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# Compassion Fatigue and Police Use of Force

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This is to certify that the doctoral dissertation by

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Walden University
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Abstract

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Forensic Psychology

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## Abstract

Compassion fatigue is a natural response to caring, where burnout and exhaustion result from helping professions which includes police officers. Exposure to trauma and stress increases the risk of developing compassion fatigue in helper professions and may have negative implications on overall mental health and physical well-being. However, not much is known about the behavioral effects of compassion fatigue among police officers during use-of-force incidents. The purpose of this study was to examine whether compassion fatigue in police officers is predictive of use-of- force incidents. The theoretical foundation was Figley's theory of compassion satisfaction and compassion fatigue. Survey data were collected from a purposeful sample of 144 U.S. police officers using the Professional Quality of Life scale and a use of force self-report scale that identified types and amounts of force used in the last 30 days. Results of logistic regression and *t* tests indicated that higher scores on the burnout subscale are a significant predictor for use of nonlethal force in comparison to participants with high compassion satisfaction scores. Results may be used by law enforcement agencies to change mental health policies and training curriculum and create intervention programs that identify factors that contribute to a police officer's decision-making capabilities as the prevalence of police misconduct complaints stem from use-of-force incidents.

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# Dedication

This work is dedicated to my wonderful and supportive partner, James, for always asking “what’s next” and “why not?” Without his encouragement and belief in me, I would not have had continued my educational journey. For my children, Nikole, Erika and Ryan, for always putting up with Mom always doing more homework, studying, and endlessly writing. I hope I have encouraged you to follow your dreams and realize anything is possible. For my mom, Shelley, and Elizabeth, I hope I continue to make you proud. For my dad and my brother, Ron, whom I miss every day so very much, I wish you were here to celebrate this achievement with me.

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I would also like to acknowledge all of the police officers who took time to contribute to this study. You have a very difficult job in today's world, and I wish you a safe, healthy and long career.

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# Chapter 1: Introduction to the Study

## Background

Research showed that workplace burnout, stress, and exposure to traumatic incidents increases the risk of developing compassion fatigue (Turgoose, Glover, Barker, & Maddox, 2017). Researchers have also addressed time in service, age, marital status, and having children (Turgoose et al., 2017). As a result of this research, minor changes have been made to state and local policies for mental health care, often in a reactive manner. The lack of research on how stress can influence a police officer's decision to use or not use force may be indicative of a larger problem identified by Ménard and Arter (2013) who found that poor coping skills, alcohol use, and post-traumatic stress disorder (PTSD) development have led to incremental policy changes to receive or obtain mental health treatment and how officers are not provided the necessary mental health training and skills to overcome traumatic exposure.

Kleider-Offutt, Clevinger, and Bond (2016) found similar trends with a direct connection with increased stress to high and low mental cognitive load. Low functioning working memory, reduced cognitive capabilities from lack of sleep, stress, and fatigue can lead to poor decision-making and impaired performance and memory (Hope, 2016; Kleider-Offutt et al., 2016). Harris, Eccles, Freeman, and Ward (2017) examined how officers react in stressful scenarios using specialized tactical teams who had received additional training in stress-based scenarios. Being presented with a variety of complex

situations, officers showed a difference in coping strategies where their decision-making changed and often showed ability to cope with the stress by resolving conflicts by planning responses. The current study with traditional police officers without special operations training may clarify the predictive relationship between compassion fatigue and use-of-force decision-making.

Chopko, Palmieri, and Adams (2015) identified frequency of trauma exposure as contributory to post-traumatic reactions. Officers from three midsize police departments completed a Critical Incident History Questionnaire (CIQH) that addressed their exposure to incidents common among police agencies to measure difficulty for an officer to deal with the particular incident (Chopko et al.). Additional scales were used to measure regression against PTSD, general health, sleep quality, and alcohol use (Chopko et al.). Research found the critical incident exposure by making a mistake that kills or injures a colleague had the highest mean nomothetic severity rating and that among the variables examined in this study, PTSD symptoms demonstrated the strongest association with the exposure indices. These studies addressed how police officers develop trauma throughout their career and whether their job assignment, age, or years in service moderate the effects of exposed trauma. These studies also addressed how overall rest, health, and substance use can be factors in the development of mental health issues.

## Problem Statement

Police officers' actions are guided by state, federal, and local laws and departmental policies. Recently, there has been much inquiry into training practices for police officers as a result of several deadly use-of-force incidents. Recent studies showed how police officers are at increased risk of developing workplace stress, compassion fatigue, and PTSD as a result of exposure to traumatic incidents (Craun & Bourke, 2015). Turgoose et al. (2017) identified high risk development of compassion fatigue for police officers who were exposed to repetitive trauma and stress, which affected their levels of job satisfaction, burnout, and empathy. Identifying the more serious and often traumatic incidents in which a police officer is most in need of mental health intervention is often determined by departmental policies and recommended training protocol (Colwell, Lyons, Bruce, Garner, & Miller, 2011; Craun & Bourke, 2015).

Longitudinal studies have addressed how secondary traumatic stress affects federal law enforcement officers' understanding of coping mechanisms used to prevent and overcome loss of empathy and workplace burnout (Craun, Bourke, Bierie, & Williams, 2014). Demographic studies have also been conducted to determine whether age, sex, marital status, and number of children increase risk to police officers for burnout syndrome, emotional exhaustion, and depersonalization (Aguayo, Vargas, Cañadas, & De la Fuente, 2017). Bolger (2015) investigated four areas that may affect force: identified as issues with the officer, issues with the suspect, issues within the

encounter, and characteristics of the community; however, there is a lack of research on how compassion fatigue is related to an officer's decision to use force. Kop and Euema (2001) conducted a study on Dutch police officers' occupational stress and the effects on use of force; however, the Dutch police system is a different type of criminal justice system compared to the U.S. system, which operates at state and local levels. There is a lack of research on how and whether compassion fatigue is related to the decision-making process regarding the use of force. Findings may show compassion fatigue to be a mitigating or mediating factor in use-of-force decisions for officers in the United States. The current study was intended to fill the gap on the relationship between use-of-force incidents and officer compassion fatigue.

## Purpose of the Study

The purpose of this study was to examine whether compassion fatigue affects behaviors in police use-of-force incidents. Data were collected using the Professional Quality of Life: Compassion Satisfaction (ProQOL) Version 5 scale and a self-report survey on types of force used and how many times force had been used by sworn police officers from local and state law enforcement agencies. The minimum sample size for this study was determined by G*power to be 128. This quantitative study addressed whether compassion fatigue is predictive of a police officer's inclination to use force. I also evaluated whether there were differences between the groups of force and no force among police officers with developed compassion fatigue.

The target population included certified police officers between the ages of 21 and 55 who had used some level of force based on the use-of-force continuum from less-than-lethal through deadly force. The population was accessible through publicly available police email addresses, and officers represented small to large metropolitan police departments in every state across the United States. Police officers were asked anonymously to participate in a short three-part online survey. The first survey was the ProQOL Compassion Satisfaction-Compassion Fatigue scale, which took approximately 5 minutes to complete. The ProQOL measures compassion satisfaction and compassion fatigue in the last 30 days. The second survey measured the types of force officers had used. The third survey measured how often each type of force was used. The three-part survey took no more than 15 minutes to complete. The desired minimum sample size was 128 from a population of over 2,000 possible participants.

## Research Questions and Hypotheses

The following research questions (RQs) and hypotheses were used to examine the effects of compassion fatigue on law enforcement officers' use of force through specific variables related to compassion satisfaction and compassion fatigue:

RQ1: Does compassion fatigue predict use of force among police officers?

$H_o1$: Compassion fatigue does not predict use of force among police officers.

$H_a1$: Compassion fatigue predicts use of force among police officers.

RQ2: Are there group differences in compassion fatigue based on types of force used?

$H_o2$: There are no group differences in compassion fatigue based on types of force used.

$H_a2$: There are group differences based in compassion fatigue based on types of force used.

## Theoretical Framework

The theoretical framework for this study was Figley's theory of compassion satisfaction and compassion fatigue. Compassion fatigue is also known as secondary traumatic stress and is a natural response to caring in which burnout and exhaustion result from the helping professions, including nurses and police officers (Figley, 1995). Figley (1995) developed the theory of compassion satisfaction and compassion fatigue and defined compassion fatigue as a "state of exhaustion and dysfunction, biological, psychologically, and socially a result of prolonged exposure to compassion stress and all that it evokes" (p. 253). Figley identified three environments as contributing to stress and fatigue (workplace environment, client/helped person environment, and personal environment), all which contribute to positive and negative aspects of helping others. These environments can lead to compassion satisfaction or compassion fatigue. Using Figley's theory of compassion satisfaction and compassion fatigue and the ProQOL-5 approach to police officer decision-making to identify officers who have developed

compassion fatigue, in conjunction with self-report scales, the results can be analyzed to determine whether there is a relationship between developed compassion fatigue and use of force decisions (Stamm, 2010).

## Nature of the Study

This quantitative study was designed to determine the predictive relationship between two variables using statistical data, as well as differences among groups. Quantitative methodology is common for compassion fatigue studies, which provide a means of comparison and measuring overall compassion fatigue and allow for group comparison (Cocker & Joss, 2016). The predictive measure has been utilized in other studies, and the ProQOL Compassion Satisfaction- Compassion Fatigue scale was an appropriate measurement tool for the current study because it measures compassion satisfaction and compassion fatigue in the last 30 days (see Figley, 1995). Use of force definition was determined by the National Academy of Sciences standard definition of "violence to police use of force context" (NIJ). This definition includes "behaviors by individuals that intentionally threaten, attempt, or inflict physical harm on others" (Reiss & Roth, 1993, p. 2). For the present analysis, this definition also designated what is included as use of force. Police officers' use of force and types was measured using a single item direct measure. This instrument constructs attitude with a clear, singular meaning in which the object being rated also is clear and singularly identifiable (Ang & Eisend, 2018).

To answer Research Question 1, I used ordinal regression with compassion fatigue as the predictor and force as the outcome. To answer Research Question 2, I conducted an analysis of variance (ANOVA) to determine whether there was a statistically significant relationship between the types of force used by police officers. Because group differences were found, a post hoc analysis using Tukey's procedure was used to further examine these differences. This design suited the study because officers were not randomly assigned to certain groups and no variables were manipulated. The independent variable was the officer's identification of compassion satisfaction or compassion fatigue through the ProQOL self-report questionnaire. The dependent variable was the police officers' use of force.

## Definitions

*Burnout*: A cumulative process marked by emotional withdrawal, social isolation, reduced sense of personal accomplishment or finding meaning in one's work, and mental and physical exhaustion caused by an increase institutional stress and increase in workload (American Institute of Stress, 2017).

*Cognitive depletion*: A temporary state in which a person has diminished capacity to exert or control volition over their affect, behavior, and cognition (Ma et al., 2013).

*Compassion fatigue*: The rapid onset of emotional exhaustion leading to burnout, loss of empathy, and depersonalization. Compassion fatigue occurs from compounded emotional stress and long-term exposure to shocking events and engaging with members

of the public who are traumatized and distressed; a state of tension and preoccupation with the traumatized patient by reexperiencing the traumatic events of others, avoidance and numbing from reminders which cause persistent arousal like anxiety, which comes from a natural emotional and behavioral responses from helping or a need to help others who suffered trauma (Coetzee & Klopper, 2010; Stamm, 2010).

*Compassion satisfaction*: The feeling of contentment and gratification from helping in any situation of trauma (Figley, 1995).

*Coping*: The cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts (Folkman & Lazarus, 1980).

*Fatigue*: The mental or physical state resulting from insufficient good quality sleep or from prolonged or intense physical, emotional, or mental effort that tends to decrease alertness, impair performance potential, worsen moods, and interfere with decision-making (Alhola & Polo-Kantola, 2007).

*Police occupational stress*: Internal and external stimulus, in which the internal body response is to restore conditions back to near homeostasis or equilibrium from the depletion of the body's resources where the flight or fight system is used to overcome real or perceived threat (Anderson, Di Nota, Metz, & Andersen, 2019).

*Stress*: A deficient balance between people's perceived demands of a situation and their perception of their ability to deal with their demands, which causes a reaction to

tangible or mentally evoked threats to bodily homeostasis (American Institute of Stress, 2017).

*Use of force*: Behaviors by individuals that intentionally threaten, attempt, or inflict physical harm on others (Bolger, 2015). The amount of effort required by police to compel compliance from an unwilling subject (International Association of the Chiefs of Police, 2001).

*Secondary traumatic stress*: The psychological and emotional distress reaction experienced by crisis workers from exposure to traumatic experiences or stories of another person (Figley, 1995).

*Use of force continuum*: An escalating series of actions an officer may take to resolve a situation. This continuum has many levels, and officers are instructed to respond with a level of force appropriate to the situation at hand, acknowledging that the officer may move from one part of the continuum to another in a matter of seconds without having to start at the minimum level (National Institute of Justice, 2016).

*Working memory*: The capacity to retain and manipulate recently acquired information that a person will rely on to execute cognitive operations within a short period of time (Cowan, 2008).

*Vicarious trauma*: The gradual change or disruption of a person's inner thoughts, beliefs, feelings, and spirit as a result of repeated exposure to others' traumatic

experiences causing the worker to re-experience or experience their own trauma (Fine, 1994).

## Assumptions

I assumed that police officers would voluntarily and willingly participate in psychological research that would be beneficial for active police officers and for future research in police mental health issues. I also assumed that police officers who have mental health issues would be less likely to cooperate in this study. Due to the nature of the study and the use of anonymous assessments, I assumed that police officers would be more likely to answer assessment questions honestly and unbiasedly regarding their mental health, gender, rank, and years of service. The publicity of mental health concerns in law enforcement in recent years suggested that police officers and departments would support research in an effort to identify mental health problems and to address them before they occur through training and policy changes. I assumed that police officers would be willing to admit to facing stressful and traumatizing incidents and would answer survey questions honestly regarding these incidents.

## Scope and Delimitations

The study was limited to current certified full-time police officers in the United States. Prospective participants were contacted through publicly available email addresses. Results may be applicable to future research in law enforcement and

psychological fields. The findings are not generalizable to police officers outside of the United States.

## Limitations

Limitations included results not being generalizable to the police population as a whole. There was no data collection in this study that addressed trauma and stress exposure prior to employment in the police department. The sample of the police officers in the United States may not be reflective of police officers in other countries with similar capacities.

