experienced sexual assault and rape, the material they are exposed to tends to be very traumatic, not just for the victims but potentially for the officers themselves (Turgoose et al., 2017). Many studies have looked at CF, BO, and STS in other helping professions. Still, until the study by Turgoose et al., none had looked at LEOs, especially those who work with individuals who had been sexually assaulted or raped. The study by Turgoose et al. focused on those officers who specialized in working with sexual assault and rape victims. After the assessment, they discovered that even if an officer had more years on the force, those who had more experience with rape and sexual assault victims showed greater STS, BO, and CF levels. Based on these findings, it would seem appropriate to conclude that those officers who work with populations who experience more

traumatic events in their lives, such as sexual assault, have a greater possibility of succumbing to CF, BO, and STS.

Compassion fatigue, BO, and STS are things that appear to increase over time (Turgoose et al., 2017). If this is true, it is something that LE organizations need to invest time and resources in to help LEOs decrease those adverse effects while also increasing their longevity on the force. Peer support groups and supervision from higher ranking officers can help keep law enforcement personnel from experiencing BO, STS, and CF. This can protect the officer's longevity and the investment of the department (Turgoose et al., 2017), as law enforcement organizations spend a lot of resources to train recruits.

Overestimating and underestimating things like time on the scene are typical by-products of working with traumatic events (Figley, 1995). This can be a symptom of individuals experiencing STS (Figley, 1995). Some other factors that can be associated with STS are depersonalization and having to suppress emotions. Both of these concepts can help crisis workers do what they need to do without undue emotional and cognitive overloads at the time of the crisis that might otherwise interfere with their effectiveness. One of the most commonly reported short-term post-exposure effects of trauma work is intrusive thoughts regarding the critical incident. When crisis workers experience trauma, there can be long-term and short-term reporting of symptoms such as fear, demoralization, anger, hypervigilance, intrusion, avoidance, sleep disturbances, and physical issues (Figley, 1995).

Law enforcement families can be affected indirectly by their LE family members' traumas (Figley, 1995). LEOs are bound at times by confidentiality, unable to unburden themselves of different aspects of their jobs to their spouses and significant others. When LEOs cannot share parts of their lives with their families, those family members can feel excluded and

closed off from their LE family members. This can create discord as well as trust issues for all involved (Figley, 1995).

According to Figley (1995), there are four phases of STS that trauma helpers go through when seeking to work with victims of traumatic events. Phase one is when they attempt to confront the STS. During this phase, helpers experience many thoughts, emotions, and actions concerning what is happening around them. They seek to gain control over them all instead of allowing those things to dictate to them how they should think, act, and feel. Of course, these are secondary effects because the helper did not personally experience the trauma. These are ramifications of the traumatic event, not part of the original trauma.

Phase two of STS is the period of safety, according to Figley (1995). During this phase, helpers can sort of catch their breath, acknowledge the event itself has ended while also recognizing the trauma has not. The event's residual effects continue to linger and perhaps increase, leading to phase three: secondary traumatic stress reaction (STSR). Figley states that phase three, STSR, is about incorporating, accommodating, and accepting what has happened. During this phase, the mental work begins regarding what they experienced. This is perhaps the most critical phase as it will determine if the trauma worker stays in an unhealthy emotional state or can move into a healthy emotional state, assimilating the events of the trauma into their psyche. If not, they can become emotionally stagnant. Coincidentally, this can be the opportune time to intervene with prevention strategies.

The fourth and final phase of STS, according to Figley (1995), is the integration phase. This phase will determine whether or not the assimilation of STS will be accomplished. If individuals can integrate their trauma memories effectively, without significant emotionality, STS can be mitigated. However, if this is not accomplished, individuals may experience



secondary traumatic stress disorder (STSD). If individuals experience STSD, they can remain as victims of the trauma, albeit vicariously, if they cannot assimilate the vicarious trauma effects into their lives (Figley, 1995). Helpers experiencing STSD will continuously seek to overcome the adverse effects so they can be viewed as having survived the experience and not considered victims (Figley, 1995). However, different characteristics can help fight against STSD, which can help prevent it from even occurring and, if need be, to treat it. According to Figley (1995), characteristics such as race, personal competence, an individual's culture, and even prior experience with trauma, including STSR, can help mitigate or even prevent STSD. When individuals experience STSR, the general symptoms include problems in interpersonal relationships that were not there before; recurring memories of what they saw, heard, or experienced; and difficulties with those memories (Figley, 1995).

According to Figley (1999), the experience of secondary traumatic stress (STS) cannot be created but is a natural by-product that is part behavior and part emotion due to individuals learning about how someone else was traumatized. The stress produced comes about because individuals desire to help others who have been traumatized or experienced some kind of suffering, which is inherent in the helping professions (Figley, 1999). Whether it is mental health professionals or LEOs, listening to the stories that survivors tell about their critical incidents can be very harmful, even though they are secondary exposures. Furthermore, some LEO populations can be more negatively affected than others.

Higher STS levels are consistent in those who show a lack of trust with others around them, have lower job satisfaction, and tend to be overprotective of their family members (Bourke & Craun, 2014b). Bourke and Craun surveyed an Internet Crimes Against Children task force, a group of LEOs who work together to capture criminals who exploit children, including those

who produce child pornography. These officers witness traumatic events every single day as a regular part of their jobs. Sometimes these investigators must also interact with the perpetrators of these crimes, even pretending to be children or criminals themselves (Bourke & Craun, 2014b). At times they must also view videos or pictures of exploited children and interview survivors of such abuses (Bourke & Craun, 2014b).

Strong social support is essential in lowering the risk of experiencing STS (Bourke & Craun, 2014a; 2014b). This includes the support from supervisors, which Bourke and Craun (2014b) found to be the most substantial relationship able to lower the risk of high STS. Simultaneously, when individuals deny they are experiencing secondary stress, denial is viewed as a negative coping mechanism; the only negative coping mechanism significantly related to higher scores of STS (Bourke & Craun, 2014b). Also, those individuals who self-reported having to view disturbing media for their job, as well as having to view it frequently, tended to have higher STS scores, and this self-reporting had the highest positive relationship with STS (Bourke & Craun, 2014b). As difficult as it may be for LEOs who investigate crimes against children, there can also be a high degree of pride (Bourke & Craun, 2014b). Even though there were high STS scores in these particular participants, it did not appear to affect their work pride, suggesting that they understood the importance of what they were doing (Bourke & Craun, 2014b).

In a comparison of the United Kingdom (U.K.) and United States (U.S.) child exploitation personnel and STS development, Bourke and Craun (2014a) found that those from the U.K. sample tended to have lower STS scores. However, both groups did reveal that higher STS scores were also associated with greater exposure to child pornography and having more personal difficulty working with the material (Bourke & Craun, 2014a). Other signs that this specialized personnel might be experiencing higher STS were higher tobacco and alcohol use

(Bourke & Craun, 2014a). Coincidentally, when individuals in both groups denied experiencing stress on the job, they also reported higher STS (Bourke & Craun, 2014a). This denial might be another “red flag,” indicating STS, something to look for in other LEOs.

Vicarious traumatization, another name for secondary trauma, can negatively affect individuals as well. Gumani (2017) performed a qualitative study with 17 South African police officers in rural settings, utilizing an unstructured interview format. To qualify as participants, officers had to have been involved in cases that included rape, domestic violence, murder, and road accidents. Each participant in the Gumani study stated their experiences with trauma crimes changed them, not necessarily for the better. Some noted the traumas they investigated challenged how they thought, including morally, even leading them to view themselves negatively because of what another person of their gender had done to another human being (Gumani, 2017). When individuals, such as LEOs, experience vicarious trauma (VT), it can negatively affect different aspects of their lives, including their spirituality, how they view themselves, how they trust or distrust others, or even their sense of worth. Their worldview can be questioned if they have believed that humanity was good when they experience the evil that can sometimes reside in others (Gumani, 2017). These thoughts can sometimes consume LEOs, or other helping professionals, preventing them from moving on from those traumatic events.

At times, the crimes or traumatic events that LEOs come upon are so gruesome or challenge how they think about the world to such a high degree that they can experience psychological turmoil (Gumani, 2017). Traumatic events can even lead LEOs to expect those same types of events to happen to them personally or happen to the general public, and not just to a select few. This can lead LEOs to expect the worst from people and to expect the worst to occur. During or after a traumatic event, LEOs can have different empathic responses to those

events. Some LEOs can see themselves or their family members experiencing the same type of traumatic events. Other times, LEOs may overidentify with a survivor's parental role, if they have children themselves, or with the survivor's gender, particularly if the LEO is a female.

At times, survivors' stories can remind or trigger the memories of LEOs' own experiences, even things that might be happening currently in their lives (Gumani, 2017). These thoughts and/or memories can interfere with the job LEOs are trying to perform at that moment and can continue to interfere after the fact in other situations. Sometimes the traumatic events do not affect LEOs until much later, such as when a court rules a person the LEO arrested is not guilty. This can lead to LEOs questioning what they did, if they did something wrong, or if they missed something (Gumani, 2017). LEOs can then question their abilities as officers and think about how the survivors and/or family members might feel about them because of the acquittal. All of these things can lead to LEOs experiencing vicarious trauma. Vicarious trauma can also lead LEOs to experience difficulties in performing their jobs, such as forgetting to work on a case, not doing their best, or even missing work because of VT (Gumani, 2017). Helpers, such as LEOs, firefighters, and mental health professionals, are more susceptible to STS and VT because of the empathy they have for survivors (Gentry et al., 2018). The problem occurs when those helpers cannot do all they desire for survivors due to circumstances beyond their control (Gentry et al., 2018).

Another condition reported by study participants (Gumani, 2017) was a sense of stupor. This can be seen or felt as numbing, unresponsiveness, apathy in their job, dissociation, and the inability to share their emotions with close others or even acknowledge those feelings to themselves (Gumani, 2017). Gumani stated that VT-related issues had been associated with "bipolar cognitive shifts from self-love to self-hatred, love for others to hatred for others, trust to

mistrust, kind-heartedness to cold-heartedness, normalcy to abnormality, and optimism to pessimism” (p. 436). If STS is left alone, it can progress into more significant problems.

STS and BO can contribute to individuals experiencing CF unless helpers can experience compassion satisfaction, which can alleviate CF (Cocker & Joss, 2016). Like LEOs, when helpers lose or have reduced empathy for those they serve and care for, along with increased and drawn-out stress, CF can occur (Cocker & Joss, 2016). According to Conn and Butterfield (2013), when LEOs see victims who in their minds do not deserve what has happened to them, they can have a difficult time coping with the traumatic event. The same occurred when officers could somehow relate to the victims or knew the victims personally (Conn & Butterfield, 2013). These experiences can lead to STS development because LEOs feel like they are not in control of what is happening. As stated earlier, control is a significant component in whether or not LEOs experience work-related stress. The more LEOs feel out of control in a situation, the more stress they will generally feel. Not only can those situations be more stressful, they can also be harder to cope with after the fact (Conn & Butterfield, 2013). However, LEOs can have an easier time dealing with the outcomes of traumatic events if they can view those events in ways that are not as threatening but are rather more of a test of their knowledge and skill. While in the middle of a traumatic event, LEOs found that if they could concentrate on what they had to do, it helped them to better control how they responded emotionally to the situation at the time (Conn & Butterfield, 2013).

Something that can destroy the worldview of LEOs is the day-in/day-out exposure they have with individuals who do not care about anyone but themselves (Conn & Butterfield, 2013). This exposure to what some might call “evil” can lead to officers developing a callousness towards those they serve, expecting everyone they encounter on the job to lie to them. When

officers see people suffer, and they believe those individuals do not deserve it, it can make exposure to STS more challenging to cope with, leading to more stress in their lives (Conn & Butterfield, 2013). It seems that LEOs need to learn effective ways of dealing with this stress.

Self-care is a coping strategy where individuals purposefully spend time in activities that give them a sense of pleasure and purpose (Conn & Butterfield, 2013). Self-care is a coping strategy that has been encouraged for decades in other service professions, such as nursing (Figley, 1995, 2013). STS not only affects their cognitive selves, it can also affect their spiritual, behavioral, and emotional selves (Conn & Butterfield, 2013). When LEOs believe they have support from significant others and family and friends, it can help them cope with the aftermath of traumatic events. When there is a lack of perceived support it makes dealing with trauma more difficult because they feel they are doing so all on their own (Conn & Butterfield, 2013).

When exposed to traumatic material, whether personally or through hearing or watching others experience trauma, STS has an opening to impact lives in negative ways (Craun et al., 2014). LE organizations need to take STS seriously and find or develop positive coping strategies that officers can utilize to lessen STS's negative impact on their lives. LEOs who utilized negative coping strategies such as tobacco and alcohol use to deal with their STS saw significant increases in their STS scores, including those who dealt with difficult subject matter (Craun et al., 2014). Craun et al. performed a longitudinal study of LEOs and secondary traumatic stress (STS) and discovered it was very stable over time in their participants. This finding suggests that mental health professionals, supervisors, and those affected by STS need to be aware that STS may not be alleviated with just the passage of time. These findings were consistent for those who reported high, medium, low, or even no STS, which also bodes well that those who score low for STS may not have dramatic increases going forward in their lives and

careers as LEOs (Craun et al., 2014). That being said, there are still significant negative effects that accompany STS.

