The Examination of Different Pathways Leading Towards Police Traumatization: Exploring the Role of Moral Injury and Personality in Police Compassion Fatigue

by

Konstantinos Papazoglou

A thesis submitted in conformity with the requirements for the degree of Doctorate of Philosophy

Psychology
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Abstract

Police officers are mandated to respond to critical incidents, and, as the first responders to arrive at a crime scene, they are often tasked with providing support to traumatized victims of crimes. Compassion fatigue is a type of traumatization (“cost of caring”) experienced by caregiving professionals who work with traumatized populations (Figley, 1995). Conversely, compassion satisfaction refers to the sense of fulfillment that first responders feel from helping those who suffer (Stamm, 2002). The current research project is comprised of three studies. In study 1, researchers recruited a national police sample ($n=1,351$) from the US and Canada and measured the prevalence rates of compassion fatigue and satisfaction. This study found that authoritarianism was significantly associated with compassion fatigue among study participants. In study 2, the researcher further explored the role of negative personality traits (i.e., dark triad—Machiavellianism, narcissism, psychopathy) in a national sample ($n=1,173$) of police officers serving with the National Police of Finland. Study 2’s findings were consistent with those of Study 1, showing that negative personality traits were significantly associated with compassion fatigue among police officers. Study 3 built on the main findings of the first two studies, and aimed to identify the different pathways that lead to traumatization by examining moral injury’s role in the process. Moral injury refers to
unprecedented traumatic life events, which can be understood as events wherein one perpetrates, fails to prevent, or bears witness to actions that “transgress deeply held moral beliefs and expectations” (Litz et al., 2009, p.1). Employing moral injury would enable researchers to examine the different mechanisms that lead to traumatization. To this end, study 3 recruited a sample (n=453) comprised of officers from the National Police of Finland, and the results showed that the dark triad of personality traits significantly predicted “self-focused” and “others-focused” moral injury. In addition, “self-focused” moral injury (and not “others-focused” moral injury) significantly predicted compassion fatigue and PTSD symptoms. Furthermore, it was found that “self-focused” moral injury significantly mediated the pathway between the dark triad personality traits and traumatization (compassion fatigue and PTSD symptoms). Clinical implications and recommendations for future research are discussed.

**Keywords:** compassion fatigue, compassion satisfaction, moral injury, traumatization, negative personality traits, police
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Chapter 1
Introduction

1 Introduction

1.1 Life Threat and Ethic of Care in Police Work

Most people, if asked about the actual work involved in being a police officer, would probably suggest that police work mainly focuses on crime investigations, patrol, and arrest of criminals. Nevertheless, the reality of what first responders’ work entails is more complex than many people may presume. Undeniably, police officers are often crime fighters and, as such, they are sworn and mandated to respond to virulent crimes (i.e., terrorism attacks, murders) and arrest the criminal(s) (Haugen, Evces, & Weiss, 2012). Notwithstanding, the other side of the coin reveals that police officers often support victims of crimes (i.e., abused children, battered women) as well as victims of natural disasters and accidents, being more often amongst the first responders present at the accident and crime scenes and give solace to traumatized victims (Andersen, Papazoglou, Arnetz, & Collins, 2015a; May & Wisco, 2015). For instance, when the mass school shooting occurred in Newtown, Connecticut, first responders were the first present at the scene (Draznin, 2013). As a result, they were the ones holding the wounded children and providing them with first aid as well as psychological support. What many may – consciously or unconsciously - ignore is that first responders are exposed to a plethora of life-threatening and potentially traumatic situations over the course of their careers. Therefore, what makes first responders’ work unique is that they are expected to diligently maintain a dual role, oscillating between “critical incident responder” and “social service worker” (Manzella & Papazoglou, 2014). Some police psychologists and
scholars have argued that first responders may encounter - not surprisingly - hundreds of potentially traumatic events during their careers (Rudofossi, 2009).