Other limitations included the research design. Findings did not indicate causation but rather the relationship between the research variables. Police officers self-report measures were also a concern. Self-report questionnaires are dependent on participant honesty.

Other limitations included the potential for police officers not to respond or to respond falsely to demographic and mental health questions in the survey. Police officers may have been reluctant to acknowledge exposure to traumatic events or that exposure had affected them. An officer's support system may have altered how a police officer responded to the survey questions. The data that were collected for this study came from police officers who may or may not have been exposed to traumatic or violent events or who may have been concerned that their privacy and anonymity would not be maintained during and after the study.

## Significance

This study filled a gap in existing research by providing an original contribution to the practice of police and forensic psychology. Use of force in law enforcement is a timely topic as a result of several high-profile cases that have been exposed in the national media. The identification of factors that contribute to a police officer's decision-making capabilities may have implications for future policymaking, training, and identification of preventive mental health treatment as opposed to reactive treatment after an incident has unfolded and excessive force has resulted in significant injury or death. Implications for social change are increased by conducting research. Preventive mental health care measures can be used before an officer has developed compassion fatigue to reduce the likelihood of injury or death to the officer and suspect. Existing research did not address the extent to which compassion fatigue affects use of force. The current study addressed the relationship between officers' self-reported compassion fatigue and incidents of use of force.

## Significance to Theory

Police work is inherently stressful and often incomprehensible to the general public with exposure to life and death situations, and with split seconds to make critical and often life-taking and life-changing decisions. This environment is ripe for development of stress and trauma. Compassion fatigue research has indicated that behavior and emotion can be affected, causing a loss of empathy and depersonalization

from long-term exposure to shocking events by engaging with members of the public who are traumatized and distressed (Figley, 1995). This leads to loss of production in work product, low-functioning working memory, reduced cognitive capabilities from lack of sleep, stress, and fatigue leading to poor decision-making and impaired performance and memory (Turgoose et al., 2017). Although researchers have confirmed the theoretical foundation of compassion fatigue in police officers, the predictive relationship between compassion fatigue and use of force has not been examined. This study added to the current compassion fatigue theory and research.

## Significance to Practice

There is a lack of research on how and whether compassion fatigue is related to the decision-making process in the use of force, and whether compassion fatigue may be a mitigating or mediating factor of the characteristics that affect use-of-force decisions for officers in the United States. This research focused on use-of-force incidents and police officer compassion fatigue. Future studies may address whether years of service, age, social support, and resiliency moderate the relationship between compassion fatigue and use-of-force incidents.

## Significance to Social Change

The purpose of this study was to investigate to what extent compassion fatigue predicted use-of-force incidents for police officers. The research addressed how the cost of caring results in compassion fatigue for officers who are exposed to violence and

adversity like child abuse, sexual assault, shootings, trauma, illnesses, and death. These types of incidents may accumulate throughout an officer's career, and the repetitive exposure can lead to serious mental and physical health effects for the police officer and manifest as reduced job satisfaction, impaired performance, and reduced quality of service (Craun & Bourke, 2015). Findings from the current study may be used to identify factors that lead to compassion fatigue in police officers, and may promote change in mental health policies, training curriculum, and intervention programs by allowing for police officers to receive mental health care without stigma or penalty.

## Summary

The incidents of several high-profile cases that have been exposed in the national media regarding police use of force have indicated the need for transparency and reform in police training, as the prevalence of police misconduct complaints stem from use of force incidents (Packman, 2011). Compassion fatigue leads to feelings of depression and withdrawal from activities that brought joy, repetitive and fixated thoughts, physical symptoms, and reduced job satisfaction (Alarcon, 2011; Schaufeli & Enzmann, 1998; Showalter, 2010). As officers are exposed to life-and-death situations, they are expected to make critical and life-changing decisions. The increase in aggressive thought and behaviors and decrease in empathetic response is a result of repetitive exposure to violence (Bartholow, Sestir, & Davis, 2005). Gutshall, Hampton, Sebetan, Stein, and Broxtermann (2017) indicated that aggressive behavior stemming from an increase in

burnout symptoms emphasizes the needs for preventive measures for law enforcement officers who are prone to stress-related disorders, and suggested that stress impacts problem-solving capabilities resulting in wrongful arrests, improper shootings, poor memory recall, and excessive use of force. Identifying the more serious and often traumatic incidents in which a police officer is most in need of mental health intervention, and identifying when officers are mentally and physically taxed is necessary to ensure officers are not making improper decisions when using force (Colwell et al., 2011; Craun & Bourke, 2015). Chapter 2 presents a review of the literature on police officers' exposure to violence and trauma and the cognitive, physical, and psychological implications that may occur when faced with use-of-force situations.

# Chapter 2: Literature Review

The trauma a police officer experiences is often carried on beyond their shift as they are exposed to more impactful events than an average citizen. How an officer learns to cope with their experiences may influence how the officer performs at future incidents. The mental preparation need to be effective in unpredictable situations can be overwhelming to many police officers. Because officers are continuously exposed to different types of trauma, there is concern that they will experience burnout, inhibited job satisfaction, and increased compassion fatigue (Turgoose et al., 2017). Police officers are taught to internalize feelings resulting in the development of self-destructive behavior. Recognizing these mental health issues and conducting research on how stress can influence a police officer's decision to use or not use force may reduce problems for police organizations and society.

The purpose of the current study was to investigate to what extent compassion fatigue predicted use-of-force incidents for police officers. In this study, compassion fatigue was the independent variable and was described as the emotional exhaustion leading to burnout, loss of empathy, and depersonalization. Compassion fatigue occurs from compounded emotional stress and long-term exposure to shocking events and engaging with members of the public who are traumatized and distressed; these symptoms often interfere with tools needed to provide service in the field of human service and trauma work (Figley, 1995; Showalter, 2010). This chapter provides the

literature search strategy, theoretical foundation, literature review related to key variables and/or concepts, and a summary identifying the major themes found throughout the literature.

## Literature Search Strategy

Key terms were used to search the Walden University library databases, including ProQuest, Sage, EBSCO Host, Science Direct, Psych Info, and Criminal Justice. Search terms used were *police*, *police officer*, *law enforcement*, *use of force*, *compassion fatigue*, *compassion satisfaction*, *burnout*, *vicarious trauma*, *secondary trauma*, *general aggression model*, and *use of force*. Literature was search from 2013; however, most of the theoretical research was conducted as early as 1995, so studies were included from that period. Sources searched were research studies, published scholarly peer-reviewed articles, standard use-of-force policies, and seminal works.

## Theoretical Foundation

Police officers face challenging work and are often exposed to critical incidents, violence, fatalities, and negative emotions that may result in negative effects on their overall well-being. Alpert, Dunham, and MacDonald (2004) and Terrill (2014) noted that much of what has been researched in police use of force lacked a conceptual or theoretical framework, where behavior is based on the focus of the encounter (situational theories), the style of the police officer (attitudinal theories), or a combination of both theories. Figley (1995) identified symptoms that manifest in people within the helping

fields. Nurses, police officers, and therapists were identified as people having increased capability of developing compassion fatigue. Figley and Showalter (2010) identified the compassion fatigue model as the emotional exhaustion leading to burnout, loss of empathy, and depersonalization. Compassion fatigue occurs from compounded emotional stress and long-term exposure to shocking events and engaging with members of the public who are traumatized and distressed; these symptoms often interfere with tools necessary to the provide service in the helping professions, the field of human service, and trauma work (Figley).

Figley (1995) defined *compassion fatigue* as a "state of tension, and preoccupation with the traumatized patient by re-experiencing the traumatic events, avoidance and numbing of reminders persistent arousal like anxiety" (p. 1), which comes from natural emotional and behavioral responses from helping or a need to help others who suffered trauma. Figley and Pines and Aronson (1988) noted that compassion fatigue is a byproduct of witnessing the suffering others may experience and should not be confused with physical and emotional burnout stemming from long-term involvement in demanding situations, which is identified as burnout. The consequences of ordinary burnout can include a propensity of violence toward others, depression, and maladaptive behaviors (Oshburg, 1996). Burnout is characterized as a cumulative process marked by emotional withdrawal, social isolation, reduced sense of personal accomplishment or finding meaning in one's work, and mental and physical exhaustion caused by increased institutional stress and increase in workload (Oshburg). Unlike burnout, compassion

fatigue may have a rapid onset. For helping profession workers, there are long-term benefits from early recognition of the symptoms and receiving early intervention (Oshburg).

Andersen and Papazoglou (2015) posited that although much of the research on mental health and law enforcement has been on severe mental health conditions such as PTSD, many officers do not fit this profile, but their experiences are just as important for behavioral, emotional, and cognitive deficits. Figley (1995) identified the fundamental difference between primary stressors and secondary stressors as exposure, where primary stressors result from direct exposure to a traumatic event and secondary stressors result from exposure to others in a trauma. Symptoms of compassion fatigue may develop after trauma exposure, affecting emotional well-being, nervous system arousal, decrease in cognitive abilities, impaired behavior and judgment, sleep disturbances, an increase in emotional intensity, loss of emotional modulation, and depression (American Institute of Stress, 2017). There is a potential to develop PTSD, feelings of isolation and loss of morale, loss of self-worth, loss of hope and meaning, and anger toward perpetrators or causal events in which an officer's identity may be impacted along with overall worldviews and a hierarchy of psychological needs including trust, safety, self-esteem, control, and intimacy (American Institute of Stress, 2017).

Bride, Radey, and Figley (2007); Figley (1995); and Schaufeli and Enzmann (1998) found that many police officers are compassionate and empathetic in their

dealings with the community, which poses a cost to their well-being, reduces their ability to bear the emotional burden and suffering of others they are trying to help, and reduces emotional control and patience. Research showed that police officers generally take on this type of work to fulfil an overall sense of personal reward from helping their communities (Alarcon, 2012; Andersen et al., 2010; Figley, 1995; Papazaglou & Andersen, 2015; Schaufeli & Enzmann, 1998; Violante, 2010). This research indicated how the cost of caring results in compassion fatigue, which can increase for officers who are exposed to violence and adversity like child abuse, sexual assault, shootings, trauma, illnesses, and death scenes. Compassion fatigue may accumulate throughout the officer's career while the repetitive exposure can lead to serious mental and physical health effects for the police officer and manifest as reduced job satisfaction, impaired performance, and reduced quality of service (Figley). Tehrani (2010) posited that police officers may experience behavioral changes that lead to a change in their values and beliefs affecting their overall views of the world.

## Development of Compassion Fatigue

Figley (1995), Papazaglou and Andersen (2015), and Showalter (2010) found that compassion fatigue contributes to the development of anxiety and depression, and that compassion fatigue is not an uncommon response experienced for the cost of caring for those in the helping professions. Figley (2011) stated that exposure to others' suffering and an officer's ability to be empathetic create pathways for the officer's overall

emotional response. Bride et al. (2007) found that indirect exposure to trauma increases the risk of developing cognitive, emotional, and behavioral changes and affects overall physical well-being. When an officer shows or experiences empathy, they can develop compassion fatigue.

Figley (1995) noted that secondary traumatic stress, known as compassion fatigue and vicarious traumatization, changes belief systems as disruptions may occur in a person's sense of identity, psychological needs, interpersonal relationships, self-meaning, and memory. The dynamic changes of behavior, personality, and relationships have been measured in studies in which PTSD has resulted from chronic exposure to trauma. Figley also noted how similar symptoms develop including hyperarousal, cognitive changes, avoidance, intrusive thoughts, sleeplessness, and functional impairment. The chronic exposure to stress accumulates as losses affecting families and coping abilities in the helping professional.

Valent (2002) explained that compassion fatigue manifests when the help that helpers provide either does not work as expected or does not work at all. Lack of support from police administration or coworkers, low coping skills, and stressed cognitive load increases the likelihood of developing compassion fatigue.

## Law Enforcement and First Responder Stress

Law enforcement is a unique category of first responders where the daily work environment puts them at risk for stress-related disease. There is an emphasis placed on

physical fitness, mental and emotional well-being from early stages of recruitment through decades in service. Researchers noted that police officers face daily stressors that are often incomprehensible to the general public, and exposure to life-and-death situations with seconds to make critical and often life-taking and life-changing decisions (Digliani, 2012; Haberfeld, 2016; Violanti et al., 2016). The job requires police officers to function at peak performance to meet the expectations of the profession; the nature of the job is contradictory in theory as expect police officers who are exposed to high rates of trauma are expected to maintain the status quo and perform at optimal levels. This poses unrealistic expectations of normal human behavior (Brooks, Dunn, Amlot, Greenberg, Rubin (2016).

## Work Environment

Showalter (2010) posited that compassion fatigue leads to loss of production in work product, higher turnover of employees, increased paperwork demands, increased calls for service, lack of administrative support and leadership, increased stress over time leading to self-doubt, emotional and physical exhaustion causing a disruption, and dissolving of careers and families when the lack of balance occurs. Coupled with shift work and mandatory overtime, this increases the likelihood for officers to develop stress disorders. Anitha (2014) reported that the amount an employee is engaged in work impacts aspects of an organization. Brown, Cooper, and Kirkaldy (1996) identified the positive relationship between job satisfaction and mental health.

Ellrich (2015) and Conn and Butterfield, (2013) report that officers have increased physical and psychological complaints, behavioral changes, anxiety and an overall negative impact on mental health and family life. Conn and Butterfield further note that those police officers exposed to secondary traumas are at increased risk for the development of other health risks, including PTSD (2013). Conn and Butterfield investigated how officers dealt with trauma exposure and how it could be mitigated through support from their department, supervisors, and coworkers. This study further explains how an officer's work environment directly correlates to their ability to cope with the traumatic stress. The study reported that police officers related normalization with coworkers as being heard and understood while their overall emotional engagement with victims created feelings of sympathy, empathy, and relatability to the critical incident. Lastly, this research reported that officers who were provided with debriefing information assisted the natural progression to processing stress and trauma. Conn and Butterfield emphasized the lack of help and training increases the secondary traumatic stress and perpetuated the stigma making successful outcomes limited either by the lack of services available or the lack of officer's emotional availability. Figley (1999) identify police officers with compassion fatigue may experience lower concentration, apathy, disorientation, decrease in self-esteem, and thoughts of self-harm or harming others and minimization of feelings, low work production, staff conflict, absenteeism, social withdrawal, and task avoidance.