Many different effects can occur when LEOs experience significant levels of stress, including STS, such as the following: reduced motivation; poor work ethic; increased use of sick leave; physical aggressiveness; dissatisfaction with their job; inability to do specific tasks; easily irritated; and the use of negative coping strategies like increased alcohol use (MacEachern et al., 2011). When LEOs succumb to these effects, it can hinder their capabilities on the job. When LEOs are not functioning at their best or do things like use excessive force inappropriately, it does not just affect them. It can affect those they are interacting with and anyone who would happen to see what occurred, either firsthand or via the media, contributing to a perception and reputation that has been tarnished by a few bad examples (MacEachern et al., 2011). Be that as it may, there are ways to mitigate the production of STS.

When LE organizations spend the time, money, and effort to provide adequate training for their employees regarding trauma and stress, it is a win-win situation for the organization, the community, the officers, and their families (MacEachern et al., 2011). It would be beneficial for LE organizations to have policies designed to protect officers, including policies aimed at preventing STS from overwhelming officers, helping all involved be able to recognize the symptoms of STS. Even when LE departments offer services, such as Critical Incident Stress Debriefings (CISD), those services are often not utilized or mandated. This lack of utilization is generally due to the stigma attached to acknowledging there is a cognitive or emotive issue, which is thought to affect possible promotions and how fellow officers view those who use such services (MacEachern et al., 2011). It is vital that when mental health services are offered by LE departments that they make it clear that the use of such services is entirely confidential, which

might increase the chances of officers utilizing them and getting the help they need for themselves and their families (MacEachern et al., 2011).

### **LEOs, PTG, and STS**

When a search was done for LEOs, PTG, and STS, only one article was found. Kunst et al. (2017) researched Dutch police family liaison officers (PFLOs) responsible for informing victims and their families how an investigation was proceeding, for things such as large-scale incidents and capital crimes. They were also responsible for giving those individuals support in practical and emotional contexts (Kunst et al., 2017). The Kunst et al. study looked at how PFLOs can experience secondary posttraumatic growth (SPG), also called vicarious posttraumatic growth (VPTG) and secondary traumatic stress (STS). According to Kunst et al., SPG should not be understood as the opposite of STS because the two conditions can be experienced together.

According to Kunst et al. (2017), STS and SPG share some common factors that affect them, such as when worldviews are shattered or their assumptions about others or themselves are destroyed. Individuals seek to understand the meanings behind the traumas they or others experience. When they are not able to discern those meanings, STS can be the result. When they can discern those meanings, SPG can result (Kunst et al., 2017). Sometimes, individuals can make meaning out of some of the factors but not others, in which case they can experience both STS and SPG simultaneously. According to Kunst et al., some research has shown SPG and STS to be significantly positively correlated.

PFLOs listen to survivors' traumatic stories, which can induce vicarious exposure to such events (Kunst et al., 2017). At the same time, they can also become emotionally connected with those they serve. These interactions have the possibility of developing both SPG and STS. LEOs



in the United States can also function in these same roles. Theoretically, they could also develop STS and SPG. Kunst et al. (2017) were able to find a small association between SPG (also called VPTG) and STS, suggesting there may be additional factors that are moderating the association. One such factor proposed by Kunst et al. is affective personality type. This was based on Kunst's (2011) research, which found that violent criminals who scored high on negative and positive affectivity were able to report high levels of PTG and PTSD. Kunst (2011) also found that self-actualizing individuals who scored high on positive affectivity and low on negative affectivity reported high levels of PTG and low levels of PTSD. Based on these findings, it was suggested by Kunst et al. (2017) that perhaps similar results could be found researching STS in place of PTSD since they share similar symptoms.

### **Summary**

Based on a thorough literature review, there was a lack of research regarding LEOs, religiosity, and VPTG, revealing it is imperative that more research be done in these areas. At the same time, it can be challenging to get LEOs to participate in such research (Velazquez & Hernandez, 2019). Because of this lack of participation by LEOs, any research conducted does not usually have large participation numbers, nor does it have groups that represent different types of populations, making them ungeneralizable to multiple populations of LEOs (Andersen & Papazoglou, 2015). Based on a thorough literature review, a significant amount of research has been done with PTG, and even somewhat with LEOs and PTG. Some research conducted has looked at LEOs and their beliefs regarding religion and/or spirituality. However, a thorough literature review revealed a gap in the existing literature regarding how the religiosity of LEOs might predict their production of VPTG, hence the reason for the current study. Chapter three discusses the methods used in the current research study to explore this research topic further.

### **CHAPTER THREE: METHODS OVERVIEW**

This chapter looks at the design of a nonexperimental study. A bivariate regression analysis was performed to determine if LEOs' religiosity can predict VPTG (hereafter simply called "regression"). The study population was law enforcement officers from a state in the Upper Midwest of the United States. Two existing instruments were used, the PTGI-X and the CRS.

#### **Design**

This study used a nonexperimental design, including a regression, to assess if any predictability could be found between one predictor or independent variable (IV), religiosity, and one naturally occurring outcome, criterion, or dependent variable (DV), vicarious posttraumatic growth (VPTG) (Warner, 2013). This study looked at law enforcement officers (LEOs) and how their interactions with the general population can expose them to direct and indirect trauma and significant life-changing events, and how such exposure can affect them. The research question proposed in chapter one worked well with a quantitative data collection design and looked at the factors of religiosity and VPTG. The IBM Statistical Package for the Social Sciences (SPSS) version 26.0 software package was used for assessing all statistics.

Creswell and Creswell (2017) discuss the different aspects of quantitative research designs and state that the social sciences have used quantitative research for many years. That trend is still popular today. When researchers desire to test theories, they will generally do so through quantitative research methods that allow them to examine how different variables may or may not interact with each other (Creswell & Creswell, 2017). Quantitative research allows for examining or measuring factors while utilizing assessment tools that produce numbered data analyzed by statistical programs (Creswell & Creswell, 2017). Surveys that use instruments that

produce quantitative or numeric data allow researchers to study a small sample of a given population with the hopes of being able to generalize the results to the larger population (Creswell & Creswell, 2017). In this study, both instruments produced quantitative data that utilized Likert-type scales and produced continuous data necessary for regressions (Warner, 2013). Those surveys assessed attitudes or opinions in ways that were non-threatening and confidential (Creswell & Creswell, 2017).

According to Creswell and Creswell (2017), the criteria for a quantitative research design include predetermined methods, statistical interpretation to assess the data, closed-ended questions, standards of reliability and validity, and unbiased approaches. This study used a postpositivist worldview using a quantitative research design that utilized surveys, predetermined approaches, and numeric data. It tested and verified the posttraumatic growth theory. It identified variables studied within a hypothesis and used standards of reliability and validity. This study used statistical procedures and unbiased approaches to assess the data retrieved from the surveys.

A quantitative research design was appropriate because LEOs have a genuine possibility of experiencing VPTG as an indirect result of what they do daily working with the general population (Kang et al., 2018; Manning-Jones et al., 2015; Tedeschi et al., 2018). When LEOs assist individuals who are experiencing or have experienced a traumatic event, or when LEOs experience their own traumatic events, those situations can be foundational to LEOs experiencing VPTG or PTG respectively (Kang et al., 2018; Manning-Jones et al., 2015; Tedeschi et al., 2018). This study utilized a quantitative research method with two existing scales. One scale, the CRS, assessed the religiosity level of LEOs, while the second scale, the PTGI-X, assessed for vicarious posttraumatic growth.

A regression was used as the statistical tool because it allowed for one independent variable and one dependent or criterion variable to be measured (Foltz, 2013; Warner, 2013). A regression was used because it fit best with the variables that were chosen, which included one dependent variable (DV), vicarious posttraumatic growth (VPTG), and one independent variable (IV), religiosity (Foltz, 2013; Warner, 2013). On the other hand, a multiple regression can have one *Y* dependent variable and several *X* independent variables, so it was not the best fit for this study, which included one independent variable (Warner, 2013).

When graphing a regression, researchers need a two-dimensional regression plane allowing for a point for the predictor variable and a point for the outcome variable (Warner, 2013). When there is a good fit, the points should be clustered together in the two-dimensional space (Warner, 2013). The *b* coefficients represent partial slope increases for the *X* predictor variable; for example, where a *b*-point increase in the predicted *Y* score is equal to one unit increase in *X*'s score (Warner, 2013).

One of this regression model's goals was to assess for a partition of variance, the amount of variance found in the *Y* outcome variable based on the *X* predictor variable (Warner, 2013). Researchers want to know what proportion of the *Y* outcome variable can be predicted by the *X* variable (Foltz, 2013; Warner, 2013). Researchers also want to know what proportion of the *Y* outcome variable cannot be predicted by the *X* predictor variable (Warner, 2013). Overall, researchers hope to account for 100% of the total variance of the *Y* outcome variable. In the results section, the percentage of variance the predictor variable was responsible for in the *Y* outcome variable will be explained (Warner, 2013).

For a regression to produce what researchers seek to find, the IV needs to be correlated with the DV (Foltz, 2013; Warner, 2013). Before running the regression, some prep-work was

completed, such as preliminary data screening and assumption tests, and then the regression was run as the last step (Foltz, 2013; Warner, 2013). According to Warner (2013), the preliminary data screening for a bivariate regression is the same for a Pearson's  $r$ . A histogram was performed to determine if  $X$  and  $Y$  scores were normally or near normally distributed (Warner, 2013). A bivariate scatter plot was completed to check if the  $X$  and  $Y$  scores were linearly related, to check for outliers, and to determine if there was uniform variance between the variables (Warner, 2013).

Other statistical analyses were considered before choosing a regression. An analysis of variance (ANOVA) was not the appropriate statistical tool for the current study because an ANOVA looks for the variance between more than one study or treatment group (Warner, 2013). It seeks to compare the Means of a quantitative outcome variable across two or more groups. The current study only had one treatment group. A two-way ANOVA was not the appropriate statistical tool because it simultaneously tests for the effect of two independent variables on one dependent variable (Warner, 2013). The current study only had one independent variable. A two-way ANOVA requires two categorical or unchanging independent variables, like male or female (Warner, 2013). The current study's independent variable was not categorical and able to change.

A multivariate analysis of variance (MANOVA) was not the appropriate statistical tool for the current study because it requires one categorical, unchanging, independent variable, and two or more continuous dependent variables (Warner, 2013). A two-way MANOVA requires two or more categorical independent variables (Warner, 2013), making it inappropriate for the current study. Both of these types of MANOVA were not appropriate because the current study had one continuous independent variable and only one continuous dependent variable.

An analysis of covariance (ANCOVA) or a multivariate analysis of covariance (MANCOVA) were not appropriate for the current study because they are used when a researcher wants to statistically control for the possible effects of a confounding variable, called a covariate (Warner, 2013). These can be one-way, two-way, or multivariate (MANCOVA). The current study included no such variables. Regression was determined to be the best fit for analyzing the one continuous independent variable's predictability of one continuous dependent variable.

In regards to statistical power, this study used .15 for a medium effect size and  $\alpha = .05$ , with a 95% confidence interval. This was based on a statistical software tool called G\*Power (Erdfelder et al., 1996), which was used to calculate statistical power. According to G\*Power, using a bivariate, single predictor variable and a 0.15 effect size, along with  $\alpha = .05$ , with a 95% confidence interval, to reach statistical power significant enough to avoid Type 1 and Type II errors, the suggested sample size was 89 participants. This study utilized 88 participants.

The possible effect on the outcome or dependent variable, VPTG, by the predictor or independent variable, religiosity, was examined by the following research question, as well as alternate and null hypotheses.

### **Research Question**

**RQ1:** Does law enforcement officers' religiosity predict vicarious posttraumatic growth?

### **Hypotheses**

The alternate hypothesis for this study was:

**Ha1:** There will be a significant prediction of law enforcement officers' vicarious posttraumatic growth by religiosity.

The null hypothesis for this study was:

**H<sub>0</sub>1:** There will be no significant prediction of law enforcement officers' vicarious posttraumatic growth by religiosity.

### **Participants and Setting**

Law enforcement officers (LEOs) were the target population of this research study. Because this study focused on LEOs, officers from a state in the Upper Midwest were approached to be participants. This researcher made a formal request to the state president of the fraternal order of police (FOP), and permission was granted to contact each officer in the state via emails that included a written explanation of what the research would be about and that it was entirely voluntary to participate. All emails were initially sent to the FOP state president, who then forwarded the emails to the local FOP presidents instructing them to forward the emails to the local FOP members. This process was completed a total of three different times. After those three initial inquiries were completed, the number of needed participants was still not met. At this point, the researcher reached out to different chiefs of police and sheriffs' departments through the local chiefs of police and chief deputies of the sheriffs' departments.

Participants in this study were drawn from a convenience sample of full-time or retired LE members from an Upper Midwest state. They included a mixture of males and females, with most officers completing the survey being male. Criteria for inclusion included those who were current full-time or retired LEOs, including the following: police patrol officers, detectives, sergeants, lieutenants, captains, chiefs of police, and other police ranks; local sheriffs and sheriff's deputies of all ranks; and state highway patrol officers of all ranks. Inclusion criteria included that they must have experienced at least one on-the-job interaction with members of the general public who had experienced a traumatic or significant life-changing event. Restrictions on participation included those LEOs who had not worked with general public members who had

experienced traumatic or significant life-changing events. There were no restrictions on participation based on age, gender, rank, education level, or years of experience.