1.2 Psychological Trauma and Resilience in Police

Psychological trauma refers to any sudden, uncontrollable, and disruptive incident that negatively affects one’s physical, emotional, behavioral, and cognitive processes, and consequently, that may beget various forms of psychopathology (i.e., post-traumatic stress reaction, major depression; Van der Kolk, 2003). The origin of the term “trauma” can be traced back to the Greek word “τραύμα” or “τραυματίζω” which literally means “to wound” (Oxford English Online Dictionary, 2017). In the area of psychological trauma, the etymology of the verb “to wound” insinuates the “psychological wounds” that may emanate from exposure to any traumatic incident. Psychological research of the impact of trauma on police officers has shown that the experience of trauma may be debilitating for first responders’ physical (i.e., high blood pressure, cardiovascular diseases) and psychological health (i.e., anxiety disorder, depression) over the course of their careers (Miller, 2000; Stephens, Long, & Miller, 1997; Violanti et al., 2006). Furthermore, exposure to traumatic incidents may adversely affect first responders’ behavior (i.e., impatience, anger outbursts), cognitive processes (i.e., memory, information processing), and emotional reactivity to daily life (i.e., sadness, feeling like a failure; Andersen, Papazoglou, Arnetz, & Collins, 2015a). As aforementioned, trauma experienced by first responders is cumulative, long-term, and complex, on the grounds that first responders – on a regular basis – experience multiple potentially traumatic incidents over the course of their careers (Papazoglou, 2013). The complexity of first responders’ trauma refers to the fact that first responders may experience trauma directly (i.e., loss of a partner) or indirectly (i.e., by asking a victim of abuse to describe what happened; May & Wisco, 2015). Among first responders, trauma is often
experienced through some or all of the human senses. For instance, a life-threatening situation (i.e., shooting) experienced by a police officer in the line of duty, may involve the following senses: sight (officer was at the incident), sound (officer listened to the sounds of shots being fired), smell (officer smelt the smoke of the firing bullet), and touch (officer held the weapon during the incident).

Despite the severity of trauma, research has indicated that human beings have the capacity to recover, adapt, and thrive in the aftermath of trauma (Andersen et al., 2015a; Andersen, Papazoglou, Koskelainen, & Nyman, 2015b; Bonanno, 2004, 2005). Although first responders seem to experience more trauma-related psychological symptoms compared to the general population, research has indicated that first responders are significantly more resilient in the face of adversities, and better armored to resolve traumatic situations compared to the general public (Fushimi, 2012; Galatzer-Levy et al., 2013; Marchand, Nadeau, Beaulieu-Prévost, Boyer, & Martin, 2015; Marmar et al., 2006; Miller, 2000). Significantly, Pietrzak and colleagues (2014), conducted a longitudinal study aimed at investigating the impact of the 9/11 terrorist attacks on police officers ($n=4,035$) who responded to ground zero. Their findings showed that the majority of police officers (77.8%) exhibited a resiliency trajectory significantly higher than non-first responders who responded to the 9/11 terrorist attacks in the vicinity of ground zero. Nevertheless, it is possible that either direct or indirect exposure to potentially traumatic incidents may lead first responders to the experience of many incapacitating mental and physical health-related conditions (Marmar et al., 2006; May & Wisco, 2015; Pietrzak et al., 2014). Further, exposure to potentially traumatic incidents may lead to the onset of post-traumatic stress disorder (PTSD; Donnelly, 2011; May & Wisco, 2015).
1.3 **Police Culture: The “Blue Brothers and Sisters”**

Organizational psychologists have extensively discussed the fact that organizations encompass their own unique cultures (or better subcultures) in the form of shared values, beliefs, ideologies, and norms among their members (Bushardt, Glascoff, & Doty, 2011; Lucas & Kline, 2008). Comprehensive knowledge of an organization’s subculture is integral for psychology researchers to better explore and understand an organization’s learning and psychological processes (Bushardt, Glascoff, & Doty, 2011). Therefore, comprehensive knowledge of an organization’s subculture allows psychologists to constructively intervene for the purpose of causing positive change within the organization and the promotion of wellbeing amongst its members (Andersen et al., 2015a, 2015b; Lucas & Kline, 2008). That is, another parameter that needs to be considered akin to PTSD among first responders is that police, fire fighters, and EMS personnel have their own distinct culture comprised of a unique framework of values, tenets, attitudes, and lingo (Crank & Crank, 2014; Paoline, 2003). While it is less so for EMS personnel compared to police officers and fire fighters, first responders’ culture is also paramilitaristic in structure – and its members are mandated to abide by the organization’s protocols and their supervisors’ guidance (Armstrong, Shakespeare-Finch, & Shochet, 2014; Lucas & Kline, 2008).