## Bio-Psycho-Social Impact

In the compassion fatigue research, Figley (1999) identifies that emotionally, police officers may experience guilt, rage, lack of power, anxiety, loss of control, fear, depression, feelings of emptiness and sadness. Behaviorally, Figley stated police officers may show irritability, appetite changes, social withdrawal, mood swings, increase in accidents and forgetfulness. As a result, Figley posited that police officers may experience somatic complaints which include sweating, rapid heartbeat, reduced or limited immunity, increase in aches and pains and higher risk for other medical problems. Gentry, Baranowsky, and Dunning (2002) posited the increase of negative arousal or intrusive thoughts can come as a result of the reexperiencing of the trauma or a trigger from a victim's trauma or memories or past traumas. Being trained to recall events for court or reports can increase the relived experience. It is also difficult for police officers to separate home life from work life. Police officers are taught to leave work and not bring their case load or experiences home as this can increase pressure and negative feelings in relationships. Danieli (1999) further adds that dealing with unresolved trauma and lowered ability to cope can cause transference of behaviors to the police officers children causing conflict in the home. The public expects police officers to behave according to social norms and to bury feelings and experiences, after all this is the job they chose, and it is part of the job. Kopel and Friedman (1999) identify the psychological impact resulting from changes in behavior between work and home life can be an exhausting emotional roller coaster traumatic in itself. Police officers may also

transfer their lack of emotion, inflexibility, and rigidity that make them effective police officers to their social roles, which may lead to the police officers being perceived as cold and uncaring. Violanti (1999) states this lack of social support systems can lead to less effective coping with traumatic situations. Violanti further adds the transference of the emotional burnout can lead others in the social circle to view the police officer as uncaring, unfriendly, and apathetic. The compounding negative effects of the emotional roller coaster between home and work life can leave officers less effective in their ability to cope and increasing the chance of developing compassion fatigue.

### Depersonalization, General Aggression Model, Burnout-Victimization Model

Bakker et al. (2000) provided evidence finding employees in health care professions who show emotional exhaustion and depersonalization have increased vulnerability to being assaulted by clients or threatened. These findings were also found in a study conducted by Gascon et al (2013) and Anderson and Bushman (2002) where empirically strong correlations between depersonalization, emotional exhaustion and violence in health care employees were identified. Burke and Mikkelsen (2005), Ellrich (2015), Shaufeli and Enzmann (1998), Winstanley and Whittington (2002) identify minor changes in a police officer's behavior put them at risk for victimization of violence or violent attacks. In the research by Bakker and Heuven (2006), Burke and Mikkelsen (2006), the increased exposure to organizational and operational stressors may lead to negative consequences for in role performance, individual well-being, and job

satisfaction. The changes in behavior often may change how an officer approaches a situation. Euwema et al, (2004) provide research that exhaustion and depersonalization may change officer behavior and negatively influence citizen encounters. Conn and Butterfield (2013) add that the inability to change situations and lack of insight into human nature only increases and exacerbates the magnitude of the external stressors reducing and affecting coping mechanisms. Paradoxically, Tehrani (2010) indicates emerging evidence relative to a caregiver understanding their role, even in extremely traumatic incidents can generate real meaning while experiencing tremendous personal growth. This comes with the premise that the caregiver can fully understand and change negative stress and energy into positive emotions and altruistic ideals. Tehrani further adds that much of the research identifies empathy come with some level of vulnerability.

Burke and Mikkelsen (2005), Kop and Euwema (2001) and Lambert et al. (2010) indicate officers who experience higher levels of burnout show more favorable attitudes for the use of violence and the support of punishment. Implications are made for officers whose departments allow for the use of force as attitudes may be affected by the process of inappropriate behavior and violence escalation. These studies identified depersonalization; the feeling of being impersonal, having emotional distance, callousness, hostility, and cynicism as reducing the objectification of humanity in the public as the moral threshold is reduced for the officer. Anderson and Bushman (2002) suggest social cognitive models such as the General Aggression Model provide in their study the identification of favorable attitudes for violence as a contributory factor in a

person's overall readiness to act out aggressive behaviors. Ellrich (2015) agreed adding that coupled with situational factors and the state of cognition, personal affect and arousal may increase the likelihood for one to act out aggressively. Police officers who view violence with positive attitudes are at increased risk for provocation from civilians and increasing violent acts. Alpert, Dunham, and MacDonald (2004) conducted analysis of evidence for police passiveness and violent circumstances, identifying the officers' part of the interactive process where each participant determines how they will react to the escalation of emotion and violence. Alpert et al. (2004) identify police officers with higher levels of burnout as susceptible victims of assault during violent encounters. This does not explain whether officers with higher levels of burnout are at increased risk of being the executioner of the violence during citizen encounters. Ellrich conducted research using a cross sectional survey and binary logistic multilevel structural equation model to investigate the link between violent victimization (physical assaults) and burnout and depersonalization to determine whether self-protecting behavior increased risk for victimization. By examining two pathways, emotional exhaustion and being a victim of a violent assault and depersonalization and being a victim of violent assault. Ellrich explains that higher levels of emotional exhaustion stemming from work overload, the organization, and lack of flexibility should be addressed by police organizations as the lack of coping skills, and energy are less motivated to engage in social behaviors, i.e., communication, empathy, and affect regulation leading to verbal force interactions and leaving them subjected to attacks. There are limitations to this

study as there is no way to identify causal relationships between victim vulnerability, burnout, civilian behavior, and workplace bullying while no consideration was made for the violent or aggressive behavior of the police officer or the addition of another officer present at the incident. The use of self-report questionnaires in this study increase the introduction of bias in the research, as use of force by officers in this geographic area is still controversial. The research does provide a basis for future longitudinal studies in police use of force and physical or violent encounters. Kop and Euwema provide research on officers with increased levels of exhaustion reported more verbal use of force encounters with citizens, leaving question as to whether there is increased propensity to utilize physical force or physical violence in encounters with civilians when exposed to high levels of burnout. van der Velden, Kleber, Grievink and Yzermans (2010) indicate stressors and aggressive confrontations increase in officers who show symptoms of severe anxiety, severe depression, and mild to moderate PTSD symptoms which are related to a reduction in job satisfaction, functional impairment, and an increase in frequency of confrontational behavior.

## Sleep Deprivation

Vila et al, (2002) identified sleep deprivation as a factor in creating a cognitively impaired police officer, where speeds, cognitive performance, motor, and task alertness are significantly impaired. Caldwell (2012) and Hope (2016) studies identify sleep deprivation and disruption has shown to impair performance in high pressure occupations

where time-critical decisions are necessary. The effects of stress, fatigue, and sleep deprivation has been well documented in human performance literature. Vila et al. found that police officers often report for duty in a tired, sleep deprived state at a rate between 14-18%, affecting their ability to perform job assignment and drive. Hope and Vila et al (2000) report in police self-report surveys, normal shift work and extended shift work has been indicative of safety errors and self-reported errors. This also coincided with much of the research on workplace accidents and the relationship with fatigue. Vila et al. report police officers who work an excessive number of hours maybe chronically fatigued often are at an increased risk of developing stress related disorders and illness and increasing the likelihood of making decision errors. McCarty and Lawrence (2016) conducted a longitudinal study on police recruit's exposure to stress during academy training and identified how chronic stress exposure lead to burnout and a decrease in workplace performance even at mild to moderate levels. This was significant in studies conducted by Hope (2016), Nieuwenhuys, Savelsbergh and Oudejans (2015), Regehr and LeBlanc (2017) as law enforcement officers are repeatedly exposed to trauma and high stress situations as a result of daily work exposure and interrupted sleep patterns can increase the likelihood of stress related disorders while having a significant consequence on the effectiveness of decision making and responses. Longitudinal studies by Gutshall et al (2017), Regehr and LeBlanc; Taverniers, Ruysseveldt, Smeets and Grumbow (2010) have addressed how increased level of distress over long periods of time increase negative affect, while exposure to high stress and repetitive trauma impacts memory,

behavior, increases depersonalization, alters perceptions, and impairs performance. Gutshall et al., Violante, Andrew, Mnatsakanova, Hartley, Fekedulegn and Burchfiel (2015) specify police officers with increased exposure to high stress showed increased sense of hopelessness, suicidal ideations, hypervigilance, reduced awareness, and sleeplessness.

Gutshall, Hampton Jr., Sebetan, Stein and Broxtermann (2017) research states resiliency to stress and cognitive performance may also stem from years working, support systems, age, education, family situations, number of days off which are critical components in the ability of a police officer to make decisions, think and act quickly and precisely, with accurate memory. Kleider-Offutt, Clevinger and Bond, (2016) depict that stress levels are often categorized into two types; Type I low operational where a person remains alert and vigilant, with situational awareness while Type II acute reflects high stress, high alert, life threats and states of emergency. Lewinski, Dysterheft, Priem and Pettitt (2016) present research that an officer's inability to recall pertinent information post incident may be viewed as deceptive in court proceedings and investigations despite the inability to perform memory recall after a stressful event is common throughout the general population. This may call into question the public's perception of transparency and whether police corruption, collusion and cover-ups exist.

Strahler and Zeigert (2015) have identified the over adaptation of endocrine response, endocrine insensitivity, blunted cortisol stress response and hypercortisolism as forms of

coping in stress producing incidents. In studies by Regehr and Le Blanc (2017), increases in cortisol levels have implication for verbal impairment, attention and memory. Hope (2016), Adolphs, Tranel and Buchanan (2005), and Phelps (2006) have reported emotional arousal as activating the amygdala therefore enhancing memory. Despite these studies, many researchers including Deffenbacher, Bornstein, Penrod, and McGorty (2004), Diamond, Campbell, Park, Halonen, and Zoladz (2007), Hope (2016), Lupien, Maheu, Tu, Fiocco, and Schramek (2007) agree in regards to human performance literature that higher stress levels impair memory performance based upon level of stress and task performance. Strahler and Zeigert (2015) research for police officers who are exposed to serious events routinely, believe this has resulted in the adaption to stress. Gutshall et al (2017), Morgan et al. (2006), Regehr and LeBlanc (2017), Salo and Allwood (2014) research shows long term exposure to stress has been well documented in research to show change in a person's perception, impacts problem solving, whereas workplace demands are identified as a major contributor to overall well- being and impairment in working memory, dissociation and inaccuracies in memory. Lewinski et al (2016) reports working memory may not perform to optimal performance based upon overload of information creating deficits in cognition, response times and accuracy in reporting. Hope (2016), reports that this is exacerbated when the officer is involved in a use of force incident.

Regehr and LeBlanc (2017) identify the growing evidence in police research for impaired work performance and exhibition of elevated stress response and acute stress

stages. Kassam, Koslov and Berry Mendes (2009) identify the type of stress as having significant impact on abilities to do well on cognitive tasks, where positive feedback increasing the cognitive resources available to cope and do better on task related situations than those who received negative feedback. Kassam, Koslov and Berry Mendes (2009), have documented dual processing reasoning adjustment and anchoring where judgement, beliefs, attitude and decisions are a result of automatic processes. Boulton and Cole (2016) have concluded through their research that an officers' decision is often formed by the nature of the situation itself, which uses more complex cognitive process. This contradicts traditional stress research despite the need for heightened use of cognitive abilities and cognitive control and working memory cognition and load. Tehrani (2010) identifies how decision making is a result of beliefs, attitudes, cognitive schema and past experiences shaping new perceptions. Research conducted by Ma, Correll, Wittenbrink, Bar-Anan, Sriram and Nosek (2013) used a correlational study design that identified officers with cognitive resources that were fatigued or compromised had an increase in racial bias during shooting incidents while situational and external factors lowered the threshold in decision making. Ma et al. (2013), found fatigue reduces cognitive control which is regulated by physical and cognitive conditions which can be induced through environmental factors like sleep deprivation and stress. The physiological response to stress has been shown to reduce dexterity and motor performance. McCarty and Lawrence (2016) and Violante (1992) identified that coping strategies experienced by newer and older police officers are significantly different,

where newer officers are far more likely to experience maladaptive strategies which increases levels of stress compared to older officers who distance themselves by utilizing task-oriented strategies reduced levels of stress.

## Working Memory

Working memory performance also plays a large role in the ability to cope with stress and decision making. Baddely (1986) identifies working memory as the ability to keep and alter information necessary to effect cognitive functions. Baddeley and Hitch (1974), Baddely (1986, 1993), Kane and Engle (2003) suggest a working memory model which provides compound interaction between attention, memory and cognition. Kane and Engle conducted extensive working memory studies that developed a clear and pervasive predictor of cognitive abilities including reasoning and retention where intelligence had no moderating effect on the correlation and an even greater predictor of attention control. Kane, Brown, Mcvay, Silvia, Myin Germeys and Kwapil (2007) concur in their study on working memory. Kane et al. (2007), working memory cognition (WMC) controlled the relationship between attention control and the cognitive demand of the given activity. Morgan et al. (2006) suggest the ability to recall information lies in the prefrontal cortex as the working memory, where exposure to acute traumatic stress increases cognitive impairment. Kleider-Offutt, Clevinger and Bond (2016) conducted a study on working cognitive load (the amount of information a working memory can effectively hold at one time and performance of police officers in a shoot-don't shoot

scenario (Kirschner, Sweller, Kirschner & Zambrano, n.d.). Research also by Ma et al (2013), presented in fatigue that resulted from even mild sleep loss results in lowered processing capability and efficiency of the working memory and cognitive depletion.

Kane, Bleckley, Conway and Engle (2001), Rosen and Engle (1998), specify the differences in working memory capacity reflects heavily on the ability to focus attention and engage in cognitive task completion often referred to as controlled attention. In Kane et al (2001), controlled attention research suggests working memory is attributed to individual differences in executive control by effectively maintaining goals and attention to stimuli while maintaining information in memory while using attention to focus on a secondary task. Individuals with high working memory have shown to have better recall and ability to perform duties when distracted by other stimuli. Experimental research by Kane et al (2007) has shown that low WMC have increased distraction and memory errors indicating a vulnerability to decreased executive functioning and mind wandering during directed activities indicating cognitive failure and increased effort for focused concentration.

The researchers sought to identify decline in controlled vs. heuristic decision making and task completion while immersed in a simulated shooting scenario. There is limited research into specific performance related problems as in shooting accuracy versus decision accuracy moderated by an officer’s psychologically related impaired performance. Researcher by Kleider-Offutt, Clevinger and Bond (2016) have identified

executive functioning as being related to overload as a taxed working memory results in the inability to focus and reduced overall attention. Regeher and LeBlanc (2017), Kleider-Offutt et al. conducted research that identifies when cognitive resources are fatigued, a reduction in processing capabilities occurs reducing cognitive ability to decode non-verbal cues resulting in emotional judgment lead to shooting bias, while in states of anxiety increased the risk of misidentifying facial expressions and other stimuli as threatening resulting in attention bias and task bias in shooting scenarios. Ma et al (2013) suggests sociological data supports research that police officer fatigue greatly relates to shooting behaviors. Rosen and Engle (1998) conducted research into working memory capacity which showed a correlation between low and high- level performance of cognitive tasks, focused attention and reasoning. Based upon extensive research, a decrease in executive functioning impairs decision making capabilities, mental processing, working memory, regulation of emotion and self-monitoring.