### **Instrumentation**

Two instruments for assessment were used for this study. The first instrument, the Posttraumatic Growth Inventory–Expanded version (PTGI-X), was used to measure the dependent variable, vicarious posttraumatic growth. The second instrument, the Centrality of Religiosity Scale (CRS), was used to measure religiosity, the independent variable. Permission was given to use the PTGI-X in written form by its creator, Dr. Tedeschi (R. Tedeschi, personal communication, May 29, 2018). Permission was given to use the CRS in written form by its creator, Dr. Huber (S. Huber, personal communication, September 29, 2019).

#### **The PTGI-X**

The Posttraumatic Growth Inventory–Expanded (PTGI-X), a 25-item expanded version of the original 1996 PTGI, is an assessment tool that uses a six-point Likert scale to assess individuals for posttraumatic growth (Tedeschi et al., 2017; Tedeschi et al., 2018). The possible answers range from 0–“I did not experience this change as a result of my crisis,” to 5–“I experienced this change to a very great degree as a result of my crisis” (Tedeschi et al., 2018, p. 92). The original factors of the PTGI (Tedeschi & Calhoun, 1996) were as follows: factor 1–relating to others; factor 2–new possibilities; factor 3–personal strength; factor 4–spiritual change; factor 5–appreciation of life. The PTGI-X is the most current version of the PTGI, and it adds “existential” to factor 4, making it “spiritual-existential change” (Tedeschi et al., 2017). This change occurred because many people worldwide do not subscribe to any particular religion or spirituality, yet can experience change in how they view the world and have philosophical questions (Tedeschi et al., 2017; Tedeschi et al., 2018). The PTGI-X was created to emphasize



the spirituality and existential aspects of individuals (Tedeschi et al., 2018). This scale shows or reveals different perspectives of existential PTG experiences versus spiritual experiences because different cultures can view spirituality and existentialism differently (Tedeschi et al., 2018).

#### *Reliability and Validity of the PTGI*

The PTGI is the most common assessment tool utilized, and to date, it has been the most rigorously researched assessment tool for PTG (Brightman, 2015; Tedeschi et al., 2018). When the PTGI was originally created, Tedeschi and Calhoun (1996) found high internal consistency,  $\alpha = .90$ . This type of result has been seen consistently since that time in numerous other research projects (Tedeschi et al., 2018; Silva et al., 2018), and with different populations (Brunet et al., 2010; Moore et al., 2011; Morris et al., 2005). The PTGI-X is now generalizable to more populations than the original PTGI due to the addition of the four items assessing spirituality and existential aspects of individuals (Tedeschi et al., 2018). Some individuals may not be spiritual or religious. Still, they may feel a connection to existential changes due to traumatic events, and the PTGI-X allows for them to report such changes in this area of their lives (Tedeschi et al., 2018). The original spiritual change factor showed fairly high internal consistency ( $\alpha = .83$ ); however, the new spiritual-existential change factor has shown even higher internal consistency, ( $\alpha = .91$ ) (Tedeschi et al., 2018). Even in the new PTGI-X, and its four additional items, there is still a correlation between them and the original spiritual change items. The spiritual-existential change items show high internal reliability (Tedeschi et al., 2017). The five-factor structure of the newly expanded PTGI-X was also supported by a confirmatory factor analysis (Tedeschi et al., 2017).

The PTGI in all of its versions is the most widely used assessment tool for VPTG (Abel et al., 2014; Deaton, 2020; Manning-Jones et al., 2015; Tedeschi et al., 2018). At the beginning

of this study, there were no current assessment tools to distinguish PTG from VPTG or any assessment tools that only measured VPTG. However, Abel et al. (2014) found that a factor analysis of the PTGI was able to show a two-factor solution that included personal growth and changes in worldview, which would be partially consistent with the original three-factor growth model proposed by Tedeschi and Calhoun (1996). Those three factors included changes in perception about oneself, interpersonal relationships, and changes in one's personal life philosophy (Tedeschi & Calhoun, 1996, p. 456). In the two-factor solution found by Abel et al., the last two factors were combined into the single factor of changes in worldview. Abel et al. found this two-factor solution to be consistent with the work of previous studies by Janoff-Bulman (2006; Janoff-Bulman & Yopyk, 2004). This suggests that a specific measure for VPTG would be warranted based on the results of their study, even though the current PTG models help our understanding of what VPTG looks like.

The original PTGI has this statement at the beginning of the assessment: "Indicate for each of the statements below the degree to which this change occurred in your life as a result of your crisis, using the following scale" (Tedeschi & Calhoun, 1996, p. 458-459). In the material sent to this researcher by Tedeschi that he sends to all researchers who request permission to use the PTGI assessment tools (R. Tedeschi, personal communication, May 29, 2018), this bracketed statement was also added after the word "crisis:" [or researcher inserts specific descriptor here]. This statement allows researchers quite a bit of freedom to change or adjust the statement to best reflect what they are seeking to study. In the case of the current study, this was the statement used: "Indicate for each of the statements below the degree to which this change occurred in your life as a result of you working with individuals who had experienced a traumatic or life-changing event, using the following scale." This statement allowed for research participants to use the

PTGI-X to measure their VPTG due to vicarious trauma exposure. This manipulation of the opening statement to the PTGI-X was consistent with how the original PTGI has been used since its inception (Tedeschi & Calhoun, 1996; Tedeschi et al., 2017; Tedeschi et al., 2018). Dr. Tedeschi was contacted to confirm whether or not he maintained that the PTGI-X could be used to measure VPTG, and he confirmed that it could (R. Tedeschi, personal communication, October 30, 2020).

A doctoral student (Deaton, 2020) recently attempted to create a specific measuring tool for VPTG for her dissertation study, to be used with helping professionals (i.e., counselors, nurses, social workers). However, the attempt was a poor model fit regarding the study's first research question, leading Deaton to admit that the Vicarious Posttraumatic Growth Inventory (VPTGI) needs "significant revisions to identify the latent variables not presented in the items" (p. 129). Even if Deaton had been able to produce and validate the VPTGI, it was specially created to work with helping professionals in the medical and mental health fields and not LEOs or even the general populace, making it an ineffectual tool for the current study. Therefore, the only current validated assessment tool being utilized by researchers to measure VPTG in the general population is the PTGI (Tedeschi et al., 2018), the one used in the current study.

#### *Scoring the PTGI*

To score the PTGI and other PTGI measures, this researcher simply needed to add the different item responses together (Tedeschi et al., 2018). At this point in time, there are no established cutoffs for any of the PTGI scales. This means that there are no established scores to indicate if individuals have reported low levels of PTG, medium levels of PTG, or high levels of PTG. At the same time, the lowest possible score is 0, and the highest possible score is 125. Therefore, researchers are given a certain amount of subjectivity in how they state levels of PTG

in their participants. Depending on what is being researched, the degree that individuals self-report PTG can be estimated by looking at the anchors (the 0–5 responses) and then pairing the anchors with the mean item scores (Tedeschi et al., 2018). Participants do not need to have a high combined score to be classified as experiencing high PTG (Tedeschi et al., 2017; Tedeschi et al., 2018). Individuals can experience high levels of PTG on even one factor, and still be classified as experiencing PTG, at least for that one factor (Tedeschi & Calhoun, 1996; Tedeschi et al., 2017; Tedeschi et al., 2018). Permission to use the PTGI-X was granted by Richard G. Tedeschi, one of the originators of the term “posttraumatic growth” and co-creator of the different PTGI assessment tools (R. Tedeschi, personal communication, May 29, 2018).

### **The Centrality of Religiosity Scale**

Huber and Huber (2012) created the Centrality of Religiosity Scale (CRS) to assess to what extent individuals do or do not utilize religion/spirituality/existentialism in their lives. The CRS’s five core theoretical dimensions are as follows: private practice, public practice, ideology, intellectual, and religious experience (Huber & Huber, 2012). The higher the CRS scores, the more it is believed that spiritual beliefs are central to who a person is in their religious life (Huber & Huber, 2012). The CRS measures from no religious or spiritual constructs (non-religious) to highly-religious or spiritual constructs within individuals (highly-religious). The CRS has been utilized with over 100,000 participants in 25 countries, used in over 100 research studies encompassing psychology, sociology of religion, and religious studies (Huber & Huber, 2012). Brightman (2015) used the CRS to discover how individuals’ religious centrality may influence their traumatic life experiences.

Most researchers use single-item scales to ask participants how important religion is to them or how religious individuals believe they are, both of which are not reliable and not well

defined, not to mention hard or impossible to validate consistently. This is one reason for the CRS. The CRS asks for participants to rate the general intensities they have of different religious dimensions that have been theoretically defined and represent religious life (Huber & Huber, 2012). The CRS then takes those responses and measures the centrality of religiosity for each participant (Huber & Huber, 2012).

The CRS can bridge the sometimes-conflictual ideas of religiosity between psychology and sociology. With this in mind, the five core dimensions can have dual functions in a sense. According to Huber and Huber (2012), the dimensions of ideology and intellectualism both cover the psychological factor of thought. Also, the private and public practice dimensions cover the psychological factor of action. Simultaneously, the experimental dimension can cover the psychological factors of emotion, perception, and experience. This concept hopefully satisfies psychology and sociology in regards to religiosity (Huber & Huber, 2012). The CRS's five dimensions help express or represent all religious life for individuals, making the CRS a great tool that can be utilized with many different religious and/or non-religious populations (Huber & Huber, 2012).

#### *Construct Validity of the CRS*

Individuals with higher scores tend to view religiosity as a central part of who they are as individuals, something Huber and Huber call a central religious construct system (2012). This has been confirmed empirically. High correlations have been found between self-reports of the importance of religious identity and the CRS, which have at times been viewed as one scale for religiosity. In the international *Religion Monitor*, the amount of correlation was 0.73, and in a student sample the correlation amount was 0.83 (Huber & Huber, 2012).

High correlations were found regarding how important individuals viewed religion for their daily life and the CRS, with the international *Religion Monitor* reporting a correlation amount of 0.76, and a student sample reporting a correlation amount of 0.78 (Huber & Huber, 2012). The CRS-15 has 15 items and has the highest accuracy and reliability (Huber & Huber, 2012), which is why it was chosen for this study. Three different studies assessed the full 15-item scale's reliability with results ranging on the full scale from 0.92 to 0.96, and results ranging on the individual dimensions from 0.80 to 0.93 (Huber & Huber, 2012, p. 716).

The CRS scoring is somewhat involved and must be done with a statistical program such as SPSS or Excel. Two different variables need to be recoded, and then the centrality index is computed. After that, the centrality index is categorized. The information for these processes was given to the researcher by Dr. Huber. Some of the responses are on a Likert scale, while others, such as "How often do you pray?" and "How often do you take part in religious services?" are not. There are three main categories for differentiating religiosity within the CRS, with three thresholds that are met for each one, as found in Huber and Huber (2012); "1.0 to 2.0: non-religious, 2.1 to 3.9: religious, 4.0 to 5.0: highly-religious" (p. 720). According to Huber and Huber (2012), individuals who fall into the non-religious category do not display "any religious construct system" (p. 715). Huber and Huber state that those who fall into the "religious" category, in-between non-religious and highly-religious, may have religious constructs that can be observed on occasion, but those constructs are rarely seen and are most likely not very intense or influential in their everyday lives. Those in the highly-religious category will most likely exhibit religious behavior even outside of religious activities, meaning that their religiosity may regulate or have sway over all that they do, not just in their religious private or public practices. According to Huber and Huber, those in the highly-religious category are different from those in

the first two categories in at least two ways. First, the highly-religious have much more differentiated “personal religious constructs” (p. 715). Second, their religious contents, such as ideas of and forgiveness both from God and towards others, are generally much higher. The CRS can assess whether individuals are active or not in five core theoretical dimensions of spiritual beliefs, such as private practice, public practice, ideology, intellectual, and religious experience (Huber & Huber, 2012). Permission was given to combine the non-religious with the religious group for this study, thereby creating two contrast groups, non-religious and highly-religious, to differentiate between those who were highly active in their religiosity versus those who were not very active or not at all active in their religiosity (S. Huber, personal communication, January 16, 2020). Permission was given to use the CRS by its creator, Dr. Stefan Huber (S. Huber, personal communication, September 29, 2019).

### **Demographic Information**

In addition to the two pre-existing scales, questions were also used to gather individual demographic information. Questions regarding religion, age, gender, LEO branch, rank or designation, and years of service were used to determine if said factors affected the results of the data collected in some way. Some of the demographic questions were also used to determine if participants met the criteria to be included in the current study, such as if they were an active, part-time, disabled, or retired LEO, and if they had worked with at least one member of the general population who had experienced a traumatic or significant life-changing event.