Significantly, another major component of first responders’ culture is the salient role of teamwork and reciprocity in facing adversities in the line of duty. Indeed, first responders’ culture instils in its members the sense of group cohesiveness and brotherhood/sisterhood-like loyalty, as an integral component of the successful completion of their duties and of their own bodily survival on the street. Apart from the importance of their own bodily survival on the street, the value of “heroism” in the first responders’ cultures is salient, since its members are expected to approach situations and be prepared to sacrifice their lives
where average individuals would have escaped (Lucas & Kline, 2008). For instance, during the 9/11 terrorist attacks, fire fighters and police officers, risking their own lives, entered in and stayed in the ready to collapse buildings in order to save civilians who were otherwise unable to escape; they remained in the buildings saving civilians until the buildings collapsed on them (Dwyer & O’Donnell, 2005).

1.4 Compassion Fatigue and Compassion Satisfaction in Police

Over time, the effort to alleviate the suffering of victims may come with a cost. Charles Figley (1995) coined the term “compassion fatigue” (p. 9) to describe this “cost of caring for those who suffer.” Compassion fatigue has multiple negative effects on the wellbeing and occupational performance of caregiving professionals, impacting them behaviorally (e.g., irritation and hypervigilance), cognitively (e.g., lack of concentration and depersonalization), and emotionally (e.g., negativity, helplessness, and hopelessness; Bride et al., 2007; Figley, 2002). Ultimately, compassion fatigue can lead to burn out, which is associated with serious mental health conditions, such as PTSD and depression, as well as failure to perform as expected on the job (Conrad & Kellar-Guenther, 2006). On the other hand, there are positive aspects to the role of caregiving. Stamm (2002) introduced the term “compassion satisfaction,” (p. 108) which refers to the feelings of increased motivation and satisfaction that are gained from helping those who suffer. Stamm (2002) posits that helping professionals who experience compassion satisfaction feel successful and highly satisfied when working with traumatized populations and that these feelings are associated with enhanced job commitment, performance, and quality of life.

Scientific literature has extensively studied the experience of compassion fatigue in different health care professions. For instance, research has explored the higher risk of compassion fatigue among social workers who: (i) have worked with adult protective services (Bourassa,
2009); (ii) have lived and worked in New York City since the 9/11 terrorist attack (Adams, Boscarino, & Figley, 2006); and (iii) have worked with survivors of terrorist attacks in Israel (Cohen, Gagin, & Peled-Avram, 2006). In addition, there have also been studies focusing on compassion fatigue among clinicians who: (i) work with veterans returning from combat zones (Tyson, 2007); (ii) provide support to survivors of violent crimes (Salston & Figley, 2003); and (iii) provide therapy to traumatized clients (Craig & Sprang, 2010). Other studies recommended possible methods that therapists can use to improve their self-care and to mitigate the negative effects of compassion fatigue (Figley, 2002). The way compassion fatigue affects a professional’s quality of life has been explored among mental health providers (Sprang, Clark, & Whitt-Woosley, 2007) and healthcare staff in community mental health services (Rossi et al., 2012). Moreover, other studies have explored compassion fatigue among physicians (Pfifferling & Gilley, 2000), nurses (Yoder, 2010), and animal-care professionals (Figley & Roop, 2006).

Police officers frequently experience potentially traumatic incidents in the line of duty. Consequently, police trauma and its complexity have been extensively discussed in the scientific literature (Henry, 2004; Violanti et al., 2005). Police trauma researchers have emphasized the complexity and cumulative effect of police trauma on police officers, maintaining that, over the course of their careers, police officers are directly or indirectly exposed to a plethora of potentially traumatic events that often induce deleterious effects on their health and wellbeing (Andersen et al., 2015a; Cross & Ashley, 2004; Paton, 2006).

Significantly, police work is not solely focused on the fight against crime; rather, police work also entails the provision of professional and emotional support for victims of crimes (e.g., battered women, abused children) after a potential threat (e.g., hostage holder) in a critical situation has been neutralized. While police officers are often able to alleviate the
traumatic suffering of crime victims, their commitment to their role as caregivers comes at a cost.