## Low Working Memory Cognition versus High Memory Working Cognition from Stress

Research conducted by Kleider-Offutt, Clevinger and Bond (2016) included the comparison of Low Working Memory Cognition (LWMC) and High Working Memory Cognition (HWMC) where the research suggests persons with LWMC had less control where controlled decisions were necessary, as shown in shoot/don't shoot decision experiment research. The studies conducted by Kleider-Offutt Clevinger and Bond.,

Vickers and Lewinski, (2012) reinforced the idea that adverse decision making was impacted by the stressed Working Cognitive Load (WCL) which resulted in the return to heuristic or automatic decision making, criminal stereotyping and a deviance in training procedures although there are few laboratory studies on police or public to reinforce reversion to automatic dorsal processing. The preliminary information from research by Vickers and Lewinski showed how seasoned officers perform better on shooting tests than rookie officers as a result of attention deficits such as being focused not on the suspect and inappropriate weapon handling. Kleider-Offutt, Clevinger and Bond research findings concluded there is an increase in negative affect with increased threat, increased levels of fatigue, physically trying to regulate the stress load and LWMC. Ma et al (2013) add that police officers rely heavily on cognitive control for decision making which can be vastly disrupted by fatigue and cognitive load. Ceschi, Demerouti, Sartori and Weller (2017) reinforce this idea in their study identifying that cognitive strain, physical strain and exhaustion limit cognitive capability and energy which effect short and long-term performance.

Research by Vickers and Lewinski (2012) shows WMC is not modifiable through training, although high stress training can lead to better overall decision making. The research by Nieuwenhuys, Simone, Caljouw, Leijsen, Schmeits and Oudejans (2009), Vickers and Lewinski suggests that special trained officers in elite units made less errors in decision making due to greater exposure to high stress training and moderating stress hormone levels than officers under normal training whose performance deteriorated.

Nieuwenhuys et al (2009) reports when officers were able to practice during high stress anxiety producing scenarios, they exhibited increases in mental effort and threat related information. Harris, Eccles, Freeman and Ward (2017) reinforce the research idea of skilled and experienced police officers as experience and exposure to performing tasks under stress allows for mediating the psychological performance under stress induced situations. Hope (2016) identifies in much of the literature how low to moderate exertion can benefit cognitive performance, but high levels of exertion have an adverse and even harmful effects on memory. This creates conflict in the undertrained and overtraining conceptual models. Nieuwenhuys, et al. (2009) investigated police officer performance during arrest and self-defense maneuvers identifying that anxiety heightens self-conscious behaviors such as feelings and thoughts during stress than to relevant tasks. Nieuwenhuys et al. (2009) likened the behavior to choking under pressure after long periods of sedentary activity to unexpectedly being exposed to a critical incident. Officers are often sedentary followed by brief moments of stimulation and physical exertion. How officers prepare themselves for unexpected stress or exertion may play a role in overall fatigue and ability to recall events. While Tehrani (2010) agreed that overall personal growth comes from preparedness by maintaining health and fitness, a healthy work-life balance, self-reflection and social support. Hope (2016) posited that stress and fatigue cause impairment in cognitive functioning and motor performance which has shown in much of the literature to prevent accurate recall of events. The cognitive impairment caused by compassion fatigue has not been researched on use of force incidents.

## Coping with Stress, Decision-Making, and Performance

Extensive research by Sparks, Faragher and Cooper (2001), Györkös, Becker, Massoudi, de Bruin, and Rossier (2012), Mark and Smith (2008), Salo and Allwood (2014) have long disputed that the effects of workplace stress on individuals may vary greatly affecting decision making capabilities. Harris, Eccles, Freeman and Ward (2017) posit that facing stressful situations can lead to negative effects such as anxiety, puts employees at risk for accidents and lowering productivity rates. Nieuwenhuys, Savelsbergh, and Oudejans (2012) identify anxiety as having a large influence on cognitive and motor performance. Griffin and Sun (2017), Hope (2016), Vila, Morrison, and Kenney (2002) posited that police officers are no less susceptible to the effects of stress as the general public, however police officers are at greater risk of developing stress related disorders as a result of unique occupational demands, exposure to life or death situations, shift scheduling, sleep deprivation, erratic work hours which place extreme physical, mental and emotional demands and work-family conflicts. In a study conducted by Ceschi, et al., (2017), decision- making competency involves a self-regulatory mechanism which job demands, resources and exhaustion deplete a person's resources effectively lessening the ability of executive functions to efficiently perform. Police officers are tasked with responding to dynamic and dangerous situations where the potential of life threats is mitigated by operational mandates as well as individual contextual factors. Griffin and Sun (2017), and Hope present the contextual factors identified throughout the literature as levels of physiological and psychological stress,

anxiety, experience, training, fatigue and the perceived. Vila, Morrison, and Kenney identified police officers who are tired show impairment in cognition or those who are stressed show a decrease in coping skills, overall performance decision making capabilities, putting their health and safety at risk as well as the publics.

Decision making in stress induced situations has been the subject of applied contexts and laboratory studies. Kassam, Koslov, Berry-Mendes (2009) and Vila, Morrison, and Kenney (2002) suggest the amount of stress a person is exposed to can affect memory, perception and cognitive abilities. Griffin and Sun (2017) report for police officers, stress is often categorized as either occupational; as in exposure to dangerous and unpredictable police work or organizational; as in work hours, bureaucracy, supervisor relationships. Kleider-Offutt, Clevinger & Bond (2016) specified that decision making tasks for police officers should be controlled, unbiased and informed based upon procedure, training and protocol and less on conditional and emotional stress. Regehr & LeBlanc (2017) detailed how society relies on the ability of police officers to make sound judgments during exposure to high-stress events and in the regular course of their work. Harris, Eccles, Freeman & Ward (2017), Kassam, Koslov, and Berry- Mendes (2009) research identified that although there have been conflicting results in the field of stress research, stress hormone levels, social pressure and naturally induced stress have yielded similar results in impaired memory and reduce conscious reasoning studies while how a police officer prepares himself, copes or relies on skills developed through training may be effective in decision making and improving overall

performance. Police officers sleep deprivation is well documented throughout the literature as irregular work schedules and excessive overtime make for good research candidates. According to Griffin and Sun (2017), Luckhaupt, Tak, and Calvert (2010) in the National Health Interview Survey, police officers are four times more likely to suffer from sleep deprivation. Vila, Morrison, and Kenney (2002) research agreed further stating this may be problematic for police departments as chronically fatigued people may develop maladaptation's such as short tempers or rudeness that create adversity when dealing with the public or in discretionary decision making. Vila, Morrison, and Kenney continued with results showing long term consequences of fatigue are relationship and attendance problems, increased stress, inability to cope with often complex decision-making tasks in threatening situations and workplace injury.

In research conducted by Daniels, Beesley, Cheyne and Wimalasiri (2008), the use of problem focused and emotional coping process during consistent and episodic situations. Salo and Allwood (2014), Kassam, Koslov and Berry-Mendes (2009), Daniels, Beesley, Cheyne and Wimalasiri (2008) conducted research which emphasized how stress situational conditions and incidental emotions impact the decision-making process. Gutshall, et al. (2017) identified stress symptomology to include lack of empathy, burnout, disassociation, poor impulse control and anxiety, while autonomic physiological symptoms include tunnel vision, loss of dexterity and fine motor skills, increased blood pressure, aggression and limited problem-solving abilities. Gutshall et al. posited that aggressive behavior stemming from an increase in burnout symptoms emphasizes the

needs for preventative measures for law enforcement officers and are often prone to increased rate of developing stress related disorders. Gutshall et al. further suggested that stress impacts problem solving capabilities resulting in wrongful arrests, improper shootings, poor memory recall and excessive use of force. Morgan, Doran, Steffian, and Southwick's (2006) research addressed persons with greater exposure to acute trauma have shown a decline in cognition, memory, dissociation and recall.

## Compassion Satisfaction

Compassion satisfaction refers to the feeling of contentment and gratification from helping in any situation of trauma. Stamm (2002) identifies compassion satisfaction is an integral part of the process of helper fatigue. Kohan (2002) further includes in the sense of accomplishment lies fulfilment from work resulting in positive attitudes, increased self-esteem and overall gratification in one's life. Furthermore, Yates and Pillai (1996) provide that the more support officers receive from their department and the government, the less stress the officers have, which has the potential to result in higher compassion satisfaction. Stamm (2002) posits that compassion satisfaction also functions as the chief mediator and perhaps moderator for compassion fatigue.

## Resistance to Compassion Fatigue

Stamm, (2002) identified key components of compassion satisfaction come from positive attitudes and good social support and the lack of control in traumatic situations can lead to psychological distress. Valent (2002) suggested that police officers who are

well grounded to social support, maintain positive attitudes and the ability to adapt to critical incidents, managing fight or flight symptoms and using biological, psychological and social resources contribute to lessening the development of compassion fatigue. Perlman and Caringi (2009), Figley and Roop (2006) reinforce that people who experience secondary exposure to negative trauma may never develop symptoms of compassion fatigue due in part because of strong social supports. Coetzee and Laschinger (2017) identify three criteria which reduces the likelihood of nurses developing compassion fatigue as inadequate positive feedback, lack of resources and how the nurse response to personal distress.

## Use of Force

Police officers have a responsibility to the public they serve, by safeguarding and protecting against those who break the law and use violence towards the police, the public and themselves (Adams, 2015). Without public support, the relationship between police and the community can turn consequential, where legitimacy and effectiveness are compromised (Adams). Although police use-of-force research began in the 1950's to track excessive or deadly violent acts, significant advancements did not come until the 1990's (Klahm, Frank, & Liederbach, 2013).

Past studies have contributed the field of use-of-force research, but most lacked the concept of identifying what was meant by the term *force*. Klahm, Frank, and Liederbach, (2013) posited that much of the research was focused on violent physical

behaviors with historical context from the Vietnam War protests and the Era of Civil Rights with a focus on police deadly force and excessive use-of-force. In the 1990's, Garner et al. (1995) had contributed significantly with two advancements in police use-of-force; first by adapting the National Academy of Sciences (NAS) definition of violence, a basis was provided for an explicit definition of force in police literature and had adapted the NAS definition to include threats, attempts, and physical force, therefore filling a large gap in the literature and providing a standard measure for how force can be identified as in police research.

Garner et al. (1995) included nonviolent behaviors as an approach to measure force which involved the use of coding schemes for continuums that have been included in many large police departments training and policies. Garner et al. had proposed a standardized and conceptual definition of force for all future research on the subject. Adams (1995) had outlined much of the problems in identifying force and offered that all researchers be less concerned with situations that used force and more concerned with times when force is frequently applied. Although Garner et al. had made significant advancements in the conceptual construct, existing studies failed to differentiate between the dichotomies of force; lethal vs. non-lethal, physical vs. nonphysical, and excessive vs non-excessive force and could not clarify the operational definition of force to include police presence, verbal commands, and restraint and control techniques which has led to some confusion in the interpretation of the past research (Klahm, Frank, and Liederbach, 2013). The recommended best practice when conducting studies on force is to clearly

define the operational construct for use-of-force in order to determine influencing factors and ensuring the data are properly measured.

The International Association of Chief of Police (IACP, 2001) data collection on use-of- force incidents is difficult to obtain and collect due to inconsistencies in departments reporting incidents, policies and selection bias in those that are reported. Adams (2015) identifies how the Bureau of Justice Statistics (BJS) reports use-of-force incidents are used in only one half of 1% of dispatched calls in recent data collection collaboration between IACP and the National Institute of Justice (NIJ). Obtaining data on such infrequent events has proven difficult in determining use-of-force research methodologies, such as cost, reliability and accuracy of data collected (Adams). After reviewing 3,340 use-of-force incidents in 3 U.S. agencies, Terrill and Paoline, (2017) determined that police organizational policies can have both consequential and influential effects when constraining use of force for police officers. Some of the policies have included very different structure, whether written directives, permissible tactics, training, review processes, reporting and how the use-of-force continuum is both utilized and designed. This adds to the overwhelming lack of consistent data which is capable of being collected. Klahm, Frank, and Liederbach, (2013) emphasized the necessity of conceptual definitions, as clarification and formulation of ideas provide for a precise definition allowing for clear interpretation of empirical findings.

## Influences on Use-of-Force Decision-Making

Police officer decision making in use of force incidents can have profound and life-long effects on the officer, the police department and the community. How a police officer makes decisions has been a relevant study topic in recent years as the public has called for transparency and reform after cases of deadly force have been highly publicized. The decision to use force when faced with crisis or high-risk situations has presented with increased progress in research to understand how police officers formulate judgment and decision making (Brown & Daus, 2015). Much of the decision-making research is based on the dual-process models of unconscious and systematic processing vs. conscious and effortful processing. Issues have arisen in research where critics of the dual process model believe that the two systems are inseparable and based on similar rule-based judgments (Brown & Duan). Brown and Daun opined that an officer's ability to control anger and emotion may influence their ability to make rational decisions. The ability to regulate cognitive processes can be taxed when personal resources are depleted and when completing multiple tasks (Ceschi et al., 2017). In high demand jobs, the impairment in self-regulatory processes comes from a lack of personal resource reserve, exhaustion, cognitive demands, emotional demands and burnout (Ceschi, et al.). Niewenhuys, Savelsbergh and Oudejans (2012) added that officers with increased anxiety have altered visual orientation, are easily distracted by non-relevant and task related threat information, have shorter goal direction resulting in less accurate, but faster shooting. Niewenhuys, Savelsbergh and Oudejans identified in research conducted on

anxiety and police as there are relational concerns as basic skills execution are limited by the increased attention to the threats but show quicker decisions and impaired in response to those threats' judgment. Having increased pressure and anxiety on the job causes officers to miss task relevant information, such as identifying weapons and negative stereotyped suspects by responding faster to threats resulting in false positive threat related constructs (Blanchette & Richards, 2010; Niewenhuys, Savelsbergh & Oudejans, 2012).