### **Procedures**

Upon approval of the dissertation proposal, the consent of the Internal Review Board (IRB) of Liberty University was sought and granted. After IRB approval, officers of an Upper Midwest state voluntarily participated in this research project. An initial email with the research

flyer containing information about the research was sent to the president of the state fraternal order of police (FOP), who then forwarded the email to the local FOP presidents. They then forwarded the email to their local FOP members, who had to state they were current, retired, or former LEOs. This was the process for each email to the FOP membership, with the researcher sending an email to the state FOP president and then the state president forwarding each email to the local presidents. They then forwarded each email to the local members. The next email contained the recruitment and consent letters with a link to the survey, including the fact that participation was completely confidential and voluntary. Participants were informed they could withdraw at any time by simply exiting out of the questionnaire website.

This format was used on three separate occasions, with very minimal participation from the over 1,200 FOP membership in the state. After about three months, permission was given to directly contact the sheriffs and chiefs of police in the state, asking them to forward the recruitment and consent letters to their departments. This produced much greater results. After doing this on two different occasions, the number ( $N = 88$ ) of participants was reached.

Participants were told that the research would be about how officers work with those who have experienced traumatic or significant life-changing events and how the results might contribute to the existing knowledge base. The email stated that as long as officers have witnessed, or listened to, the traumatic or life-changing events that others have experienced, they were to be included in the study. If they had not witnessed or listened to others' traumatic or significant life-changing events, they should be excluded and not participate in the study. The email stated that the length of the survey would take approximately 15–20 minutes to complete. The actual average time spent on the survey was less than seven minutes, with an average completion rate of 87%. The email included a hyperlink to take the survey online via Survey



Monkey. Permission was also given by the state FOP president to post the research flyer on the state FOP Facebook page.

There were minimal risks in this study. It did not ask LEOs to remember personally experienced traumatic or significant life-changing events, but rather their experience working with individuals who had such experiences. Potential risks might have involved the triggering of memories that included themselves or others experiencing traumatic or life-changing events. If participants experienced undue emotional discomfort while participating in this study, they were encouraged to reach out to their local peer-support group, chaplain, and/or department psychologist. They were also encouraged to take advantage of their Employee Assistance Program. If needed, they could have clicked on the link provided to the *Psychology Today* website, where they could put in their zip code and be directed to a mental health professional in their area. The link was <https://www.psychologytoday.com/us>.

After the first recruitment email was sent, a second and third recruitment email were sent out approximately two–four weeks apart, encouraging those who had not participated yet to fill out the survey. The timing of the follow-up emails was dependent upon when the FOP president and local presidents sent them. A cut-off date to receive survey submissions was initially set at three months after the initial survey email had been sent. However, as already stated, not enough participants were reached at the end of the three months, requiring additional recruitment directly through sheriffs and chiefs of police. Having the state FOP president and local presidents and then sheriffs and police chiefs send out the emails helped maintain the participants' confidentiality. The first screen of the survey stated that participants would be giving their consent to participate by submitting the survey. Retrieved data is being stored on this researcher's personal computer that is password-protected, along with a passcode-protected USB

drive. The information will be kept for three years and will then be deleted. No paper copies will be made or kept of the collected data.

Once the  $N = 88$  participants was reached after repeated contacts with LEOs to participate, and knowing the difficulty of getting this population to participate in research (Velazquez & Hernandez, 2019), after four months and coming within one participant of the recommended number, the survey was closed. The results were downloaded and entered into the IBM SPSS version 26.0. Descriptive statistics and frequencies were calculated for all demographic variables (i.e., religion, gender, age, rank, and years of service), and survey measures were run in SPSS. A regression analysis was conducted after the prep-work and assumptions were met (Warner, 2013). Religiosity was the IV or predictor variable, and vicarious posttraumatic growth (VPTG) was the DV or outcome variable.

### **Data Analysis**

SPSS was used to process and run the different statistical measures, including the regression. This study included one predictor or independent variable (IV), religiosity, and one outcome or dependent variable (DV), vicarious posttraumatic growth (VPTG). Once all prep-work and assumptions were met as mentioned in the Design part of this study, a regression was conducted to determine to what degree the IV could predict any of the variance found in the DV and what percentage of the variance the IV contributed.

Some pre-steps needed to be completed before running the regression. Screening of each individual variable was conducted, as well as bivariate data screening for all feasible combinations of variables before performing any data analysis because it is common for raw data to have missing values, inconsistent responses, outliers, nonnormal distributions, nonlinear relationships with quantitative variables, and errors in data entry or coding (Warner, 2013). A

bivariate correlation procedure was run in SPSS, and pairwise deletion was selected to determine if there were any correlations, allowing SPSS to use data from all participants who did not have any missing values for particular sets of variables (Warner, 2013, p. 134). For this study, only participants who answered every question were used, helping to eliminate data collection errors and missing data.

Summary statistics can be found in several different ways. A table of frequencies was run to determine the number of participants for each variable and the number of participants in each group (Warner, 2013). This helped determine if some groups were too small for proper analysis or if some groups needed to be combined to create larger groups (Warner, 2013). Bar charts were run for categorical variables such as gender (Warner, 2013, p. 138). Bar charts help detect invalid scores. A histogram was run to determine the shape of the distribution of scores to see if the scores were normally distributed (Warner, 2013). Boxplots were run to determine the dispersion of scores as well as the central tendency (Warner, 2013). Descriptive statistics for each variable were run to test for skewness, kurtosis, variance, standard deviation, minimum and maximum dispersion, and mean (Warner, 2013, p. 150).

According to Warner (2013), there are three assumptions for a regression that includes one predictor variable that should not be violated. The first assumption is that the *Y* outcome variable should have scores that are reasonably normally distributed and quantitative (Warner, 2013). This was determined by viewing the univariate distribution of the scores on the *Y* axis (Warner, 2013). A second assumption for a regression model is that the variables need to have a linear relationship (Foltz, 2013; Warner, 2013). A scatterplot was run to assess for linearity (Foltz, 2013; Warner, 2013). The scatterplot also looked for any severe bivariate outliers that might have skewed the results (Warner, 2013). The third and final assumption for regression is

making sure that the variance in the *Y* outcome variable scores is homogenous across the *X* predictor variable (Warner, 2013). This homogenous variance assumption was assessed by utilizing a bivariate scatterplot, looking at the *Y* scores, and seeing how they varied across the *X* level (Warner, 2013).

As mentioned previously in this chapter, a bivariate regression was the most appropriate research statistic because the purpose of the research was to assess for effect and/or predictability by one IV on one DV (Foltz, 2013; Warner, 2013). When the regression was run, it created a multiple *R* which is the same as a correlation, and an *R* squared, which is the proportion or percentage of variation in the DV that was accounted for by the IV (Foltz, 2013; Warner, 2013). The regression also created a model summary that includes an *R*, a regular *R*-squared, and an adjusted *R*-squared (Foltz, 2013; Frost, n.d.). According to Frost (n.d.), researchers want a high *R*-squared because this is indicative of a good correlation between the IV and the DV. A *p*-value was also created by the regression, which helps to either reject or not reject the null and alternate hypotheses, to avoid Type I and Type II errors.

### Summary

The purpose of the current study was to examine whether or not LEOs' religiosity is able to predict VPTG. The purpose was to expand on the current knowledge base regarding LEOs religiosity's connection with VPTG. Two existing assessment tools were used to measure religiosity (CRS) and VPTG (PTGI-X). The current study's survey package included an invitation letter, an informed consent letter, a demographic questionnaire, and two psychological instruments. A bivariate regression was determined to be the most appropriate statistical tool to determine if a single independent variable (religiosity) could predict a single criterion or dependent variable (VPTG). A bivariate regression was run to determine the relationship

between the variables and to accomplish the statistical analysis of the current study, after determining that all assumptions for a regression had been met. Chapter four discusses the results of this bivariate regression analysis.

## **CHAPTER FOUR: FINDINGS**

### **Overview**

This chapter discusses a quantitative study that examined the predictability of law enforcement officers' (LEOs) religiosity and their subsequent ability to produce vicarious posttraumatic growth (VPTG). A convenience sample of 101 LEOs was surveyed. Of that number (*N*), 88 completed the full survey and were included in the statistical analysis. One research question was reviewed, along with alternate and null hypotheses. Descriptive statistics, data screening procedures, and the assumptions for bivariate regression analysis are discussed, along with the statistical methods used and inferences drawn from the results.

### **Descriptive Statistics**

Eighty-eight LEOs from an Upper Midwest state completed the entire survey and were used in the statistical analysis. Of the participants, 75 were active LEOs, and 13 were retired LEOs. When asked about their religious affiliation, 80 participants identified with Christianity, six identified with none, one identified with Judaism, and one identified with other. The majority of the respondents (85.2%) were active in law enforcement (LE). Christianity (90.9%) was overwhelmingly the largest religious group identified. As expected, male participants (85.2%) outnumbered female participants (14.8%), as the literature shows most LEOs tend to be male (Chopko, 2008; Chopko & Schwartz, 2012; Chopko & Schwartz, 2013; Chopko et al., 2013; Chopko et al., 2018). In regards to ethnicity, those identifying as White (96.6%) were the vast majority. This statistic would also reflect the general population in the Upper Midwest, the area used in this study. The branches of law enforcement represented were Police (56.8%) and Sheriff (42.0%), along with State Highway Patrol (1.1 %). In Table 1, the most numerous age range represented were those 31–40, and the largest group for years in LE was 21+ years. This study's

demographics reveal that disproportionately respondents were White, male, Christian, and in LE for 21 or more years.

**Table 1**

*Frequencies for study variables Age & Years in Law Enforcement*

<i>Age</i>		
Range	Frequency	%
18-30	13	14.8
31-40	26	29.5
41-50	21	23.9
51-64	24	27.3
65 +	4	4.5

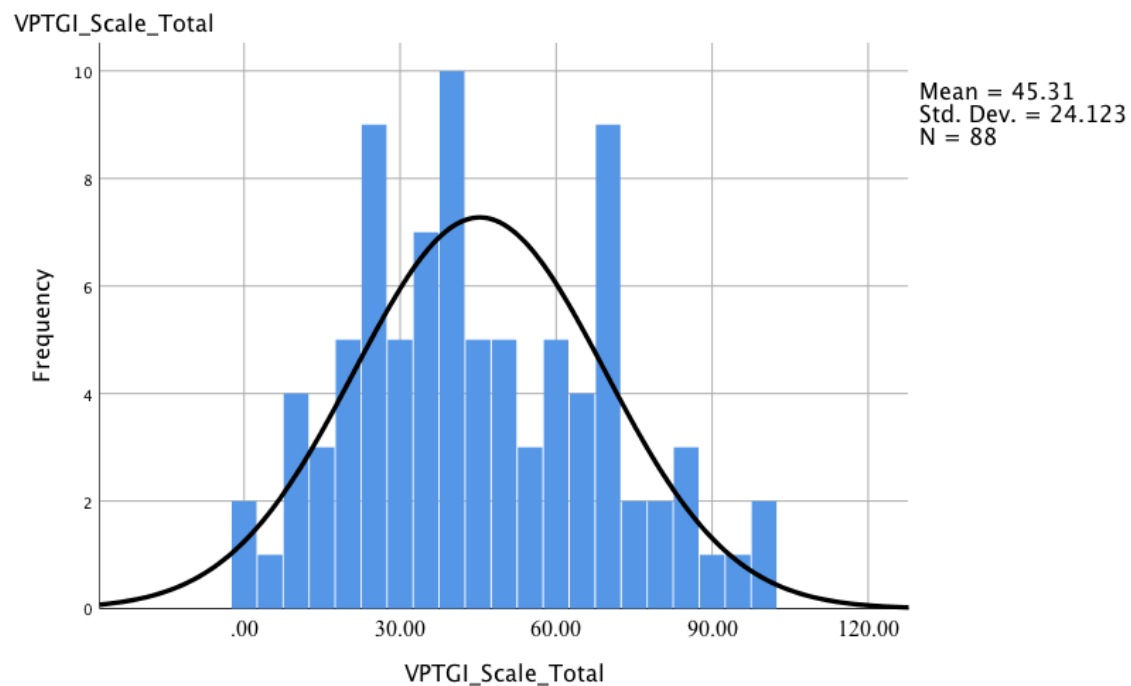
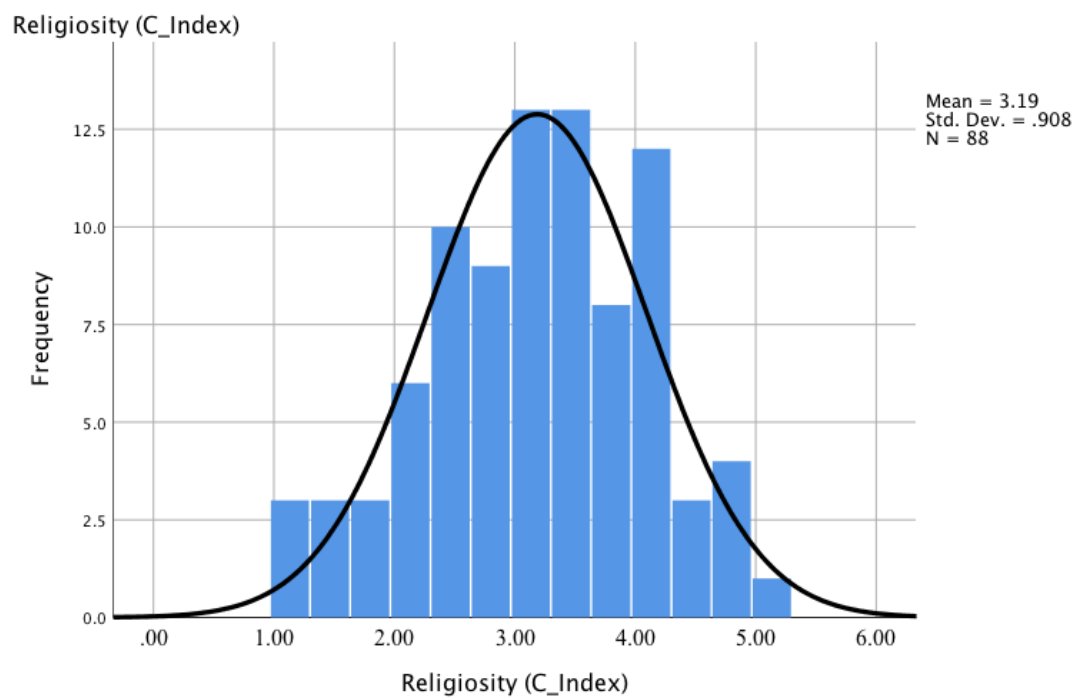
  

<i>Years in Law Enforcement</i>		
Range	Frequency	%
1-5 years	11	12.5
6-10 years	14	15.9
11-15 years	13	14.8
16-20 years	12	13.6
21 + years	38	43.2

No extreme scores were discovered using boxplots for each variable. No missing data was found. Normal distributions were found across all the study variables once descriptive and inferential statistical testing was conducted on the number ( $N$ ) of 88 participants. In Table 2, the fundamental descriptive statistical analysis of the sample showed that VPTG (PTGI-X) had a mean ( $M$ ) of 45.31 with a standard deviation ( $SD$ ) of 24.12, while religiosity (C\_Index; CRS) had a  $M$  of 3.2 and a  $SD$  of .91, which can be seen in Figures 1 and 2 respectively.