1.4.1 Compassion Fatigue vs. Burnout

Many may suggest that compassion fatigue and burnout are almost identical conditions due to sharing many of the same symptoms, including: emotional exhaustion, aloofness, de-personalization, distress, somatic complaints, alcohol and drug abuse, and life disruption (Figley, 2002; Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010; Jacobson, 2012). However, in their research on trauma specialists, Craig and Sprang (2010) emphasized that burnout is distinct from compassion fatigue in the sense that the symptoms of trauma exposure are not present in burnout. Specifically, burnout is defined as the experience of exhaustion, cynicism, and lack of professional efficacy by caregiving professionals due to high job demands (e.g., heavy workload, shift work), lack of resources at work (e.g., necessary equipment is not available), lack of social support from peers and supervisors, and excessive work-related stress (Burke & Mikkelsen, 2006; Conrad & Kellar-Guenther, 2006; Martinussen, Richardsen, & Burke, 2007). On the other hand, Figley (1995, 2002) emphasized that prolonged exposure to traumatized victims, combined with the inability to emotionally disengage themselves from the victims’ traumatic experiences (e.g., identification with the victim), may lead to compassion fatigue among caregiving professionals. It should be noted that compassion fatigue may occur if caregiving professionals ignore or deny the initial compassion fatigue cues (or residuals) and do not seek help to address those issues before their compassion fatigue symptoms become debilitating. Prominent trauma scholar, Yael Danieli (1996) stated that, in some occasions, caregiving professionals who suffer from compassion fatigue may even dissociate during their work with traumatized individuals. Therefore, evidence suggests that
compassion fatigue can be distinguished from burnout based on the experience of trauma exposure.

Furthermore, the impact of both burnout and compassion fatigue on frontline professionals’ health and wellbeing tends to accumulate over their years of service, especially if their effects remain unaddressed (Martinussen, Richardsen, & Burke, 2007; Perez, Jones, Englert, & Sachau, 2010). In addition, both burnout and compassion fatigue may affect caregiving professionals’ decision-making at work as well as their job performance and job satisfaction (Salloum, Kondrat, Johnco, & Olson, 2015). As well, both conditions may increase an individual’s tendency to quit job, increase absenteeism, and experience a loss of work motivation (Salloum et al., 2015). Although many researchers have categorized burnout and compassion fatigue as separate, yet overlapping, conditions, there is compelling evidence as aforementioned to suggest that they are distinctly independent from each other (Conrad & Kellar-Guenther, 2006; Hooper et al., 2010; Wagaman, Geiger, Shockley, & Segal, 2015).

1.4.2 Compassion Fatigue vs. PTSD

Much the same as its relationship to burnout, compassion fatigue and post-traumatic stress disorder (PTSD) also have certain commonalities as well as differences. Although both conditions originate in exposure to trauma, compassion fatigue refers to prolonged exposure, the excessive desire to save traumatized victims (e.g., “God’s syndrome”), and emotional engagement in trauma-related work that may lead to emotional exhaustion and certain cognitive distortions (e.g., world is not safe, world is not just; Beaton & Murphy, 1995; Tehrani, 2007, 2010). Conversely, PTSD is a psychiatric condition, as diagnosed by a clinician, that occurs after an individual is exposed to a life-threatening incident that jeopardizes the safety and physical integrity of themselves or others (Asmundson & Stapleton, 2008; Marmar et al., 2006). Analytically, a concise description of the DSM-V
(APA, 2013) diagnostic criteria for PTSD is as follows: a) experience of the stressor (e.g., direct or indirect exposure); b) intrusive symptoms (e.g., intense or prolonged distress); c) avoidance (e.g., trauma-related external reminders); d) negative alterations in cognition and mood (e.g., persistent distorted blame of self or others); and e) alterations in arousal and reactivity (e.g., hypervigilance, sleep disturbance). The aforementioned symptoms must persist for more than a month in order to qualify as diagnostic criteria for PTSD. In addition, a PTSD-diagnosed individual will experience peritraumatic (e.g., dissociation, distress, terror) and posttraumatic (e.g., avoidance, passive coping) effects both during and after the life-threatening event (Marmar et al., 2006; Martin et al., 2009). As with its relationship to burnout, those suffering from compassion fatigue may show similar symptomatology to those in the PTSD diagnostic criteria. For instance, a caregiving professional who suffers from compassion fatigue may experience intrusive thinking regarding a client’s trauma, a tendency to avoid thoughts, feelings relative to a victim’s trauma, and difficulty concentrating and falling asleep (Figley, 1995, 2002).