Threat and anxiety affecting police related performance and influencing decisions are an inherent part of police work (Niewenhuys, Savelsbergh, & Oudejans, 2015). Controlling fear related response has been addressed in literature by posing simulated methodologies on police officers to determine decision making consequences. These types of studies are impaired by the ability to collect live data at the time of police related incidents. In studies conducted by Niewenhaus, Savelsbergh and Oudejans and Landman, Nieuwenhaus, and Oudejans (2016) self-control strategies and anxiety producing methods were induced to assess decision related actions in controlled environments, but data from training studies indicate real life scenarios are far more prone to high levels of stress and decision related errors. Niewenhaus and Oudejans (2011) reported a decrease in aim performance and an increase in officer's heart rate as speed and accuracy are compromised by the heightened state of arousal and an increase in avoidance behaviors associated with anxiety. Despite the studies on increased training and practice, most researchers found that false-positive, bias related shooting responses did not change over

time when police officers were faced with anxiety producing high threat situations in simulated studies.

## Summary and Conclusions

This chapter has presented and discussed the research and studies that have been conducted about the theory and relationship of police use-of-force and compassion fatigue. Clevinger and Bond (2016), Kleider-Offutt, Regehr and LeBlanc (2017), Morgan et al (2006), Strahler and Zeigert (2015), Vickers and Lewinski (2012) all identify the limitations to these types of testing and that research is documented throughout much of the literature as posing conceptual and methodological concerns as the inability to measure or simulate accurate real life-threatening situations may not give accurate reporting or the occasion of alternative explanations or provide viable research in psychobiological responses, create realistic perception or alter cognition as the police officer is aware the scenario is laboratory based. Harris, Eccles, Freeman and Ward (2017), Strahler and Zeigert (2015), and Oudejans (2008) question the ability to create natural or immersive experiences for real life use-of-force scenarios stating there are limitations by technology and virtual reality shortcomings while research for occupations such as law enforcement expose subject participants to harm and death. In research conducted by Harris et al. (2017), officers were asked how they believed they would respond in a situation or what they thought they would do instead of using guided recall for similar experiences which leads an officer to revert to policy, procedures and training.

The recall may not reflect the officer's true response when faced with a life or death decision. Niewenhaus, Savelsbergh, and Oudejans (2011) provided insight into high threat situations and anxiety, as a police officer's decision to use force can be attributed to cognitive processing and reserve, behavior and emotional responses all which influence judgment. Ma et al. (2013) identified officer decision making as a complex concept and contains many variables including types of calls, neighborhood arousal, fatigue, cognitive load and working memory, all which provide unique complexities in conducting real life research which are difficult and pose ethical dilemmas for field research. The simple idea that an officer can develop anxiety and compassion fatigue as a result of secondary trauma exposure has yet to be researched for its overall effect on use-of-force judgments. Within this chapter, the literature search, literature review and theoretical foundations were provided. Chapter 3 will further provide the research methodology for the study to evaluate both the hypothesis and the research questions.

# Chapter 3: Research Method

The literature addressed how police officers experience high levels of stress as a result of exposure to all kinds of trauma. The trauma may affect an officer's ability to gain proper sleep, reduce working cognitive load, and make effective decisions (Figley, 1995). The trauma a police officer experiences is often carried on beyond their shift as they are exposed to far more impactful events than an average citizen. The research revealed that how an officer learns to cope with their experiences may influence how the officer performs at future incidents. The mental preparation needed to be effective in unpredictable situations can be overwhelming to many police officers. As officers are continuously exposed to different types of trauma, there is concern that they will experience burnout, low job satisfaction, and compassion fatigue (Figley). Police officers are taught to internalize feelings often resulting in the development of self-destructive behaviors.

## Research Design and Rationale

This study addressed the relationship between police officers' development of compassion fatigue and increased use of force during incidents. The data were gathered through a standardized compassion satisfaction-compassion fatigue scale (ProQOL-5) and a use-of-force self-report indicating type and number of times each type was used. The independent variable in this study was compassion fatigue as measured by the police officers' responses to the ProQOL-5 indicating whether police officers showed

compassion fatigue or compassion satisfaction. The dependent variable was police officers' use of force as measured by types and number of times used. The research approach was quantitative addressing the predictive relationship between the independent and dependent variables, as well as differences among groups (see Creswell, 2013). The predictive study was conducted using a validated and reliable survey instrument.

The data sets were analyzed using an ordinal regression model with compassion fatigue as the predictor and use of force as the outcome to determine whether a significant relationship exists. An ANOVA was conducted to determine whether there was a statistically significant relationship between the types of force used by police officers. Data analysis indicated that a change in methodology was necessary. Due to the low response to lethal use of force, this option was eliminated, and the variable was changed to use of less than lethal force and no use of less than lethal force. A change to a *t* test was made based on the new variable description.

The goal of this study was to collect a large enough sample to detect meaningful effects, and to minimize researcher bias by using a standardized questionnaire. There were no foreseeable time and resource constraints in this study as there was adequate access to police officers throughout the United States, which enabled me to collect data from a large sample through emailed questionnaires. Collecting reliable data from surveys for the purpose of making inferences about human behavior has long been

utilized by social science researchers (Frankfort-Nachmias & Nachmias, 2008; Kukull & Ganguli, 2012).

## Population

The target population was certified police officers (a) who had used some level of force in the last 30 days, based on the use-of-force continuum that included less than lethal through deadly use of force, and (b) who were between the ages of 21 and 55. The population was accessed through publicly available email addresses for officers representing small to large metropolitan police departments in the United States. Officers who failed to complete the test, had missing demographic data, or had other missing data were excluded from the study.

## Sampling and Sampling Procedures

Nonprobability snowball sampling was used because it was necessary to collect enough participants through the email chain to distribute the survey to certified law enforcements officers with a range of time in service. Snowball sampling allows participants to recruit other participants to engage in the study from their list of acquaintances (Frankfort-Nachmias & Nachmias, 2008). Snowball sampling ensured that enough surveys would be completed by police officers who identified as using some level of force in the last 30 days. In the recruitment email, I asked participants to forward the email survey to other certified police officers in their contact list. Each time an email was forwarded with the survey request, the group was asked to continue to forward the email

to police officers until enough officers responded to the survey. Officers who had used some level of force were included.

## Sample Size

A G*Power 3.1 analysis was conducted to determine the minimum number of participants. G*Power is available and downloadable statistical software used for the determination of sample size when alpha is known (Faul, Erdfelder, Lang, & Buchner, 2007). G*Power allows the researcher to calculate power based on the type of test being conducted as long certain variables (alpha, effect size and power level) are known (Faul et al., 2007). Power is a type of probability measurement ranging from 0 to 1, and indicates the strength of a hypothesis by ensuring that if the null hypothesis is rejected the rejection is done correctly so that an effect of any size will be detected and will establish statistical significance (Kraemer & Blasey, 2016). An a priori power analysis was conducted to detect a medium effect size of .25 and an alpha level of .05 for a regression analysis with two predicator variables. For each variable, 128 participants were required, so a minimum sample of 128 was needed (see Kraemer & Blasey, 2016). The statistical power was set at .80 to reduce the likelihood that the outcome would be based on chance. Although a .95 power is often recommended, much of the research in the social sciences has indicated that small sample sizes produced by large effect sizes may provide a noticeable effect including the possibility of inaccurate or incorrect results that tend to be larger than the true population; although using very large sample sizes generated by small

effect size in research, results may be the inclusion of having to invest immense resources to the study to produce an effect (Charan & Kantharia, 2013). A medium effect size may contribute to the minimization of missing significant results (Charan & Kantharia, 2013. For this study, I used a power of .80, a medium effect size of .25, an alpha of .05, and two predictors (independent and control variables) to calculate a minimum sample size of 128 participants. The total number of participants in this study was 144.

## Procedures for Recruitment, Participation, and Data Collection

The data collection for this study commenced after I received Walden University Institutional Review Board (IRB) approval (#10-30-19-0672900). A demographic survey was administered to the officers to collect demographic data, including sex, total years in service, and rank (patrol, detective, first line supervisor, and administrative). The officers were contacted through an email that provided a detailed description of the study, including information about the benefits and risks of participation and the ethical responsibilities of the researcher. Survey Monkey offered several advantages over the traditional paper survey. A request was also provided to the police officers who participated in the anonymous survey to forward the email to as many law enforcement professionals as they had access to through workplace email.

Once an officer agreed to complete the survey, the format included detailed instructions on how participants were to give consent and how the researcher could be contacted should participants have questions regarding the study. Information was

provided on anonymity for participants. A completed survey indicated that the police officer had agreed to participate in the research with the understanding that all results would available to participants if they provided their email address to me at a later time. The participants were under no obligation to participate or provide identifying information. The email address did not need to contain identifying information that would otherwise be accessible to the general public. Referral sources were provided to the officers in the form of an employee assistance program and other nationwide mental health providers if participants determined that they were in need of additional services or debriefing. The officers were asked to electronically sign the informed consent form if they did not have questions or concerns and if they understood that there was no obligation to participate in the study. The survey contained four parts: a demographic questionnaire, the ProQOL-5 survey instrument, the use-of-force questionnaire, and the Single Item Direct Measure of Force.

## Review

Police officer participants were instructed to complete the demographic survey. Officers were then asked to complete the ProQOL-5, the use-of-force questionnaires, the single item direct measure of force review. The data was only collected through the survey system and analyzed once the minimum number of completed surveys were obtained. There was no reason for further contact with participants for treatment or interviews. The survey data were stored a locked password protected computer. All

surveys were placed and held in separate files and data hardcopies have been stored in a locked combination protected filing cabinet for confidentiality.

## Instrumentation and Operationalization of Constructs

The survey contained only one published instrument, the ProQOL-5 scale to collect data for this the study. Additionally, three short sections were created in order to collect basic demographic information of gender, age, rank and years of working experience in law enforcement, the type of force used in the last 30 days which included soft techniques, less thank lethal techniques and deadly force. Permission was obtained from the ProQOL Center prior to conducting any research. (Appendix A).

## Professional Quality of Life Scale, Version 5

The survey used was the Professional Quality of Life Scale (ProQOL) Compassion Satisfaction-Compassion Fatigue scale (Stamm, 2010) (Appendix B). The ProQOL scale was developed from Figley's theory of compassion fatigue and is a revision of the Compassion Fatigue Self-Test for helping professions which has clinical implications to assess working professionals in the helper professions to direct measure their level of compassion fatigue, burnout, and compassion satisfaction and each subscale stands alone (Bride, Radey, & Figley, 2007). The ProQOL measures traumatic secondary exposure by a self-test measure. Although the ProQOL self-test is non-diagnostic and incidents of Compassion Fatigue do not yield an official diagnosis from the Diagnostic and Statistical Manual of Mental Disorders (DSM-V, 2013). The ProQOL-5 is useful

screening tool stress related health problems for persons working in the helping professions (Stamm, 2010). The ProQOL-5 was an appropriate instrument in this research as it is the most actively used tool to measure positive and negative affect of persons in the helping field and have experienced or been exposed to trauma. The ProQOL is used frequently in research surrounding compassion fatigue (Stamm, 2010).

Chopko, Palmieri, and Adams (2015) identified frequency of trauma exposure as contributory to post traumatic reactions. The current measure, the ProQOL-5 has been revised several times since its inception in 1995. The version used for this research is the current version 5. Over 200 published papers in the PILOTS database (the Published Literature in Posttraumatic Stress Disorder) reference the ProQOL scale, nearly 100,000 internet articles, of which half (50%) are quantitative peer-reviewed research articles on secondary traumatic stress issues, 46 use the current version of the ProQOL Scale (Knight, 2010; Stamm, 2010).

The measure was originally called the Compassion Fatigue Self-Test and developed by Charles Figley in the late 1980s. Stamm and Figley began collaborating in 1988. In 1993, Stamm added the concept of compassion satisfaction and the name of the measure changed to the Compassion Satisfaction and Fatigue Test, of which there were several versions. These versions in the early 1990s were Figley and Stamm, then Stamm and Figley. Through a positive joint agreement between Figley and Stamm, the measure

shifted entirely to Stamm in the late 1990s and was renamed the Professional Quality of Life Scale.

In the early stages of compassion fatigue research, four scales emerged. Two of the developed scales, the Impact of Event Scale and the Traumatic Stress Institute Belief Scale were determined to not have a specific link to secondary traumatic exposure. These two scales were determined better suited for persons who were victims of trauma and for individuals who were exposed in a secondary nature as a helper capacity (Kadambi & Ennis, 2004). The remaining two scales were identified as specific measure for secondary trauma exposure. The two scales are the Compassion Fatigue Test and the Secondary Traumatic Stress Scale (Figley, 1995; Figley & Stamm, 1996; Stamm, 2002; Stamm, 2008). The operational constructs administered to the police officers were the ProQOL-5 Compassion Fatigue-Compassion Satisfaction scale. The permissions are in the appendix with the request that the data from this study is shared with Stamm and staff. The ProQOL is the third revision of the scale since its inception for use in the research community (Stamm, 2005a).

Stamm (2005) posited that the ProQOL measure is best when used in its current complete form. Stamm (2005) identified that some researchers have opted to cut scores to indicate measure of risk and protective factors exhibited by the participants. In the ProQOL-5, participants are asked to respond to questions identifying how often they experienced a particular item in the previous 30 days (Bride, Radey, & Figley, 2007).

Each statement has a 6-item Likert scale, where scoring is required for the sum of the total items in each of the 10 item subscales (Bride, Radey, & Figley, 2007). The scoring guidelines provide that the three scores are divided into a quartile method (Stamm, 2005). Stamm (2005) reported that marked cuts have been made at the 25th and 75th percentiles. This may increase the chances of a type 1 error by over including participants who may not have otherwise been included. Stamm (2005) states that the method of using cuts at percentiles may increase the possibility of obtaining a false positive result even if a participant is placed in a group in which they don't belong, but provides that including someone who does not belong to a particular group is better than excluding someone who should be listed in a particular group so that they the participant is considered.

The compassion satisfaction scale measures work related stress as a result of secondary trauma exposure (Stamm, 2010). A score of 33 or above would be an indicator of job satisfaction, proving an internal reliability of .87 (Stamm, 2010). The burnout scale measures feelings of score of below 18 is indicative of positive feelings about the participant's effectiveness in productivity based upon the workload in their job (Stamm, 2010). Scores above 27 may indicate feelings of ineffectiveness, providing an internal reliability of .72 (Stamm, 2005). The compassion fatigue/secondary trauma scale measures trauma-related issues including fear, and scores above 17 may indicate a potential problem reflecting elevated levels of compassion fatigue and secondary traumatic stress exposure, providing an internal reliability of .80 (Bride, Radey, & Figley,

2007; Stamm, 2005). In order to determine the true effect of the independent variable on the outcome variable, compassion satisfaction was assigned as the control variable.