**Figure 1**

*VPTG Histogram*

**Figure 2***Religiosity Histogram*



The PTGI-X (Results labeled VPTGI\_Scale in Tables 2 & 3 and Figures 1 & 3 because this study assessed for vicarious posttraumatic growth) is an assessment instrument that consists of 25 questions measured on a six-point Likert scale. The lowest possible score was zero, and the highest possible score was 125. This study's highest score was 100, indicating the individual reported experiencing a high level of VPTG. The lowest score for this study was zero, indicating the individual reported experiencing no VPTG. The *M* of 45.31 suggests that, on average, participants experienced a medium level of VPTG, with a 24.12 *SD* from the mean.

The Centrality of Religiosity Scale (CRS or C\_Index) is an assessment instrument that consists of 15 questions. The scale assessed to what extent individuals did or did not experience or utilize religiosity in their daily lives and placed participants into three separate groups on a scale from 1.0 to 5.0: 1.0 to 2.0 = non-religious, 2.1 to 3.9 = religious, and 4.0 to 5.0 = highly-religious (Huber & Huber, 2012). The lowest possible score was one, meaning that individuals were non-religious. The highest possible score was five, meaning the individuals were highly-religious. For this study, the first two groups were combined into one group. In other words, any score of 3.96 or lower placed individuals into group one, the non-religious group, and any score between 4.0 and 5.0 placed them into group two, the highly-religious group. The *M* of 3.2 indicated that, on average, the participants reported experiencing medium religiosity, with a .91 *SD* from the mean.

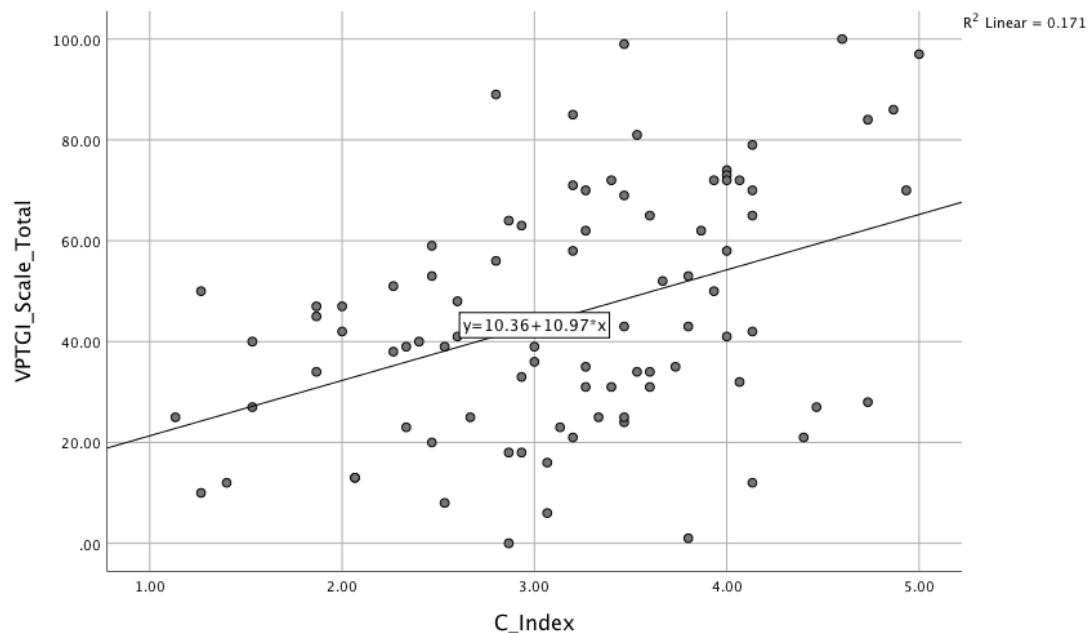
### **Assumption Tests**

SPSS tested for accuracy, missing data, outliers, and for all assumptions to be met so that a regression could be performed, as well as checked for normality, linearity, homogeneity, and homoscedasticity. There were no typing errors or input errors. There were no missing data. *Z* Scores were formulated to see if any results were above three or minus three, to detect any

outliers. All Z Scores were less than three or minus three, indicating no outliers. Histograms and scatterplots were created for each variable, with all variables showing reasonably normal distributions and linearity, meeting normality and linearity criteria. As seen previously, Figures 1 and 2 are histograms of VPTG and religiosity, respectively. The histograms show reasonably normally distributed scores across both variables. For the regression, a scatterplot, as seen in Figure 3, was run for religiosity (C\_Index) and VPTG. The results showed a reasonably normal distribution shape, meeting the criteria for homogeneity. Figure 3 also shows a linear relationship, with no significant outliers, along with increases in VPTG predicted by increases in religiosity.

**Figure 3**

*Regression Scatterplot*



The skewness and kurtosis statistics can be seen in Table 2. Skewness and kurtosis help determine if scores are normally distributed. To determine if skewness is statistically significant, researchers take the skewness statistic and divide it by the standard error of skewness. If the ratio

is greater than 1.96 or -1.96, one can say the effect is statistically significant ( $p < .05$ ). Based on these results no scales showed statistically significant skewness. To determine if kurtosis is statistically significant, researchers take the kurtosis statistic and divide it using kurtosis's standard error. If the ratio is great than 1.96 or -1.96, one can say the effect is statistically significant ( $p < .05$ ). Based on the results in Table 2, none of the scales showed statistically significant kurtosis. Therefore, it can be stated that the assumptions for a regression (normality, linearity, and homogeneity) were met.

**Table 2***Descriptive Statistics for Study Variables, Including Subscales*

<i>Descriptive Statistics for Study Variables, Including Subscales</i>									
Main Scales	Minimum Statistic	Maximum Statistic	Mean Statistic	Mean Std. Error	Standard Deviation	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
VPTGI Total	0	100	45.310	2.572	24.122	0.302	0.257	-0.638	0.508
Religiosity (C_Index)	1.130	5	3.190	0.097	0.908	-0.239	0.257	-0.426	0.508
Subscales									
PTGI - Relating to Others	0	32	12.320	0.782	7.340	0.381	0.257	-0.392	0.508
PTGI - New Possibilities	0	23	8.300	0.615	5.770	0.374	0.257	-0.790	0.508
PTGI - Personal Strength	0	30	10.100	0.526	4.940	-0.279	0.257	-0.710	0.508
PTGI - Spiritual/Exist. Change	0	27	9.020	0.750	7.020	0.742	0.257	-0.333	0.508
PTGI - Appreciation of Life	0	15	7.940	0.410	3.820	-0.273	0.257	-0.763	0.508
Religiosity 2 & 3 Categories									
Two Categories *	1.000	3.000	1.450	0.090	0.843	1.324	0.257	-0.253	0.508
Three Categories**	1.000	3.000	2.100	0.062	0.588	-0.019	0.257	-0.094	0.508

\* Non-religious (comb. w/Religious) &amp; Highly Religious

\*\* Non-religious, Religious, and Highly Religious

Also, from Table 3, one can see that the two variables, VPTG and religiosity, were significantly correlated as the Sig. (2-tailed) was  $p < .001$ . Normal Q-Q Plots were run for each variable, showing a linear relationship between the observed values and expected normal, with only the spiritual/existential change showing a slight skewness. The Pearson Correlation showed a positive correlation between VPTG and religiosity, with  $r = .413$ , which is considered a medium-sized relationship.

**Table 3**

<i>Correlation Analysis Results</i>			
		VPTGI-X Total Scale	Religiosity (C_Index)
VPTGI-X Total scale	Pearson Correlation	1.000	0.413*
	Sig. (2-tailed)		0.000
	N	88	88
Religiosity (C_Index)	Pearson Correlation	.413*	1
	Sig. (2-tailed)	0.000	
	N	88	88

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

## Results

### Hypotheses

**RQ1:** Does law enforcement officers' religiosity predict vicarious posttraumatic growth?

The alternate hypothesis for this study was:

**Ha1:** There will be a significant prediction of law enforcement officers' vicarious posttraumatic growth by religiosity.

The null hypothesis for this study was:

**H<sub>0</sub>1:** There will be no significant prediction of law enforcement officers' vicarious posttraumatic growth by religiosity.

A correlation determined there was a significant relationship between LEOs religiosity and their production of VPTG. A simple regression determined any predictability of scores on LEOs VPTG from their religiosity. The VPTG of LEOs was measured using the Posttraumatic Growth Inventory–Expanded (PTGI-X). The religiosity of LEOs was measured using the Centrality of Religiosity Scale (CRS or C\_Index). The researcher tested one research question, one alternate hypothesis, and one null hypothesis.

A regression was performed on the data of 88 LEOs evaluating if VPTG was predictable from religiosity. The predictor variable was religiosity, and the dependent variable was VPTG.

The correlation table is seen in Table 3. The strength of the association was considered medium ( $r = .413$ ), and the correlation coefficient was statistically significant ( $p < .001$ ).

A Normal P-P plot was performed, and the results showed a linear relationship between religiosity and VPTG. As seen in Figure 3, the relationship between  $X$  and  $Y$  was positive and reasonably linear with no bivariate outliers, with reasonably normally distributed scores, showing good homogeneity and no homoscedasticity. The correlation between VPTG and religiosity was statistically significant,  $r(86) = .413$ ,  $p < .001$ ,  $R^2 = .171$ . The regression equation for predicting VPTG from religiosity was  $Y' = 10.36 + 11.0 \times X$ . The  $Y$  intercept was 10.36 and the gradient, or slope, was 11. Therefore, for a one-unit increase in the raw score on  $X$ , the predicted number of units of change in the raw score on  $Y$  increased by 11. The  $R^2$  for this equation was .171, meaning 17% of the variance in VPTG was predictable from religiosity. This predictability is considered a small to moderate relationship, with increases in religiosity tending to be associated with increases in VPTG. The 95% confidence interval (CI) for the slope to predict VPTG from religiosity was 5.785 to 16.1157. Based on the results of the regression there was significant evidence to reject the null hypothesis and conclude that religiosity ( $M = 3.2$ ,  $SD = .91$ ) significantly predicted VPTG ( $M = 45.31$ ,  $SD = 24.12$ ),  $r(86) = .413$ ,  $p < .001$ ). Therefore, there was significant evidence to not reject the alternate hypothesis. The ability to accurately predict VPTG from religiosity was small to moderate. Approximately 17% of the variance in VPTG was able to be accounted for by its linear relationship with religiosity.

### Summary

The study's original purpose was to examine the influence of religiosity upon the VPTG of law enforcement officers. The purpose was also to expand the current knowledge of LEOs experiences of religiosity and VPTG. A regression was performed to assess how religiosity

might predict VPTG in LEOs. Based on the regression results, a significant relationship was discovered between the two variables ( $p < .001$ ). One can state that religiosity can predict 17% of the variability of LEOs VPTG. As their religiosity increases, so does their production of VPTG. Chapter five builds upon the discussion of chapter four, looking at the significance of the results and the findings of previous research studies, implications of the results, the study's limitations, and areas for future research.

## **CHAPTER FIVE: CONCLUSIONS**

### **Overview**

Chapter five builds on the results found in chapter four from the regression. The significance of the results are discussed, along with the findings of previous research. Implications for the results are stated regarding how religiosity predicts LEOs' VPTG. The limitations of the study are discussed, along with future research recommendations.

### **Discussion**

The purpose of this study was to examine the possible influence that religiosity might have upon LEOs' experience of VPTG. A regression analysis was conducted to explore whether or not LEOs' religiosity might predict levels of VPTG. The study results led to some interesting conclusions that could help chaplains and professional counselors understand the importance of religiosity in the prediction of VPTG in LEOs.