Consequently, it seems that there are commonalities between compassion fatigue and burnout as well as compassion fatigue and PTSD; in other words, compassion fatigue appears to have symptoms in common with both PTSD and burnout. Nonetheless, compassion fatigue is not a psychiatric condition and does not emanate from one’s exposure to a life-threatening situation. Instead, it refers to a caregiving professional’s long-term exposure to traumatized populations. In addition, those who suffer from compassion fatigue may show similar symptomatology to those diagnosed with PTSD. However, compassion fatigue symptoms are developed in reference to caregiving professionals’ experiences in their work with traumatized populations. Thereby, symptoms may refer to long-term emotions, thoughts about victims’ trauma as well as the services provided to those victims.
For instance, officers who serve in a child exploitation unit may experience compassion fatigue (e.g., feeling emotionally overwhelmed, experiencing lack of concentration) as a result of providing support on a long-term basis to abused children during investigations in numerous cases. On the other hand, patrol officers may be wounded in the line of duty by a violent criminal and, as a result of this life-threatening situation, they may experience PTSD symptoms (or full diagnosis of PTSD) as discussed in previous paragraph. Consequently, compassion fatigue is comprised of a set of symptoms that markedly distinguish it from both PTSD and burnout (Collins & Long, 2003; Figley, 2002; Salston & Figley, 2003).

1.5 The Role of Negative Personality Traits Towards Traumatization

It is interesting—but not surprising—that in the ’60s and ’70s many scholars argued that police officers were attracted to police work in order to gain power and authority over the public (White, Cooper, Saunders, & Raganella, 2010). What is even more interesting is that many police scholars contended that negative personality traits (e.g., authoritarianism) may intensify over an officer’s years of service as these traits could allow officers to enforce the law and perform their duties more effectively (Laguna, Linn, Ward, & Rupslaukyte, 2010). Nonetheless, recent research with police officers has demonstrated that authoritarianism does not increase alongside years of service (Laguna et al., 2010), and that the vast majority of officers are motivated to join the police force because of job security/benefits, adventure at work, and the opportunity to help their communities (Carlan, 2007; White et al., 2010).

Indeed, power and authority was found by researchers to be at the bottom of the scale of preferences for why police officers entered the police academy in the first place.

What about the role of negative personality traits in police officers’ experiences of trauma? Similar to some research perspectives on military personnel (e.g., Frankfurt & Frazier, 2016), there may be some researchers who support the notion that police officers who are
high in certain negative personality traits (e.g., authoritarianism) may experience fewer or none of the effects of trauma exposure compared to officers who are either low in, or do not possess, such traits. Specifically, police officers high in negative personality traits (e.g., authoritarianism) may prioritize their own benefits and feel less empathy towards victims of crimes and, hence, experience less compassion fatigue than officers who are emotionally engaged in their work or who show empathy towards victims of crimes. To examine the veracity of the aforementioned perspective, empirical research allows us to shed light on the role of certain negative personality traits in the experience (or not) of trauma among police officers.

1.5.1 Dark Triad of Personality Traits

Paulhus and Williams (2002) stated that the dark triad (DT) refers to the constellation of the most offensive non-pathological personality traits as they most prominently studied and defined in previous literature work as such. At this end, the DT is comprised of three subclinical personality traits: narcissism, psychopathy, and Machiavellianism (Johason, Koenig, & Tost, 2010; Johason & Webster, 2010). The DT personality traits overlap in many ways and have a significant positive correlation with one another, which has led to the assumption that the DT represents a cluster of personality traits (Vernon, Villani, Vickers, & Harris, 2008). More specifically, research has suggested that individuals with more pronounced DT personality traits exhibited lower positive emotionality/affect, antisocial behavior, distrust of others, and substance abuse (Miller et al., 2010). Furthermore, individuals with DT personality traits may be self-centered, dishonest, impulsive, and callous in their attitudes towards others (Jones & Paulhus, 2014; Miller et al., 2010). Other researchers have contended that the DT personality traits also share a tendency towards producing exploitive and manipulative behavior, a sense of grandiosity, a sense of self-
importance (Lee & Ashton, 2005), social malevolence, emotional coldness, duplicity, and aggressiveness (Paulhus & Williams, 2002). Researchers found that individuals with DT personality traits showed impaired overall empathy and especially affective empathy (ability to catch others’ emotions and generate appropriate emotional reaction in response to others’ emotions; Jonason & Krause, 2013; Jonason, Lyons, Bethell, & Ross, 2013; Wai & Tiliopoulos, 2012). Therefore, a sense of cooperation, altruism, inclusion, compassion, and other prosocial skills seems to be low or even absent among individuals with DT personality traits (O’Boyle, Forsyth, Banks, & McDaniel, 2012).