## Reliability and Validity of the ProQOL

Researchers should consider domain when determining which instrument to use in measuring compassion fatigue (Bride, Ragley, & Figley, 2005). More specifically, determination of what constructs of compassion fatigue fit the current study should utilize instruments that are easy to use and give simplistic presentation lend to obtaining unobtrusive and reliable responses (Cieslak et al., 2013). Stamm (2010) identified one particular study using the ProQOL had presented the alpha coefficients utilizing Cronbach's alpha had reported the compassion satisfaction scale as .88, a compassion fatigue scale as .81, and a burnout scale of .75.

Stamm (2010) reports the alpha reliabilities for the scales as compassion satisfaction alpha = .87, burnout alpha = .72 and compassion fatigue alpha = .80. Stamm (2010) also noted that in the original test, the reported alphas are slightly lower as a result of revision of the ProQOL scales to half the original size (compassion satisfaction alpha = .87, burnout alpha = .90, Compassion Fatigue alpha = .87). Stamm (2010) identifed that a reduction in collinearity is a result of increased specificity on the item to scale statistics with the standard errors of the measure being smaller to provide less margin of error interference, thus potentially improving the measurable effect size especially in clinical studies where sample size tends to be smaller. The test-retest data suggested there is good

reliability across time with a small standard error of the estimate (Stamm, 2010). Stamm (2005) indicated that based upon the measurement of the three different subscale constructs with small interscale correlations, convergent and discriminant validity are supported in the ProQOL by measuring multiple traits through multiple methods. The revision of the ProQOL from the original Compassion Fatigue Self -Test reduced the known collinearity between compassion fatigue and burnout scales increasing statistical significance (Stamm, 2010). The compassion satisfaction scale has 5% shared variance (r=.-.14; co-σ = 2%; n=1187) with the burnout scale. The compassion fatigue scale and 2% shared variance with the secondary traumatic stress scale where (r=-.23; co-σ = 5%; n=1187). Stamm (2010) reports that the burnout scale and secondary traumatic stress scale are clearly different, but an indication of a higher distress symptom are reported in both at a rate of 21%, as it is a trait in both constructs. The shared variance between these two scales is 34% (r=.58; co-σ = 34%; 14 n=1187) (Stamm, 2005). The scales both measure negative affect but are clearly different; the burnout scale does not address fear while the secondary traumatic stress scale does (Stamm, 2005).

Guidelines for scoring (Stamm, 2005) are based on a conservative quartile method whereby cut scores are based on the 75th percentile. As such, the guidelines suggest that a score of 33 or below on the compassion satisfaction scale may suggest job dissatisfaction. Guidelines for the burnout scale suggest that a score below 18 reflects positive feelings about one's ability to be effective in one's work, and scores above 27 may be cause for concern in that one may not feel effective. Regarding the compassion

fatigue/secondary trauma scale, scores above 17 should be considered to reflect a potential problem in this domain. Internal consistency reliability estimates for the sub-scales are reported as .87 for the compassion satisfaction scale, .72 for the burnout scale, and .80 for the compassion fatigue/secondary trauma scale. Stamm (2005) reported that a multi-trait, multi-method approach to convergent and discriminant validity supports the discriminant validity of the ProQOL suggesting that the subscales measure different constructs. Stamm (2005) did not note whether convergent validity was supported. The data supporting the validity of the ProQOL have not as yet been published or made publicly available and therefore cannot be assessed. Factor validity studies have not been published.

## Use-of-Force Self-Report Measure

The use-of-force self-report measure is a survey where the participant will identify through scale the types of force, they have utilized in the last 30 days (Appendix D). A self-report measure is an appropriate measure as Carlier (1999) indicates that police officers themselves are best to recount number of times and types of force they have used. There have been a limited number of studies which provide comprehensive examination of police attitude towards use-of force, despite the amount of research on lethal and non-lethal use-of-force measures in law enforcement. Garner, Maxwell and Heraux (2002) identify that much of the research that has been performed on police use-of-force has been categorical in nature by two steps; some force vs. no use-of-force or

adding a third category of excessive force. Additional survey questions will address the number of times the police officer has used the type of force reported in each case measured by single item direct measure.

The National Institute of Justice (2016) identifies the use-of-force levels, or continuum for police officers, as basic verbal and physical restraint, less than lethal force, and lethal force. Although there is no single, universally accepted or agreed-upon definition for use-of-force, the International Association of Chiefs of Police (2001) has described use-of-force as the "amount of effort required by police to compel compliance by an unwilling subject". Police officers should only use force necessary to effect and arrest, protect themselves and others from harm and to reduce the violence in an incident (NIJ, 2016). Basic verbal or physical restraint is defined as calm, nonthreatening commands, increase their volume and shorten commands, and Empty-Hand Control, where officers use bodily force to gain control of a situation either by grabs, holds joint locks, punches, or kicks to restrain the individual (NIJ, 2009). The less than lethal use-of-force is identified as blunt impact by use of baton or projectile to immobilize a person, chemical weapon or spray, or Conducted Energy Devices (CEDs) where an officer may use CEDs to immobilize an individual by the discharge a high-voltage, low-amperage jolt of electricity at a distance (NIJ, 2009). Lethal Force is defined as the use of a lethal weapon to gain control of a situation which should only be used if a suspect poses a serious threat to the officer or another individual. Officers use deadly weapons such as firearms to stop an individual's actions.

The identified controls in the study were gender, years of service employment, and rank. The gender was dummy coded as 1-male and 2-female. The length of the officer's employment or time in service is represented by (f) as frequency for the number of times the year is reported. The years of service was distinguished from 0-5 years, 6-10 years, 11-15 years, and 16-20 years and 20 plus years of service. The police officers rank was also reported as a frequency variable, with the following representations: 1= patrolman, 2=detective/investigator, 3=supervisor, 4= administrative rank (Assistant or Deputy Chief, Chief).

Single-item rating scales have been shown to be a convenient source in comparison to multiple-item measures which are designed to measure particular constructs. The purpose of the present study is to test the reliability and validity and comparison of a single-item attitude scale with the overall use-of-force categories and compassion fatigue and compassion satisfaction results. Participants included are 144 police officers between the ages of 21 to 55 (M = 40.5, SD = 7.67; males 122; 76.25% and 38 females; 23.75%) recruited from publicly available emails of sworn law enforcement personnel.

## Data Analysis Plan

The target population for this research consisted of approximately 2500 adult males and females who are sworn police officers in the United States with different years for time in service. A total of 957 police officers were sent an email invitation to

participate in the survey. I conducted a G* Power analysis and according to this test, the required sample had to include a minimum of 128 respondents as this was the recommended minimum sample size. The predictor variables were compassion fatigue and compassion satisfaction, while the criterion variable was use-of-force incidents. The ideal number of participants for this study was 128, where a total of 144 participants completed the survey. According to Cook, Heath and Thompson (2000), a reasonable expectation for survey responses sent via electronic mail service provide a rate of approximately 25 to 30% returns.

The data analysis was completed using SPSS Statistical Software Package Version 25. The data was prescreened and cleaned using SPSS data screening and cleaning features to increase the reliability of data provided in the data analysis, detection and correction of any errors, evaluation of test assumptions, identification of missing data and outliers, normality, homoscedasticity and linearity (Mertler & Reinhart, 2017; Osborne, 2013; Zhang, Zhang, & Yang, 2003).

The data analysis was completed by using descriptive statistics to calculate and summarize the demographics information obtained from the survey questionnaire. The ProQOL subscales were scored for incidents of compassion fatigue/secondary trauma, burnout and compassion satisfaction. Inferential statistics analysis was used to obtain conclusions about the hypotheses of this research, where ANOVA and regression analysis were completed. The purpose of regression analysis is to develop an equation

that both predicts values and explaining causal relationships on dependent variables (Mertler & Reinhart, 2017).

## Assumptions of Regression Analysis

There are two main assumptions in ordinal regression; raw scale variables and residuals or predictor errors. In raw scale assumptions, the researcher should assume that the independent variables are fixed, are measured without error and the existing relationship between both the independent and dependent variables is linear (Mertler & Reinhart, 2017). Residuals or prediction errors are the portion of scores which multivariate analysis does not account (Mertler & Reinhart, 2017). To meet the assumption of residuals, the researcher needed to find if the errors were normally distributed and not an extension of the independent variables, the variance produces homoscedasticity, any errors which are singularly observed from the dependent variable were not related to other observations and the observed mean remained at zero over several replications (Mertler & Reinhart, 2017). Violations of some of the assumptions are research design issues, issues of linearity, homoscedasticity and normality (Mertler & Reinhart, 2017).

## Research Questions and Hypotheses

RQ1: Does compassion fatigue predict use of force among police officers?

$H_o$1: Compassion fatigue does not predict use of force among police officers.

$H_a1$: Compassion fatigue does predict use of force among police officers.

RQ2: Are there group differences in compassion fatigue based upon types of force used?

$H_o2$: There are no group differences in compassion fatigue based upon types of force used?

$H_a2$: There are group differences based in compassion fatigue based upon types of force used.

## Threats to Validity

Validity of surveys is the process of assessing the survey questions to ensure they are accurate and reliable. Internal validity represents to what extent the survey inferred that a causal relationship has occurred by the manipulation of the independent variables and that the constructs of the study are appropriately measured (Campbell, Stanley, Miller & Salkind, 2003). External validity represents the application of the study conclusions to determine to what extent the study may be generalized to the population and across settings of time, people and context. (Campbell, Stanley, Miller & Salkind, 2003). By not addressing threats to validity, researchers can obtain incorrect conclusions if the threats which are not addressed or are overlooked during the sampling and research process. Validity was addressed throughout the study and controlled for by using random

sampling and having enough of a sample of population to ensure outcomes are not influenced unduly by sampling and selection bias.

## Threats to External Validity

External validity represents the application of the study conclusions to determine to what extent the study may be generalized to the population and across settings of time, people and context. (Campbell, Stanley, Miller & Salkind, 2003). The representativeness of the variables during the research design is subjective due to the effects of testing, researcher selection bias, the interaction or reaction that occurs as a result of the testing process, the reactive or interaction effect of testing, and low response rate (Campbell, Stanley, Miller & Salkind, 2003). The importance of recognizing external validity was acknowledged by accounting for pretest, treatment and reaction as they may alter the data collection and analysis process as well as the outcome of the study and the generalizability and transferability to the rest of the population. External validity threats are controlled for by accounting for selection bias and ensuring the sample obtained is from the representative population.

## Threats to Internal Validity

Internal validity refers to the accuracy of statements made about the causal relationships that have occurred by manipulation of the variables and that the constructs of the study are appropriately measured (Campbell, Stanley, Miller & Salkind, 2003). Internal validity is based on the procedures and operation that a researcher has used, the

measurement of the variables and their choice in the research design (Salkind, 2010). Causal relationships occur when the researcher can determine if one variable has occurred followed by the other variable, or the timing sequence of the variables and are not mitigated by a third variable (Salkind, 2010).

There was a possibility of threats to internal validity during this research which were addressed as history, maturation, testing, instrumentation, statistical regression, mortality, selection, ambiguity about direct or causal relationships, and rivalry between groups (Salkind, 2010). History poses a problem for internal validity when a new variable becomes available during the testing process. The variable is not equally distributed among both the control and treatment groups (Salkind, 2010). There was no new treatment or testing instrument that was available to participants during this study. This study did not contain a treatment variable, nor did it require the manipulation of any variable. Maturation occurs when participants change due to growth over the course of the experiment (Creswell, 2013; Robson, 2006). This was addressed by using a single testing process, with no repeating necessary. Testing can affect internal validity when over the course of the experiment, participants respond to the same testing instrument multiple times, therefore becoming more proficient at the test taking aspect. This was addressed in this study by only allowing participants to take the ProQOL survey and questionnaires one time. As a result of the one-time participation, there was no pre-test or post-test component, which can threaten validity of instrumentation. Based on the information that there is no pretest component and that the ProQOL is a reliable

instrument, statistical regression was not compromised as participant's performance was not measured by a poorly designed pretest, measurement error or chance. Mortality, rivalry, and selection was addressed by using a one-time survey, where participants were not purposely selected in the initial recruitment process nor were there any surveys included that were not completed if a participant decided voluntarily to withdraw from the process. This study did not contain a treatment variable, nor did it require the manipulation of any variable where participants were able to drop from a particular group and recruitment was larger than the recommended size to ensure surveys collected were complete. The participant assignment to the group required meeting a cut off score, which reduced the likelihood of researcher bias in group assignment.

The study approach using email surveys collected data over a short period of time (four weeks) to avoid time related issues and unpredictability in response time. Cronbach's alpha determined the reliability of the ProQOL instrument in this research study. Participants who did not complete surveys or non-response surveys posed concerns for sample size and to ensure that an adequate representation of the population was achieved. Recruiting from a very large percentage of the population provided the likelihood that the minimum number of the required sample size of 128 participants was reached.

## Threats to Statistical Conclusion Validity

The goal of this study was to provide evidence and further the body of knowledge for the discipline. Statistical conclusion validity is affirmed when the data are analyzed completely and accurately by use of the appropriate statistical method to address the research questions and stated hypotheses (Garcia-Perez, 2012). Inappropriate analysis methods where the conditions are altered or lack of controlling Type I and Type II errors can lead to incorrect conclusions (Garcia-Perez, 2012). Having a low statistical power to detect an effect can provide an increase in risk for a Type II error, thus resulting in an error that does not truly exist (Garcia-Perez, 2012). To determine whether a co-variation or relationship exists requires the appropriate statistical tests, adequate and reliable sampling and measurement procedures. Threats to statistical conclusion validity were accounted for in this research by using a significance level of .05 and a standard minimum significance level of .80, to minimize the likelihood of a false statistical significance.