There was one research question for this study: Does a law enforcement officer's religiosity predict vicarious posttraumatic growth? A regression analysis was conducted to answer this question, with religiosity as the independent or predictor variable and VPTG as the dependent or criterion variable. The Centrality of Religiosity Scale (CRS) was used to assess religiosity levels, and the Posttraumatic Growth Inventory–Expanded (PTGI-X) was used to assess for levels of VPTG.

According to the results of this study, most participants self-identified as following the Christian tradition for their religiosity. When the religiosity (CRS) scale assessed their religiosity levels, there were three possible groups into which individuals could be placed: non-religious, religious, and highly-religious. The non-religious ( $N = 11$ , 12.5%) and religious ( $N = 57$ , 64.8%) categories were combined into one group representing non-religious individuals ( $N = 68$ , 77.3%).

This was done because, according to Huber & Huber (2010), those who fall within the religious category may show religious constructs occasionally, but those constructs are rarely seen, meaning their religiosity most likely does not impact or influence their daily lives or their behaviors. According to Barna (2016), most individuals in the non-religious category would qualify as atheists, agnostics, or non-practicing Christians. The categories of non-religious and religious were combined for this study to separate those considered highly-religious and active daily in their religiosity from those who were not. The minority of respondents ( $N = 20$ , 22.7%) were highly-religious, meaning their religiosity does affect their daily behaviors and would be considered by Barna as practicing Christians. Although Barna and the CRS are not identical in their assessments, they do cover many of the same topics and concepts, especially when looking at those concepts within the CRS that could be considered as assessing Christian beliefs. This would include behaviors such as prayer, Bible reading, church attendance, belief in God, and the importance of faith to the individual.

Based on the current study's results, individuals may self-identify with a particular religion or spirituality, but that does not mean they necessarily practice their religiosity the same way or to the same degree as others. This is evident in most churches today, where approximately 20% of church attendees perform about 80% of the ministry within said churches. This means that only about 20% of church attenders are really active in their beliefs, leading them to participate in religious ministry actively (i.e., teaching a religious class, helping in other ministry areas regularly). Those numbers are generous, as Barna found only 19% said they volunteered at a nonprofit and 18% stated they volunteered at a church in the last week. The vast majority of individuals who show up on a Sunday morning are not involved in any type of ministry within or without the church. Church attendance is an experience for them, typically one



day a week, but that experience does not always translate into a lifestyle (Barna, 2016). This is generally speaking, of course.

However, as a pastor, this researcher can verify that most people attend church only on a Sunday morning. Still, throughout the rest of the week, their actions/behaviors do not always reflect Christ's teachings. Today, even those considered to be strong supporters of their church, on average, attend about 50% of the time, and sometimes less, based on this researcher's 28 years of pastoral ministry. Barna (2016) states that a "practicing Christian" says that their faith is a very important aspect of their life, self-identifies as a Christian, and attends church at least once a month. If people are not in church to hear the teachings of Christ, it must be difficult to implement those teachings into their lives, into their behaviors. According to Barna, only 34% of Americans claim to read the Bible on their own, and only about 35% have attended a church service in the last week. This means that unless they attend church, 66% of Americans receive no biblical teaching or knowledge in any given week, and 65% do not attend church regularly.

However, this does not mean they are not Christians or they do not love God. Just like it does not mean that everyone who attends church is a Christian or Christ-follower. The point is this: everyone is at a different place when it comes to how they practice their religiosity, and that practice, or lack thereof, influences their behaviors. Based on this study's religiosity assessment, the vast majority of respondents (77.3%) were not behaviorally active in their religiosity when they filled out the evaluation. This could have affected how their religiosity predicted their VPTG.

Charles et al. (2014) looked at spirituality and its effect on the functionality of LEOs. They state that when officers access their spirituality, it can be a powerful and positive coping mechanism allowing LEOs to deal with traumatic and critical incidents more effectively. Oman

and Lukoff (2018) found that those who utilize religious or spiritual beliefs as coping mechanisms could improve their physical and mental states. Weber and Pargament (2014) assessed the role of religion and spirituality on mental health and found that those who were more religious tended to have a higher quality of life, better mental health, lower depression rates, and less anxiety. Koenig et al. (2012) state that a very effective way of coping with the stresses that life brings is using one's religious beliefs. Koenig et al. also found that religion promotes the idea that life experiences, both positive and negative, have meaning. Religiosity can help individuals integrate and make sense of those experiences (Koenig et al., 2012).

The current study seems to agree with these previous studies. This study shows religiosity can improve the quality of life, including the production of VPTG, which can increase the individual's mental well-being and enable them to deal more effectively with the effects of traumatic events, and provide meaning for those traumatic events. These results would seem to suggest that the utilization of chaplains in LE would be a very positive matter to pursue. Armed with the information from this study, chaplains should not fear to bring up LEOs' religiosity, realizing that helping LEOs to increase their religiosity can help to increase their production of VPTG, and therefore their outlook on life. Professional counselors should also recognize from this study the importance of assessing LEOs' religiosity if and when they work with this population.

In a similar vein, in regards to PTG scores, Wu et al. (2019) discovered that the individuals in their meta-analysis of 26 articles reported different levels of PTG based on their direct or indirect exposure to trauma. Those who experienced direct exposure (53.05%) were significantly higher in their prevalence of moderate-to-high PTG than the group that reported indirect trauma (50.4%). This could explain the current study results, where the participants were

asked about their indirect trauma exposure. Perhaps the indirect exposure to trauma led to lower VPTG scores because the trauma was secondary in nature. In the current study, the highest VPTG mean for years of experience was 50%. Both of the means for VPTG in Police and Sheriff fell below 47%. When it came to age and VPTG, the highest mean was 54.8% for those in the 41–50 age bracket. The next highest mean was 49.25% for those in the 65 and older age bracket. These results show that the majority of LEOs fell below the moderate-to-high levels of VPTG, which would appear to be consistent with the findings of Wu et al. (2019).

Another possible factor in the lower scores of VPTG in the current study may be the frequency of exposure to trauma (Chopko et al., 2016). Chopko et al. discovered that those police officers who experienced more severe traumas versus more frequent traumas saw a direct effect on the predictability of their PTG. The current study focused on vicarious trauma and not on frequency or severity. However, if the current study participants had experienced more frequent and less severe trauma, it may have resulted in lower VPTG scores. The idea of experiencing less severe trauma but more frequent trauma would be an excellent topic for future study.

As stated earlier in this paper, no studies were found that explicitly looked at predicting LEOs' religiosity connected with their production of vicarious posttraumatic growth. Chopko et al. (2016) did look at the spirituality of LEOs and if they experienced only spiritual growth, but did not look at the other four growth factors of PTG (Tedeschi et al., 2018), and they did not consider VPTG at all. However, one previous study was found that looked at VPTG, also called secondary posttraumatic growth (SPG), in a sample of Dutch police family liaison officers (Kunst et al., 2017). Still, it did not study whether or not religiosity might predict VPTG.

The theory of PTG, and VPTG, as proposed by Tedeschi & Calhoun (1996), requires direct exposure for PTG and indirect exposure for VPTG to traumatic or significant life-changing events. The current study showed that LEOs could experience VPTG in the course of what they do with the general public, and their religiosity can somewhat predict it. Perhaps the relatively small effect of predictability (17%) of VPTG by religiosity was a result of the majority ( $N = 68, 77.3\%$ ) of respondents who were considered non-religious.

Based on this study's results, it can be speculated that if most of the respondents had fallen into the highly-religious category, the variance in their VPTG might have increased due to their religiosity from 17% to a higher percentage. Future studies need to explore this more to see if that outcome could be possible. It stands to reason that if people's daily behaviors are not affected by their religiosity, then the effect of religiosity on other areas would be lessened, such as their ability to produce VPTG. Therefore, one might surmise that if more of the respondents in this study had fallen into the highly-religious category, there might have been higher predictability found for VPTG from religiosity.

Jones et al. (2020), in a qualitative study including 32 firefighters and EMTs/paramedics, sought to discover barriers to those first responders seeking help for their mental health issues. Jones et al. stated that the most significant reason was a lack of understanding and education about mental health concerns. The Jones et al. study showed how crucial education could be, both during initial training and continuing education, to help break through the stigma attached to seeking mental health support (Jones et al., 2020). One wonders if the same could be said about education regarding PTG and VPTG. PTG education has been linked to positive benefits in previous studies (Paton & Burke, 2007; Shakespeare-Finch et al., 2014; Shochet et al., 2011; Tedeschi & McNally, 2011). We do not know how well the participants in the current study

understood the concept of VPTG. More research is needed regarding how the lack of understanding about VPTG might influence average VPTG scores. Based on previous research, it is surmised that some education, both before and after starting their jobs, for those who might be exposed to traumatic events might lead to a greater understanding of VPTG, enable them to better recognize VPTG, and thus result in higher scores on the PTGI-X.

### **Implications**

One implication from this study is that chaplains, counselors, psychologists, and LE organizations should not ignore the religiosity of LEOs because it can predict the production of VPTG. This should give LE organization in particular encouragement to begin, increase, and encourage the use of chaplain programs. As seen in the literature, more and more people seek help from sources outside of the counseling/psychology field (Redman, 2008; Paul, 2005), especially if their religious beliefs have been challenged or compromised (Carey et al., 2016). However, even when seeking traditional help from professional counselors or psychiatrists, PTG can still be the result, even if the interventions being used were not specifically designed to promote PTG (Roepke, 2015).

Some of the interventions used where individuals reported PTG post-intervention included the following: couples' interventions, those promoting stress management, exposure therapy, self-disclosure, expressive writing, and cognitive restructuring (Roepke, 2015). It appears to be difficult to say with any certainty whether these and other interventions actively seek to promote PTG, partly because PTG is not always addressed during or after therapy by professional counselors (Roepke, 2015). This creates a question of what might happen if therapists actively sought to talk about and promote PTG with their clients. Perhaps such action would promote PTG to an even greater degree based on the current findings.

According to Calhoun & Tedeschi (1999), it is a natural phenomenon for clients to experience growth while going through therapy. If professional counselors know this and point it out to their clients, it might promote even more growth. Simultaneously, clinicians cannot create growth in their clients; only clients can do so (Calhoun & Tedeschi, 1999). However, professional counselors need to be careful about how they speak to their clients, because even subtle suggestions can hinder or promote the production of PTG (Roepke, 2015). According to Roepke (2015), if interventions not designed to promote PTG can do so, then it would stand to reason that interventions specifically designed to promote PTG should be able to encourage even more significant gains in an individual's production of PTG. However, Roepke cautions that such interventions could put excessive pressure on clients to produce PTG, and if they are not able to do so, guilt could be created instead. According to Calhoun and Tedeschi (1999), clinicians should be careful not to put undue expectations of producing PTG on their clients and instead simply encourage whatever growth the clinicians can observe.

According to Tedeschi and McNally (2011), one of the ultimate benefits that individuals can experience in PTG is the ability to give other individuals the ability to understand and experience their own PTG. As individuals learn about and experience PTG after experiencing traumatic events, it helps them build resilience for future events (Tedeschi & McNally, 2011). When individuals can experience positive personal change after experiencing critical incidents, it can give them the tools they need to bounce back from those events. It can also help them recover more quickly from future traumas (Tedeschi & McNally, 2011). Another benefit of PTG is when people who have experienced it can come alongside others who are currently experiencing a similar trauma, helping them walk through the experience so they too might experience PTG (Tedeschi & McNally, 2011). Giving individuals prior knowledge of PTG

before they experience critical and traumatic events might increase positive coping strategies, including the exploration of growth areas in their lives because of the trauma they experienced (Tedeschi & McNally, 2011). These are also areas that professional counselors and chaplains can explore with LEOs. Chaplains, in particular, can draw upon religiosity concepts that also encourage individuals who have experienced traumatic and significant life-changing events in the past to share their stories, their triumphs, even their struggles, with others who are currently experiencing negative life events, to give them hope and encouragement.

Just because a traumatic event has occurred, and there have been adverse effects, does not mean those are the only things that can come from such experiences. There are growth areas in individuals' lives that need to be found and encouraged, helping them find meaning from those adverse events (Tedeschi & McNally, 2011). When individuals can receive training in the concepts of PTG it can enhance their spirituality and emotional and social lives, which can all increase the probability of experiencing PTG (Tedeschi & McNally, 2011).

This study reinforces the idea of utilizing LEOs' own spirituality after they have experienced vicarious trauma (VT), allowing them to experience VPTG. When those who work with trauma victims can access their religiosity, it can increase the probability of experiencing VPTG. This can then increase their ability to decrease the negative impact of the VT exposure, circumventing the despair and isolation that can come from VT, allowing them to give meaning to what they do (Arnold et al., 2005; Cohen & Collens, 2013; Tedeschi et al., 2018). Finding meaning is something that chaplains and professional counselors can help LEOs see when they cannot see it themselves.

This study has implications for the fields of counseling and psychology. According to Tedeschi et al. (2018), PTG, and therefore VPTG, is not necessarily a standalone theory but

should be viewed and understood from an interdisciplinary standpoint (Tedeschi et al., 2018). When mental health professionals and researchers consider the functionality of PTG through other disciplines, they will have a better idea of how PTG can impact individuals' lives on an everyday basis, as well as how to utilize PTG in helping people overcome traumatic events (Tedeschi et al., 2018). When individuals experience critical incidents that create significant stressors in their lives, there are bound to be multiple questions they feel the need to answer (Tedeschi et al., 2018). When PTG is viewed from a "bio-psycho-social-spiritual framework," having at least a cursory knowledge of other disciplines will allow mental health professionals to better help their clients with the questions challenging their assumptions about their lives (Tedeschi et al., 2018). More therapy techniques that can utilize PTG is better than just one technique, giving clinicians more options to explore with their clients. The more disciplinary models mental health professionals have at their disposal, the greater the possibility that one of those models will help their clients (Tedeschi et al., 2018).

Therefore, posttraumatic growth and VPTG do not just influence individuals intrapersonally. They also affect them interpersonally. What this means is that to fully understand how PTG and VPTG are being experienced within individuals, researchers and mental health professionals need to be aware of the close relationships those individuals have and how they are influenced by them (Tedeschi et al., 2018). Contexts, such as peer support groups and significant others, can influence whether individuals experience PTG/VPTG and to what extent (Tedeschi et al., 2018). This happens when individuals are willing to share different aspects of their traumatic experiences within those contexts and how those support systems receive those revelations (Tedeschi et al., 2018). But this cannot happen if LEOs are not made



aware of PTG and VPTG and their contexts. Therefore, training about what VPTG is, how it is produced, and the possible positive effects that can come from VPTG would seem to be in order.

From a religiosity as well as PTG/VPTG standpoint, Currier et al. (2013) discovered that individuals could experience positive changes and increases in their religious/spiritual selves in areas such as forgiveness, religious practices, and daily spiritual experiences. These religious/spiritual experiences can increase their production of PTG (Tedeschi et al., 2018) and should not be ignored by counselors, psychologists, and chaplains. According to Gerber et al. (2011), religious coping in the aftermath of a traumatic experience can give individuals a better understanding of the world around them. Gerber et al. found that this increased their ability to produce PTG. Therefore, professional helpers, such as counselors and chaplains, would do well to incorporate the religiosity of the LEOs with whom they work. This study helps to bolster this emphasis on religiosity when working with LEOs. This is important because many individuals have a spiritual or religious affiliation, and PTG and VPTG are coherent with many of the world's religions, including Christianity.

The beginning of Christianity is consistent with the PTG model (Tedeschi & Calhoun, 1995; Tedeschi et al., 2018). Individuals at the beginning of the Christian faith experienced traumatic experiences and experienced growth, where their beliefs about the world around them and even themselves were challenged when Christ died. Many different secondary groups fall under the heading of Christianity. However, at least one aspect of Christianity unifies them: that Jesus Christ suffered and died on the cross. One could say with much certainty that Christianity was born out of adversity and severe trauma (i.e., the crucifixion and death of Jesus Christ) (Tedeschi et al., 2018). In his Gospel, John writes about the crucifixion and its effects on those who believed in Jesus. In John 16:20–21, he quotes Jesus as saying,

I tell you the truth, you will weep and mourn over what is going to happen to me, but the world will rejoice. You will grieve, but your grief will suddenly turn to wonderful joy. It will be like a woman suffering the pains of labor. When her child is born, her anguish gives way to joy because she has brought a new baby into the world. (NLT)

Although the writers of the New Testament cannot be observed or interviewed today, it may be possible to extract possible behaviors that could be interpreted as PTG processes based on the texts they left behind (McGrath, 2006). Following the PTG model, it may be possible to produce narratives from the New Testament writers that show psychological processes produced post-trauma, namely after the death and resurrection of Jesus Christ (McGrath, 2006). Although written a few decades after the death and resurrection of Christ, the texts all point to sense-making by the authors, another aspect of the PTG model (McGrath, 2006; Tedeschi et al., 2018). However, not all events that could be considered traumatic are necessarily viewed as traumatic by everyone who experiences them (Johnson & Boals, 2015; Calhoun et al., 2010; McGrath, 2006). Because of how individuals can view critical incidents differently, it can be challenging to nail down a definition of trauma that everyone can agree upon (McGrath, 2006). There is a general consensus that growth can be seen in three main areas of individuals' lives, reported as positive changes in their self-perceptions, better interpersonal relationships, and changes in how they view life. All three of these areas are seen in the lives of those who followed Christ in the New Testament era (Luke 7:36–48; John 13:34–35; Matthew 5:43–48).

Perhaps the continuity of how individuals from ages long ago up to today experience trauma gives Christianity its credibility and its allure. The fact that Jesus Christ and many of His followers experienced significant, life-changing events, even severe traumas at times (2 Corinthians 11:23c–27), and still lived to not only survive but thrive, can be appealing to people

still today. Having a leader, like Jesus Christ, who was tested in every way that humans are tested, but who did not give in to those temptations (Hebrews 4:15), can give hope that individuals today can withstand temptation as well. It can provide them with hope, not only while experiencing life-changing events but also hope for a future, even hope of an afterlife (Romans 5:3–5). It can also bring positive growth, PTG and VPTG, into their lives. This study's results are consistent with the theory of PTG, as put forth by Tedeschi and Calhoun (1996).

### **Limitations**

One limitation of this study is that respondents were from a single Upper Midwest state, limiting the study's generalizability to other regions of the United States and the world in general. Another limitation could be a concern with population validity. Even though over 1,200 LEOs were contacted to participate in the study, less than 10% responded, reducing the statistical analysis to 88 participants. A minimum sample size of 89, based on a medium-effect size at the alpha level of .05, was suggested using G\*Power, a free statistical power analysis program created for the biomedical, behavioral, and social sciences (Erdfelder et al., 1996). Even though the LE population is not known for its participation in such studies (Velazquez & Hernandez, 2019), this number does hinder the study's generalizability. Also, most of the respondents were males, which might skew the results with a male bias.

Additionally, over 96% of the respondents were White, and over 90% identified with Christianity. This lack of ethnic and religious diversity limits this study's generalizability to those of different ethnic and religiosity backgrounds. The current study had a majority of male LEOs. Therefore, future research might seek to balance the male/female ratio to see if the results differ in any way, seeing how males and females can respond and react differently in similar

situations. Also, the fact that more and more females are entering LE, it would be good to have females better represented in the literature regarding LEOs.

A further limitation to this study could be that those who chose to participate may differ from those who decided not to, including but not limited to their personal or secondary experiences with trauma, their experiences with the general population, and their personal experiences with religiosity. Another limitation may be whether officers experienced trauma before joining the force (Burke & Shakespeare-Finch, 2011). If the current study officers did not experience prior trauma and vicarious trauma, it might have lowered VPTG scores.

Moreover, another limitation may be that not everyone is religious or spiritual; therefore, chaplains, counselors, and others should be careful in using this study to promote any particular religious or spiritual belief. It should be mentioned that not everyone's religiosity has been positive in their lives. Therefore, chaplains and counselors should be careful in assuming that all religious/spiritual experiences are positive. Religiosity is very subjective and personal and should be viewed by counselors and chaplains as such.

Something else to consider regarding this study's validity is that some (Jayawickreme & Blackie, 2016) would argue that self-report measures, such as the PTGI-X, cannot prove individuals have experienced PTG, or as in the case of this study, VPTG. Instead, they believe the reported PTG, or VPTG, is illusory and not actual positive change. This is something to keep in mind when looking at the results of such assessments. However, as stated earlier, other studies have found that such self-report assessments have shown real changes, and those real positive changes have been corroborated by the additional evaluation of others close to the research participants (Shakespeare-Finch & Barrington, 2012; Shakespeare-Finch & Enders, 2008; Taubman-Ben-Ari et al., 2011; Tedeschi & Calhoun, 1996; Tedeschi et al., 2018).

A final limitation of this study was the Covid-19 pandemic, which was happening at the time of this study. The survey included this question at the end: “Are any of your responses to this survey connected with the Covid-19 pandemic?” There were five answers in the affirmative. Participants who answered “yes” were then asked to type out and explain why they answered the way they did. The responses were more personal/family-oriented and dealt more with staying healthy. Three mentioned how they believed God intervened for them and/or their families regarding health issues. The answers did not seem to impact LEOs’ interactions with the general public, as far as this survey measured, besides one participant stating that Covid-19 had changed how officers do their jobs, but they did not mention specifics. No participants noted that any of their answers to the survey were affected by the pandemic.

### **Recommendations for Future Research**

This study did not look at the impact of how different types of vicarious trauma (VT) might influence VPTG, which would be an interesting topic for future research and how individual religiosity might factor into those results. Future research could also analyze how specific religious or spiritual beliefs might influence LEOs’ production of VPTG, as this study only sought to discover how religiosity, in general, might be a factor.

Future research might also consider studying first responders in general, of which LEOs are a part, and how religiosity might influence their VPTG, as first responders tend to experience more VT than the general population. PTG and VPTG appear to be very similar constructs. However, some (Cohen & Collens, 2013) believe they also have differences. Another recommendation for future research would be to study just how different PTG and VPTG actually are, and perhaps how religiosity might factor into those differences. Future research might also include a specific measure to assess VPTG because there were none as of the writing

of this study. Those who have studied VPTG have utilized the most appropriate validated assessment tool, the PTGI, or its updated version, the PTGI-X (Abel et al., 2014; Manning-Jones et al., 2015; Tedeschi et al., 2018). The use of the PTGI-X may be viewed by some as a limitation because it was not specifically designed to assess VPTG, and therefore may be limited in evaluating every aspect of VPTG (Manning-Jones et al., 2015). Future research could also look at how LEOs' religiosity might affect the coping mechanisms they utilize, as this study did not broach that subject.

### **Summary**

The purpose of this study was to examine how religiosity might predict the VPTG of law enforcement officers and to expand the current knowledge of how those factors might affect LEOs. The most significant finding from the results shows that LEOs' religiosity does predict their production of VPTG. Such information needs to be utilized by chaplains and professional counselors as they work with the LE population. Although religiosity is a personal aspect of who individuals are, it does impact how they think and what they do. Law enforcement agencies would do well to begin, encourage, and promote chaplain programs. They should also promote the utilization of mental health professionals, helping officers realize that such support is vital to remaining in LE. Simultaneously, it also increases the viability of their close personal relationships with their children, spouse, and significant others. VPTG is something that LEOs experience, even if they are not aware of what VPTG is. Therefore, it stands to reason that if LEOs can receive some kind of training, whether before joining LE or continuing education within LE, that such training might increase not only their awareness of VPTG in their lives but perhaps even the increase of it. Not only that, if LEOs can recognize VPTG, or PTG, in the general population they work with, such officers might be able to share their knowledge with

those individuals, increasing the general population's understanding of what VPTG is and even the potential benefits of VPTG.

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## APPENDICES

### APPENDIX A

**From:** Stefan Huber

**Date:** Sunday, September 29, 2019 at 10:19 AM

**To:** "Kingsriter, Brad"

**Subject:** [External] AW: Request for permission to use the CRS

Dear Brad Kingsriter

I give you the permission for using the Centrality of Religiosity Scale (CRS) in your dissertation.

Enclosed you find information – including scoring – about several versions for the CRS.

I'm interested in the findings of your research. So, I would be glad, if you send me your PhD thesis as pdf after you've finished it.

Best regards,  
Stefan Huber

Prof. Dr. Stefan Huber  
Director of the Institute for "Empirical Research on Religion"

## APPENDIX B

**From:** Rich Tedeschi  
**Date:** Tuesday, May 29, 2018 at 7:59 PM  
**To:** "Kingsriter, Brad"  
**Subject:** PTGI

Brad-- Here is a package of measures we use in our research here in Charlotte. Please use and cite them appropriately, and best wishes in your work.

RT

Richard G. Tedeschi, Ph.D.

**Assistance to PTG Researchers**

We provide to researchers this information about the measures we have published in relation to posttraumatic growth (PTG). You may note that the PTGI was first published and the term first used by us (Tedeschi & Calhoun) in the 1995 book *Trauma and Transformation*. However, the version we have used was published with a revised response format in *Journal of Traumatic Stress* in 1996. The expanded version, the PTGI-X was published in *Journal of Traumatic Stress* in 2017. Other measures have been published in order to research PTG in children, and to provide a measure of both positive and negative outcomes in the aftermath of trauma, and to assess other variables that are central to our model of PTG processes. That model is also reproduced here. The references that follow are a selected list that includes some work with researchers outside our department with whom we collaborate, and our students in our research lab.

**This material is copyrighted and may not be revised or published without our permission.**

**In Reciprocation**

There is no charge for the PTGI and these other measures, and there is no charge for the reproduction of the scale for use in research.

We welcome the use of our scales in not-for-profit research. However, these inventories are not to be reproduced for any kind of general distribution and may not be used in for-profit enterprises.

In reciprocation, we would like you to send us a gratis copy of any manuscripts, theses, dissertations, research reports, preprints, and publications you prepare in which our materials, or any version of them, is used.

Tedeschi, R.G., & Calhoun, L.G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma., *Journal of Traumatic Stress*, 9, 455–471.