## Ethical Procedures

In order to comply with the American Psychological Association's (2002) Ethical Principles of Psychologists and Code of Conduct, all research that was conducted safeguarded ethical treatment and protection of participants. Necessary precautions were taken to safeguard the participant's identity as it was not revealed within the research due to the anonymity of the survey. Police officer participation was strictly voluntary where

only demographic information was collected, adhering to anonymity and confidentiality within participants and all information collected was for the sole purpose of conducting research. A time frame of four weeks was allotted for data collection. Police officers who chose to participate and completed the study questionnaire were informed of the nature of the study and provided informed consent. There were no incentives for a police officer to participate or to answer the questionnaire they received through the email distribution. Police officers who did not complete the questionnaire or who decline to participate were not penalized in any manner. Police officers who participated had the right to discontinue at any time and for any reason by exiting from the electronic survey without penalty. There were no offers of any material inducement for participation and there were no negative consequences to those who decline to participate or withdraw before the study's completion.

The demographic information collected was generalized to gender, age, rank and time in service. In keeping with confidentiality, the raw data and electronic results from the electronic survey collected are maintained in a secured filing cabinet as well as stored on a password protected computer and backed up on a password-protected hard drive. All files will be deleted after 5 years or in accordance with APA standards. Protecting research participants is crucial to the research. No personal, demographic information or site description will be released in any way where someone may identify a research participant of this study. No one except the researcher or Walden faculty will view confidential data of this study. No transcriber or translator will be required.

All participants will have access to summary of the research conducted and results of the dissertation upon its completion. The voluntary participation in this research study may lead to an advancement of future research, intervention methods and treatment of compassion fatigue for police officers. The research design and ethical practices for this research study have been approved by Walden University IRB and assigned approval number 10-30-19-0672900 and subsequent IRB application and documents are listed under Appendix C.

## Summary

This chapter has presented and discussed the quantitative methods utilized to identify the relationship that exists between police officer use of force and police officer elevated compassion fatigue levels. Within this chapter, the research questions, population, sampling methodology, confidentiality, hypothesis, assessments, ethical considerations and collection of data have been provided. Chapter 4 will further provide a descriptive and analysis of the data that was collected to summarize the analysis used to evaluate both the hypothesis and the research questions.

# Chapter 4: Results

Chapter 4 presents the findings of the statistical analyses related to the two research questions and provides a brief explanation of the study intentions and data collection. The study was conducted to determine whether compassion fatigue was a predictor for use-of-force among officers between 21 and 55 years of age in the United States. The study also addressed the differences between the types of force used based on each ProQOL-5 subscale. This quantitative study was designed to answer the following research questions:

RQ1: Does compassion fatigue predict use of force among police officers?

$H_o1$: Compassion fatigue does not predict use of force among police officers.

$H_a1$: Compassion fatigue predicts use of force among police officers.

RQ2: Are there group differences in compassion fatigue based on types of force used?

$H_o2$: There are no group differences in compassion fatigue based on types of force used.

$H_a2$: There are group differences in compassion fatigue based on types of force used.

## Data Collection

Before data collection started, appropriate permissions were obtained for the ProQOL-5 Scale and Survey Monkey. The survey instrument included demographic questions, the ProQOL-5 Scale, and the use-of-force questionnaire. The survey was presented to participants in English.

The data collection period, which was initiated after receiving IRB approval (10-30-19-0672900), occurred between October 30, 2019 and November 19, 2019. A search was conducted of every state capital and all major metropolitan police agency websites to locate police officer work email addresses. If a work email address was located by internet search, the survey request was then sent to the officer via the email address. This process continued until the required sample size was obtained, which took 3 weeks. A total of 957 email surveys were disseminated.

There were 160 police officers who participated in this study; however, 16 participants did not complete the survey. These surveys were eliminated, resulting in a total of 144 completed surveys. The minimum number of participants needed was 128. The email invitation to complete the survey included a consent form. The consent form was the first page of the survey, and starting the survey served as the participants' written consent to participate. Each survey contained the ProQOL-5 Scale, five demographic questions, and four questions on use and type of force. The following section describes the participants' demographic responses. The information in Table 1 includes the number

of participants and their responses to the demographic questions in the survey, which addressed age, gender, number of years as a police officer, and current rank or assignment.

Of the police officers who completed the survey, 75.69% were male and 24.3% were female. Regarding rank, 36.1% of participants reported being detective/investigator/inspector, 36.1% reported being a patrol officer, 18.7% reported being a first line supervisor, 6.2% reported being midlevel management, and 2.7% being administrative chief/deputy chief level. Participants' age ranges were 36-40 (19.4%), 41-45 (19.4%), 31-35 (17.4%), 46-50 (16.6%), 26-30 (13.9%), 21-25 (6.9%), and over 51 (6.2%). Regarding experience, 24.3% had 21 or more years, 20.1% had 6-10 years, 20.1% had 16-20 years, 19.4% had 11-15 years, and 15.9% had fewer than 5 years of experience, as shown in Table 1.

Table 1

*Demographic Data for Participants*

| Source | Frequency | % |
|---|---|---|
| Gender | | |
| Male | 109 | 75.7 |
| Female | 35 | 24.3 |
| | | |
| Rank | | |
| Patrol officer | 52 | 36.1 |
| Inv/Det/Insp | 52 | 36.1 |
| 1st Line supervisor | 27 | 18.6 |
| Mid-level manager | 9 | 6.3 |
| Admin/DC/Chief | 4 | 2.7 |
| | | |
| Age | | |
| 21-25 | 10 | 6.9 |
| 26-30 | 20 | 13.9 |
| 31-35 | 25 | 17.4 |
| 36-40 | 28 | 19.4 |
| 41-45 | 28 | 19.4 |
| 46-50 | 24 | 16.6 |
| 51+ | 9 | 6.2 |
| | | |
| Years in law enforcement | | |
| 1-5 | 23 | 15.9 |
| 6-10 | 29 | 20.1 |
| 11-15 | 28 | 19.4 |
| 16-20 | 29 | 20.1 |
| 21+ | 35 | 21.3 |

## Results

Police officers are taught to internalize feelings, often resulting in the development of self-destructive behavior; therefore, I was concerned that police officers would not be willing to participate in this study. Research questions and hypotheses are restated in this section, as well as descriptive statistics of the participants' responses to the survey items associated with the variables in the research questions. The data analyses used in the study included logistic regression and *t* tests. Data analysis indicated that the data for participants using deadly force was negligible in comparison to the overall population. Therefore, the dependent variable become binary (using non-lethal force and no use of force). This resulted in ordinal regression being determined to be inappropriate for data analysis. There were no notable violations to statistical assumptions.

### Research Question 1

Does compassion fatigue predict use of force among police officers? Initially, ordinal regression was determined to be the appropriate method of data analysis; however, after data collection, logistic regression was determined to be more appropriate in analyzing the data because the category for deadly use of force was negligible (.04%). Elimination of the deadly force statistic allowed for analysis of nonlethal force and no nonlethal force. According to logistic regression, the independent variable of compassion fatigue, as measured by compassion satisfaction, burnout, and secondary traumatic stress, was not significantly correlated with the dependent variable of use of force, as measured

by nonlethal force and no nonlethal force). Data screening was completed, and there were no notable outliers.

A binomial logistic regression was performed to determine the effects of burnout, compassion satisfaction, and secondary traumatic stress on the likelihood that police officers would use force. Linearity of the continuous variables with respect to the logit of the dependent variable was assessed via the Box-Tidwell procedure. Based on this assessment, all continuous elements of the independent variable were found to be linearly related to the logit of the dependent variable. There was one standardized residual with a value of .557 standard deviations, which was kept in the analysis. The logistic regression model was not statistically significant, $\chi^2(3) = 6.57$, $p < .087$. The model explained 6% (Nagelkerke $R^2$) of the variance in use of force and correctly classified 61% of cases. Of the three elements of the predictor variable, only burnout was statistically significant. Burnout significance is shown in Table 2.

Table 2

*Burnout Significance*

| Step 1a | B | S.E. | Wald. | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| CSS | 0.075 | 0.39 | 0.037 | 1 | 0.848 | 1.077 |
| STSS | 0.007 | 0.448 | 0 | 1 | 0.987 | 1.007 |
| BOS | -0.441 | 0.191 | 5.326 | 1 | 0.021 | 0.643 |
| Constant | 0.651 | 0.557 | 1.368 | 1 | 0.242 | 1.918 |

Negative coefficients with odds ratio less than one, i.e. Exp(B) = .67, than one unit of change in $X_2$ leads to the event being less likely (.40/.60) to occur. As one variable increases, the other decreases, indicating that officers with higher burnout show an increased use of force.

**Research Question 2**

Based on the results of force types, seven officers reported using a firearm for lethal force, 142 officers reported verbal/hands on, four officers reported using pepper spray/baton, and six reported using an electronic defense weapon. Due to the small number of police officers reporting use of deadly force, a *t* test was conducted using nonlethal force or no nonlethal force with the dependent variable and compassion fatigue (as measure by compassion satisfaction, burnout, and secondary traumatic stress scales)

as the independent variable. Levene's test for quality of variance was performed for all parts of the independent variable. Each result was not significant, so equal variances were assumed.

The *t* test indicated a significant difference in the scores for secondary traumatic stress and use of nonlethal force ($M$ = 24.38, $SD$ = 7.106) and no nonlethal force ($M$ = 22.09, $SD$ = 6.59); $t(141) = -1.996$, $p < .048$. Based on the *t* test for burnout, there was a significant difference in the use of nonlethal force ($M$ = 27.52, $SD$ = 5.52) and no nonlethal force ($M$ = 24.63, $SD$ = 5.35); $t(141) = -3.152$, $p < .002$. For compassion satisfaction, there was no significant differences in the use of nonlethal force ($M$ = 35.38, $SD$ = 6.017) and no nonlethal force ($M$ = 36.46, $SD$ = 6.264); $t(141) = 1.043$, $p > .299$. All scores are reported in Table 3.

Table 3

*Test of Equal Variances*

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | |
|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference |
| CSS | Equal variances assumed | 0.021 | 0.885 | 1.043 | 141 | 0.299 | 1.082 | 1.037 |
| | Equal variances not assumed | | | 1.048 | 135.519 | 0.297 | 1.082 | 1.032 |
| BOS | Equal variances assumed | 0.059 | 0.808 | -3.152 | 141 | 0.002 | -2.883 | 0.915 |
| | Equal variances not assumed | | | -3.14 | 131.313 | 0.002 | -2.883 | 0.918 |
| STSS | Equal variances assumed | 1.246 | 0.266 | -1.996 | 141 | 0.048 | -2.293 | 1.149 |
| | Equal variances not assumed | | | -1.978 | 128.246 | 0.05 | -2.293 | 1.159 |

## Summary

Based upon the data analysis, the participants who had elevated scores on the burnout scale were likely to have elevated use of nonlethal force incidents compared to participants who had higher scores on the compassion satisfaction scale as burnout was a statistically significant predictor for the use of nonlethal force. Burnout and compassion fatigue levels indicate there are significant difference in the use of nonlethal vs. not nonlethal force among participants. Participants who had elevated scores on the compassion satisfaction scale were likely to see a lower number of incidents of the use of nonlethal force. Chapter 5 will further provide findings, explore implications and limitations and future recommendations of the data analysis.

# Chapter 5: Discussion, Conclusions, and Recommendations

Chapter 5 provides a brief explanation of why this research was conducted, an interpretation of the findings, a description of the implications and limitations, a list of recommendations, and conclusions from the study. The purpose of this study was to examine the predictive relationship between compassion fatigue, as measured by the ProQOL, and use-of-force. Data analysis indicated that officers with higher scores on compassion satisfaction were less likely to use force and had lower scores on burnout and secondary traumatic stress. Officers with higher burnout scores reported increased stress, lack of sleep, depression, trauma exposure, being overwhelmed by caseloads and police red tape, and lower scores on compassion satisfaction. The data analysis also indicated that these officers were more likely to use nonlethal force compared to officers with higher compassion satisfaction scores.

## Interpretation of the Findings

Police officers are high risk for developing compassion fatigue as a result of workplace stress and exposure to serious and traumatic incidents, which leads to decreased job satisfaction and loss of empathy (Coetzee & Klopper, 2010; Craun & Bourke, 2015; Figley, 1995; Stamm, 2010; Turgoose et al., 2017). Figley (1995) and Showalter (2010) defined compassion fatigue as emotional exhaustion leading to burnout, loss of empathy, and depersonalization; compassion fatigue occurs from compounded emotional stress and long-term exposure to shocking events and engaging with members

of the public who are traumatized and distressed, and these symptoms often interfere with tools needed to provide service in the helping professions, the field of human service, and trauma work. This quantitative study was conducted to fill a gap in the literature by examining the relationship between compassion fatigue and use of force among police officers, and decisions regarding the type of force they use. Findings may be used to develop mental health treatment and resiliency programs for law enforcement officers.

The results from data analysis indicated that officers who enjoy working and helping others believe they can make a difference in their career, are proud of their work, and are able to accept newer techniques and protocols in law enforcement. The results also indicated that officers with higher scores on compassion satisfaction were less likely to use force and showed lower scores on burnout and secondary traumatic stress. Officers with higher burnout scores reported increased stress, lack of sleep, depression, trauma exposure, being overwhelmed by caseloads and police administration, and lower scores on compassion satisfaction. The findings indicated that these officers were more likely to use nonlethal force compared to officers with higher compassion satisfaction scores. Officers with higher secondary traumatic stress scores reported preoccupation with more than one person, being easily started, being unable to separate their personal lives from work, avoidance of activities, and secondary trauma. Although the findings were not significant, the *t*-test results indicated that further study with larger samples is warranted. Of the three elements of the predictor variable, only burnout was statistically significant.

The participants who had elevated scores on burnout were more likely to have elevated use of nonlethal force compared to participants who had higher scores on compassion satisfaction. Burnout was a statistically significant predictor for use of nonlethal force. According to Gutshall et al. (2017), the identification of stress symptomology includes lack of empathy, burnout, disassociation, poor impulse control and anxiety, while autonomic physiological symptoms include tunnel vision, loss of dexterity and fine motor skills, increased blood pressure, aggression, and limited problem-solving abilities. Furthermore, Gutshall et al. posited that aggressive behavior stemming from an increase in burnout symptoms emphasizes the needs for preventive measures for law enforcement officers who are often prone to increased rate of developing stress-related disorders, and suggests how stress impacts problem-solving abilities resulting in wrongful arrests, improper shootings, poor memory recall, and excessive use of force. Ellrich (2015) investigated the link between violent victimization, burnout, and depersonalization to determine whether self-protecting behavior increased risk for victimization. Ellrich found that higher levels of emotional exhaustion in police officers stemming from work overload, the organizational constructs, and lack of flexibility should be addressed as officers who lack coping skills and energy may be less motivated to engage in social behaviors, i.e., communication, empathy, and affect regulation, leading to verbal force interactions and leaving them subjected to attacks.