## APPENDIX C

## Research Participants Needed

### **The Relationship of Religiosity to Vicarious Posttraumatic Growth in Law Enforcement Officers**

- Are you an active, part time, disabled or retired Law Enforcement Officer (LEO) from South Dakota?
- Have you experienced at least one on-the-job interaction with a member of the general population who has experienced a traumatic or life-changing event?

If you answered **yes** to all of these questions,  
you may be eligible to participate in this research study.

The purpose of this research is to expand the current knowledge that is connected with LEOs and their experiences of religiosity and vicarious posttraumatic growth (VPTG). This study could also influence future studies to develop tools that could benefit LEOs in regards to their religiosity and VPTG. Participants will be asked to complete an anonymous online survey. This survey will take approximately 20 minutes to complete.

Participation in this study will be conducted online,  
and will be completely anonymous.

To participate, please go to



Brad Kingsriter, a doctoral candidate in the School of Behavioral Science at Liberty University, is conducting this study. Brad Kingsriter has been a chaplain with the Aberdeen, SD police department since the Spring of 2016. He is a member of the APD peer support team, as well as the Critical Incident Stress Management (CISM) team of Brown County.



## APPENDIX D

May 14, 2020

[REDACTED]

Dear [REDACTED]:

I have been a chaplain with the Aberdeen Police Department (APD) since the Spring of 2016. I am a member of the APD Peer Support team, as well as the Critical Incident Stress Management (CISM) team of Brown County.

As a graduate student in the School of Behavioral Science at Liberty University, I am conducting research as part of the requirements for a Doctor of Education degree. The title of my research project is The Relationship of Religiosity to Vicarious Posttraumatic Growth in Law Enforcement Officers, and the purpose of my research is to expand the current knowledge that is connected with LEOs and their experiences of religiosity and VPTG. This study may help clinicians, researchers, clergy, chaplains, and law enforcement departments develop a better understanding of LEOs and help LEOs better understand themselves. This study could also influence future studies to develop tools that would benefit LEOs in regards to their religiosity and VPTG.

I am writing to request your permission to use members of the FOP of South Dakota to participate in my research study. I am also asking you to post my recruitment flyer on your social media, as well as for you to forward recruitment emails, as many as three, to your FOP membership.

Participants will be sent an email asking them to click on a link to the website Survey Monkey and complete the provided survey. They will be presented with informed consent information in that email prior to participation. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time by simply exiting the website before submitting the completed survey.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval, or respond by email to [REDACTED]. A permission letter document is attached for your convenience.

Sincerely,

Brad Kingsriter  
Doctoral Candidate at Liberty University

## APPENDIX E



**FRATERNAL ORDER OF  
POLICE**  
[REDACTED]  
**STATE LODGE**



May 18, 2020

[REDACTED]  
Fraternal Order of Police - [REDACTED] State Lodge  
[REDACTED]

Dear Brad Kingsriter:

After careful review of your research proposal entitled *The Relationship of Religiosity to Vicarious Posttraumatic Growth in Law Enforcement Officers*, I have decided to grant you access to our Fraternal Order of Police (FOP) - [REDACTED] State Lodge membership.

Check the following boxes, as applicable:

☒ I, as the FOP President, will forward the recruitment email provided by you to the local Fraternal Order of Police (FOP) lodge presidents, to maintain the anonymity of the membership. The local FOP lodge presidents will then forward the recruitment letter to their individual members, as a second way to protect the anonymity of the FOP membership.

☒ I, as the FOP President, am requesting a copy of the results upon study completion and/or publication.

Sincerely,

[REDACTED]  
President  
Fraternal Order of Police - [REDACTED] State Lodge

## APPENDIX F

## IRB Approval Letter

Date: 11-25-2020

IRB #: IRB-FY19-20-246

Title: The Relationship of Religiosity to Vicarious Posttraumatic Growth in Law Enforcement Officers

Creation Date: 3-24-2020

End Date:

Status: **Approved**

Principal Investigator: Brad Kingsriter

Review Board: Research Ethics Office

Sponsor:

## Study History

Submission Type	Initial	Review Type	Exempt	Decision	<b>Exempt</b>
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## Key Study Contacts

Member		Role	Co-Principal Investigator	Contact	
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Member	Brad Kingsriter	Role	Principal Investigator	Contact	
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Member	Brad Kingsriter	Role	Primary Contact	Contact	
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## APPENDIX G

**Consent**

**Title of the Project:** The Relationship of Religiosity to Vicarious Posttraumatic Growth in Law Enforcement Officers

**Principal Investigator:** Brad Kingsriter, Doctoral Candidate, Liberty University

**Invitation to be Part of a Research Study**

You are invited to participate in a dissertation research study. In order to participate, you must be a full-time or retired law enforcement officer (LEO), which includes the following: police patrol officers, detectives, sergeants, captains, and Chiefs of Police; local Sheriffs and Sheriff's deputies; and state highway patrol officers of all ranks. You must also have experienced at least one on-the-job interaction with a member of the general public who has experienced a traumatic or life-changing event. Taking part in this research project is completely voluntary.

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

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

Vicarious posttraumatic growth (VPTG) can be a positive by-product that develops within individuals subsequent to them hearing about a traumatic event second hand. Individuals do not need to experience posttraumatic stress disorder (PTSD) to experience VPTG. There are three main areas of individuals lives that VPTG can be expressed, namely in their self-perception, their life philosophy, and their interpersonal relationships. Religiosity can represent both a religious and a spiritual aspect to individuals. There has been an increased interest in both spirituality and religious beliefs, and how they influence individuals.

Unfortunately, there is limited research about both VPTG and religiosity, in particular how religiosity impacts the ability of producing VPTG. At the same time, almost everyone who deals with trauma, whether through primary or secondary exposure, tends to experience some level of VPTG. The purpose of this study is to expand the current knowledge that is connected with LEOs and their experiences of religiosity and vicarious posttraumatic growth (VPTG).

**What will happen if you take part in this study?**

If you agree to be in this study, you will be asked to do the following things:

1. Complete an online survey. Participation should take approximately 15-20 minutes to complete.

**How could you or others benefit from this study?**

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

However, there may be benefits to society. This study may help clinicians, researchers, clergy, chaplains, and law enforcement departments develop a better understanding of LEOs and help



LEOs better understand themselves. This study could also influence future studies to develop tools that would benefit LEOs in regards to their religiosity and VPTG.

#### **What risks might you experience from being in this study?**

The risks involved in this study are minimal, which means they are equal to the risks you might encounter in everyday life. Participation may invoke certain emotions connected to the memories of past vicarious traumatic experiences.

If you should experience undue emotional discomfort while participating in this study, you are encouraged to reach out to your local peer-support group, chaplain, and/or department psychologist. You might also take advantage of your Employment Assistance Program. You can also click on the link below for Psychology Today, where you can put in your zip code and be directed to a mental health professional in your area.

<https://www.psychologytoday.com/us>

#### **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. No identifiable information is being collected.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

#### **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 Brad Kingsriter, Doctoral Candidate at Liberty University. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [REDACTED]. You may also contact the researcher's faculty sponsor, [REDACTED], at [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 Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu)

**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.

To participate, please click “Next”.

Liberty University  
IRB-FY19-20-246  
Approved on 5-13-2020

## APPENDIX H

## Recruitment Letter 1

Dear Law Enforcement Officer:

I have been a chaplain with the Aberdeen Police Department (APD) since the Spring of 2016. I am a member of the APD Peer Support team, as well as the Critical Incident Stress Management (CISM) team of Brown County.

As a graduate student in the School of Behavioral Sciences at Liberty University, I am conducting research as part of the requirements for a Doctor of Education degree. The purpose of my research is to expand the current knowledge that is connected with law enforcement officers (LEOs) and their experiences of religiosity and vicarious posttraumatic growth (VPTG). This study may help clinicians, researchers, clergy, chaplains, and law enforcement departments develop a better understanding of LEOs and help LEOs better understand themselves. This study could also influence future studies to develop tools that would benefit LEOs in regards to their religiosity and VPTG. I am writing to invite eligible participants to join my study.

Participants must be a full-time or retired law enforcement officer (LEO) from South Dakota, who has experienced at least one on-the-job interaction with a member of the general public who has experienced a traumatic or life-changing event. For example, listening to or observing a traumatic or life-changing event that someone else has experienced, such as a vehicle accident, rape, domestic violence, sexual abuse, home or business fire, natural disaster, etc. Law enforcement officers would include the following: police patrol officers, detectives, sergeants, captains, and Chiefs of Police; local Sheriffs and Sheriff's deputies; and state highway patrol officers of all ranks. Participants, if willing, will be asked to fill out an anonymous online survey. It should take approximately fifteen to twenty minutes or less to complete the entire survey. Participation will be completely anonymous, and no personal, identifying information will be collected.

In order to participate, please click the hyperlink included at the bottom of this email. The consent document on the first page of the survey contains additional information about my research, but you do not need to sign it. After you have read the consent information, please click the "Next" button to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the survey.

[REDACTED]

Sincerely,

Brad Kingsriter  
Doctoral Candidate at Liberty University

## APPENDIX I

## Recruitment Follow-up Letter

Dear Law Enforcement Officer:

You may have previously seen this recruitment e-mail, sent 2 weeks ago, requesting your participation in a survey. If you have not yet completed the survey, your participation would be greatly appreciated.

I have been a chaplain with the Aberdeen Police Department (APD) since the Spring of 2016. I am a member of the APD Peer Support team, as well as the Critical Incident Stress Management (CISM) team of Brown County.

As a graduate student in the School of Behavioral Sciences at Liberty University, I am conducting research as part of the requirements for a Doctor of Education degree. The purpose of my research is to expand the current knowledge that is connected with law enforcement officers (LEOs) and their experiences of religiosity and vicarious posttraumatic growth (VPTG). This study may help clinicians, researchers, clergy, chaplains, and law enforcement departments develop a better understanding of LEOs and help LEOs better understand themselves. This study could also influence future studies to develop tools that would benefit LEOs in regards to their religiosity and VPTG. I am writing to invite eligible participants to join my study.

Participants must be a full-time or retired law enforcement officer (LEO) from South Dakota, who has experienced at least one on-the-job interaction with a member of the general public who has experienced a traumatic or life-changing event. For example, listening to or observing a traumatic or life-changing event that someone else has experienced, such as a vehicle accident, rape, domestic violence, sexual abuse, home or business fire, natural disaster, etc. Law enforcement officers would include the following: police patrol officers, detectives, sergeants, captains, and Chiefs of Police; local Sheriffs and Sheriff's deputies; and state highway patrol officers of all ranks. Participants, if willing, will be asked to fill out an anonymous online survey. It should take approximately fifteen to twenty minutes or less to complete the entire survey. Participation will be completely anonymous, and no personal, identifying information will be collected.

In order to participate, please click the hyperlink included at the bottom of this email. The consent document on the first page of the survey contains additional information about my research, but you do not need to sign it. After you have read the consent information, please click the "Next" button to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the survey.

  
Sincerely,

Brad Kingsriter  
Doctoral Candidate at Liberty University

## APPENDIX J

## Demographic and Covid-19 Questions

1. Are you an active, part-time, disabled, or retired Law Enforcement Officer from South Dakota who has worked with a least one member of the general public who has experienced a traumatic or life-changing event? (i.e. – individuals who have experienced: a car accident, rape, domestic abuse, sexual abuse, home or business fire, natural disaster, etc.)
  - a. Yes
  - b. No
2. What is your employment status with law enforcement?
  - a. Active
  - b. Part-time
  - c. Disabled
  - d. Retired
  - e. Other
3. With what religion do you associate?
  - a. Judaism
  - b. Christianity
  - c. Islam
  - d. None
  - e. Other
4. What age range do you fall into?
  - a. 18-30
  - b. 31-40
  - c. 41-50
  - d. 51-64
  - e. 65 or older
5. What is your gender?
  - a. Male
  - b. Female
  - c. Prefer not to answer
6. Please specify your ethnicity.
  - a. White
  - b. Black or African American
  - c. Native American or American Indian
  - d. Hispanic or Latino
  - e. Asian/Pacific Islander
  - f. Other
7. Which branch of law enforcement are you most recently affiliated?
  - a. Police
  - b. Sheriff
  - c. State Highway Patrol
8. What is your rank or designation in your law enforcement department?
  - a. Police officer/Patrol officer

- b. Police Detective
  - c. Police Sergeant or Corporal
  - d. Police Lieutenant
  - e. Police Captain or Deputy Chief
  - f. Chief of Police or Commissioner
  - g. Sheriff Deputy or officer
  - h. Corporal/Sergeant/Lieutenant with Sheriff Department
  - i. Captain in Sheriff Department (also Major or Colonel)
  - j. Chief Deputy Sheriff
  - k. Sheriff
  - l. Highway Patrol Trooper
  - m. Highway Patrol Colonel/Captain/Lieutenant
  - n. Highway Patrol Sergeant
  - o. Other
9. How long have you been, or were you, in law enforcement?
- a. 1-5 years
  - b. 6-10 years
  - c. 11-15 years
  - d. 16-20 years
  - e. 21 plus years

Two additional questions about Covid-19.

This will be Question #50

Q – Are any of your responses to this survey connected with the Covid-19 pandemic?

Yes or No.

This will be question #51

Q – If you answered “Yes” to the previous question, please explain in the space provided below:  
blank box for answers.