In the current study, participants who had elevated scores on compassion satisfaction were more likely to a lower number of incidents of the use of nonlethal force.

Stamm (2002) noted that key components of compassion satisfaction come from positive attitudes and good social support, and the lack of control in traumatic situations can lead to psychological distress. The current study filled a gap by providing evidence of a significant relationship between burnout and use-of-force among police officers.

## Limitations of the Study

There were several limitations to this study. First, the findings were generalizable only to police officers within the United States. Second, there was no test or survey given to the participants to determine whether officers had been exposed to traumatic events prior to the start of their careers or beyond 30 days prior to this survey. Next, this study was not focused on what position the officers held in their respective departments; however, it was a question asked in the survey to identify where stress and burnout may occur. Officers in different positions may experience different mental health stress. Adapting protocol for operational functioning may be different depending on the rank and structure of the police department. Understanding organizational stress and how the relationship with administration affects officers' overall mental health and morale is an opportunity for further study.

This results from this study are applicable to police officers in the United States and may not be generalizable to officers in other countries. Although I recruited many participants, the survey participation was low. Additional studies may be needed to

understand the impact of compassion fatigue on police officers in specific job functions in the United States.

Other limitations included the research design. This study did not address causation, but rather the predictive relationship between the variables. Other concerns were self-report measures of police officers. Self-report questionnaires are reliant on participant honesty. There was a risk of police officers not responding honestly to demographic questions and mental health questions in the survey. Also, data collection did not address trauma and stress exposure prior to 30 days before survey completion. Police officers may have been reluctant to acknowledge exposure to traumatic events or that exposure had affected them. Trauma exposure and violence can affect people in different ways, and there was no guarantee that officers participating in the study were exposed to traumatic or violent events. An officer's support system may have altered how a participant responded to the survey questions. Participants may have believed that privacy and anonymity would not be maintained during and after the study.

## Recommendations

Stress and trauma exposure are part of every police officer's career. Exposure is often sudden and without warning, and in most cases is treated as every other call. Officers have long been taught to push down their feelings and move on because this is part of the job. The findings from the current study were significant in the area of officer reported burnout and provided additional information for further studies.

It is recommended that future research be conducted using random selection on a larger population to determine overall force/officer ratio including deadly use of force to generalize the findings. The current study results from the secondary traumatic stress *t* test indicated that a larger sample should be studied. Future studies could also address years of service to determine whether officers are experiencing burnout or increased stress at specific periods in their careers. Researchers could also examine officers' prior exposure to trauma to develop protocol for intervention strategies that identify officers in need and to develop preventive programs to promote resiliency.

## Implications

Findings from the current study indicated that officers who experienced a perceived trauma scored significantly higher overall on the ProQOL-5 than officers who scored low on the compassion satisfaction scale. According to Figley (2002), stressors (whether new or old), life and workplace demands, and trauma exposure can cause compassion fatigue. Figley's (2001) compassion fatigue model describes how traumatic memories can lead to compassion fatigue. According to Violanti and Violanti (1999), police officers who are exposed to workplace trauma and report previous traumas have a significantly higher risk for developing compassion fatigue. According to the current study findings, officers who had elevated scores of compassion fatigue, specifically in the burnout subscale, also had increased risk of using nonlethal force. Recognizing symptoms early and providing proactive intervention is key in reducing burnout

(Oshburg, 1996). Findings from the current study support periodic mental health assessments for all police officers, regardless of incident exposure, because recognizing symptoms early on and providing proactive intervention may reduce the use of nonlethal force.

Additionally, Hope (2016) and Vila et al (2000) found in police self-report surveys, normal shift work and extended shift work has been indicative of safety errors and self-reported errors. This identifies a need to provide increased time to adjust to shift changes, rested time off between shifts as officer burnout increases with extended shift work. The officers who showed elevated scores on the burnout subscale may be fatigued and are at risk for development of stress related disorders, increasing the likelihood of making decision errors (Vila et al, 2002). Regher and LeBlanc (2017), Taverniers, Ruysseveldt, Smeets and Grumbow (2010) have addressed how increased level of distress over long periods of time increase negative affect, while exposure to high stress and repetitive trauma impacts memory, behavior, increases depersonalization, alters perceptions, and impairs performance. Ellrich (2015) identified how burnout results in lower productivity of workers and a higher rate of turnover for employment. This further emphasizes how exposure to multiple trauma; sleep regulation and lack of support increase the likelihood that an officer will develop compassion fatigue and how officers prepare themselves in advance for unexpected stress or exertion may play a role in overall fatigue.

Koslov and Berry Mendes (2009) identified this type of stress as having significant impact on abilities to do well on cognitive tasks, where positive feedback increases the cognitive resources available to cope and do better on task related situations than those who received negative feedback. Often officers are sent for mental health evaluation at the recommendation of a supervisor (fitness for duty evaluation) or through their own contact with employee assistance programs. Programs and policies that promote healthier working relationships and creating open dialogue with supervisors may reduce the stigma of mental health concerns in the workplace.

Gutshall, Hampton Jr., Sebetan, Stein and Broxtermann (2017) research indicated how resiliency to stress and cognitive performance may be due to the officer's support systems, family situations, and time off. Figley (1995) also indicates how similar symptoms develop including hyperarousal, cognitive changes, avoidance, intrusive thoughts, sleeplessness, and functional impairment. The chronic exposure to stress accumulates as losses affecting families and coping abilities in the helping professional.

Police agencies should create an environment that promotes resiliency by increasing programs and activities that promote family time, encourage hobbies, well-being and overall physical wellness. Officers that reported having support systems and positive outside influences away from work, i.e. hobbies, family time had higher compassion satisfaction scores and overall lower scores on the burnout and secondary traumatic stress scales. Yates and Pillai (1996) provided that the more support officers

receive from their department and the government, the less stress the officers have, which has the potential to result in overall higher compassion satisfaction, reducing employee turnover and increasing productivity.

Valent (2002) stated that police officers who are well grounded to social support, maintain positive attitudes and have the ability to adapt to critical incidents, managing fight or flight symptoms and using biological, psychological and social resources contribute to lessening the development of compassion fatigue. Ménard and Arter (2013) identified how incremental policy changes have been made for officers who experienced poor coping skills, alcohol use and PTSD to receive or obtain mental health treatment and how officers are not provided the necessary mental health training and skills to overcome traumatic exposure.

The results of this study indicated that officers have an increase in use of nonlethal force when levels of compassion fatigue and burnout are high. Police agencies need to develop policies and protocols which provide access to regular counseling services, debriefings and mental health wellness checks while promoting stress reduction and resiliency building programs that extend throughout the course the employees ‘career. The positive impact of officer wellbeing can reduce the likelihood that using force will increase based upon the factors that lead to compassion fatigue.

## Conclusion

A police officer's job presents a unique perspective on how a work environment puts them at risk for stress related diseases. Police officers are faced with life and death situations and often make critical and split-second decisions. Although some officers will make it through their career without experiencing psychological disturbances and being resilient in the face of adversity, the decisions a police officer must face create an environment of rapid and repeated exposure to trauma and stress and can affect any police officer at any time. The unreasonable expectations that a police officers are to perform their jobs without error despite shift changes, mandatory overtime, lack of sleep, paperwork demands, lack of administrative support can often lead officers to emotional and physical exhaustion.

The normalization of emotions and feelings comes with programs such as Critical Incident Teams (CIT), which provide the ability for police officers to be heard in an environment of sympathy and empathy during debriefing sessions (Conn and Butterfield, 2013). Beyond CIT, protocol needs to be in place for regular mental health assessments. This study resulted in findings that police officers are inclined to use force when they experience burnout under the compassion fatigue model, when they are specifically experiencing low concentration, apathy, disorientation, low self-esteem, thoughts of self-harm or harming others and minimization of feelings, low work production, staff conflict, absenteeism, social withdrawal, and task avoidance. Understanding that police officers

minimize or downplay their discomfort rather than facing or admitting to feelings is a common place in law enforcement culture. Police officers are at risk for developing problematic and poor behaviors as a result of burnout and compassion fatigue. The prevalence of burnout increases uses of nonlethal force for officers, but also poses significant issues for police agencies who are often charged with investigating force incidents and disciplining the involved officer. Addressing stress and trauma in proactive mental health policies and programs within law enforcement agencies throughout the officer's career, can promote a supportive and proactive interventionistic attitude which can reduce the likelihood that burnout and secondary stress may occur leading to a reduction in use-of-force incidents.

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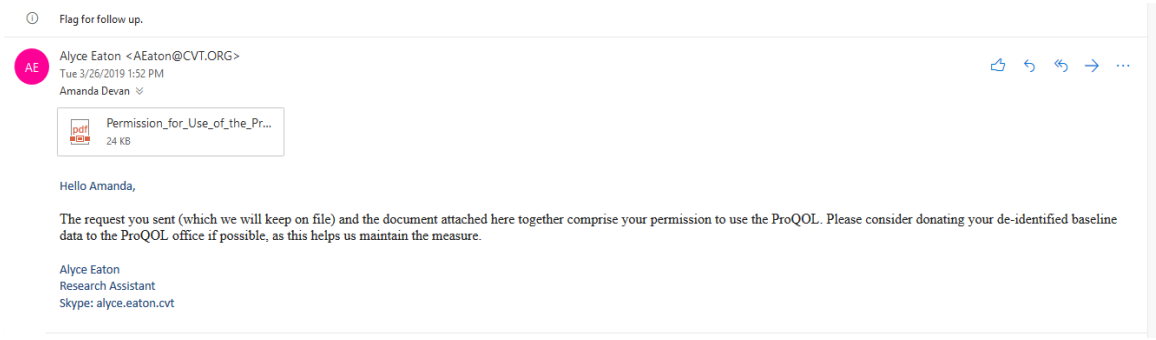
# Appendix A: Permissions



Flag for follow up.

AE

Alyce Eaton <AEaton@CVT.ORG>
Tue 3/26/2019 1:52 PM
Amanda Devan

Permission_for_Use_of_the_Pr...
24 KB

Hello Amanda,

The request you sent (which we will keep on file) and the document attached here together comprise your permission to use the ProQOL. Please consider donating your de-identified baseline data to the ProQOL office if possible, as this helps us maintain the measure.

Alyce Eaton
Research Assistant
Skype: alyce.eaton.cvt

ProQOL Permission

Permission for Use of the ProQOL (Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue) www.ProQOL.org Accompanied by the email to you, this document grants you permission to use for your study or project. *The ProQOL (Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue) www.ProQOL.org*

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This permission covers non-profit, non-commercial uses and includes permission to reformat the questions into a version that is appropriate for your use. This may include computerizing the measure. Please print the following reference or credit line in all documents that include results gathered from the use of the ProQOL.

Stamm, B. H. (2010). The ProQOL (*Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue*). Pocatello, ID: ProQOL.org. Retrieved [date] www.ProQOL.org



*Help us help all of us. Please consider donating a copy of your raw data to the data bank. You can find more about the data bank and how you can donate at www.ProQOL.org and www.ProQOL.org/Donate_Data.html. Data donated to the ProQOL Data Bank allow us to advance the theory of compassion satisfaction and compassion fatigue and to improve and norm the measure itself.*

# Appendix B: Professional Quality of Life Scale: Version 5

## Professional Quality of Life Scale (ProQOL)

### *Compassion Satisfaction and Compassion Fatigue (ProQOL) Version 5 (2009)*

When you *[help]* people you have direct contact with their lives. As you may have found, your compassion for those you *[help]* can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a *[helper]*. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

**1=Never, 2=Rarely, 3=Sometimes, 4=Often 5=Very Often**

1. I am happy.

2. I am preoccupied with more than one person I *[help]*.

3. I get satisfaction from being able to *[help]* people.

4. I feel connected to others.

5. I jump or am startled by unexpected sounds.

6. I feel invigorated after working with those I *[help]*.

7. I find it difficult to separate my personal life from my life as a *[helper]*.

8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I *[help]*.

9. I think that I might have been affected by the traumatic stress of those I *[help]*.

10. I feel trapped by my job as a *[helper]*.

11. Because of my *[helping]*, I have felt "on edge" about various things.

12. I like my work as a *[helper]*.

13. I feel depressed because of the traumatic experiences of the people I *[help]*.

14. I feel as though I am experiencing the trauma of someone I have *[helped]*.

15. I have beliefs that sustain me.

16. I am pleased with how I am able to keep up with *[helping]* techniques and protocols.

17. I am the person I always wanted to be.

18. My work makes me feel satisfied.

19. I feel worn out because of my work as a *[helper]*.

20. I have happy thoughts and feelings about those I *[help]* and how I could help them.

21. I feel overwhelmed because my case [work] load seems endless.

22. I believe I can make a difference through my work.

23. I avoid certain activities or situations because they remind me of frightening experiences of the people *[I help]*.

24. I am proud of what I can do to *[help]*.

25. As a result of my *[helping]*, I have intrusive, frightening thoughts.

26. I feel "bogged down" by the system.

27. I have thoughts that I am a "success" as a *[helper]*.

28. I can't recall important parts of my work with trauma victims.

29. I am a very caring person.

30. I am happy that I chose to do this work.

# Appendix C: IRB Approval

Dear Ms. Devan,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "**Implications of Compassion Fatigue in Police Use of Force**."

Your approval # is 10-30-19-0672900. You will need to reference this number in your dissertation and in any future funding or publication submissions. Also attached to this e-mail is the IRB approved consent form. Please note, if this is already in an on-line format, you will need to update that consent document to include the IRB approval number and expiration date.

Your IRB approval expires on October 29th, 2020. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application document that has been submitted as of this date. This includes maintaining your current status with the university. Your IRB approval is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, your IRB approval is suspended.

Absolutely NO participant recruitment or data collection may occur while a student is not actively enrolled.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 10 business days of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the Documents & FAQs section of the Walden web site: http://academicguides.waldenu.edu/researchcenter/orec

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If,

in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Congratulations!

Walden University
100 Washington Ave. S, Suite 900
Minneapolis, MN 55401

# Appendix D: Use of Force Self-Report Measure

Question 1. Have you used force in the last 30 days (verbal, hands-on, pepper spray, taser, baton or firearm)?

Question 2. What type of force have you used in the last 30 days? Mark all that apply.

Question 3. How many times have you used nonlethal level of force in the last 30 days (verbal, hands-on, pepper spray, taser, baton or firearm)?

Question 4. How many times have you used lethal force in the last 30 days (firearm)?