1.5.2 Dark Triad of Personality Traits and Trauma

Recent empirical research has indicated that individuals with high levels of DT personality traits are more susceptible to traumatization compared to those with low levels (or absent levels) of DT personality traits. In what follows, the author refers to a number of research findings that “connect the dots” and show that individuals with negative personality traits (e.g., dark triad) are indeed vulnerable to trauma exposure. In their study of survivors of a traumatic event, researchers found that survivors with high levels of narcissism were more vulnerable to developing PTSD symptomatology (Bachar, Hadar, & Shalev, 2005). More precisely, they concluded that those high in narcissism “are prone to develop PTSD after an exposure to a traumatic event because they experience the traumatic event as a narcissist injury, as a blow to their narcissist illusion of invulnerability” (p.762). It seems that the traumatic event threatens (and perhaps shatters) the narcissist individual’s personal image as being strong, invulnerable, brave, courageous, and able to resist and handle the threat. Other researchers have found that individuals high in psychopathy indicated dysfunctional impulsivity and poor emotional self-regulation (Jones & Paulhus, 2014). Furthermore, self-control and social support are critical in preventing the development of PTSD (Bonanno,
Romero, & Klein, 2015; Bonanno, Westphal, & Mancini, 2011; Marmar et al., 2006); however, a lack of self-control, aloofness, and social isolation are prevalent among those with high levels of DT personality traits (Jonason, Koenig, & Tost, 2010; Paulhus & Williams, 2002).

What is the role of empathy in the picture? As discussed above, the inability to disengage emotionally (or excessive empathy) may make one susceptible to compassion fatigue (Figley, 2002; Salston & Figley, 2003); yet, research has discovered that DT individuals show deficits in empathy (Ali, Amorim, & Chamorro-Premuzic, 2009), which supports the expectation that these individuals possess little to no capacity to empathize with others. Wagaman and colleagues (2015) have contended that self-other awareness and emotional regulation are two components of empathy. In their work with caregiving professionals, they found that low self-other awareness and poor emotional regulation were significant predictors of indirect traumatic stress and burnout. Analogously, paramedics who showed less authentic self-expression displayed emotions that they did not feel or made efforts to actually feel certain emotions that they were supposed to feel in certain circumstances. As a result, they experienced more work exhaustion and less job satisfaction than their peers who were genuinely empathic and showed authentic self-expression during traumatic incidents (Blau, Bentley, & Eggerichs-Purcell, 2012).

1.6 Moral Injury in Police Work

The study of moral injury has been predominantly developed from clinical work and research with soldiers and veterans. Moral injury refers to unprecedented traumatic life events wherein one perpetrates, fails to prevent, or witnesses actions that “transgress deeply held moral beliefs and expectations” (Litz et al., 2009, p.1). As a result, morally injured individuals often alter their beliefs; for instance, that the world is a safe and benevolent place
or that human beings trustworthy. Events that may lead to moral injury may be death-related situations, killings, handling/uncovering human remains, severely wounded victims that the person was not able to help (Frankfurt & Frazier, 2016). Moreover, individuals who suffer from moral injury may experience guilt, frustration, a sense of rejection, difficulty forgiving, self-harm, anhedonia, and shame (Currier, Holland, & Malott, 2015; Kopacz et al., 2016; Shay, 2014; Nash & Litz, 2013).

Current literature has not addressed moral injury experienced by police. Nonetheless, police officers often experience atrocities, gruesome crimes, and death in the line of duty (Papazoglou, 2013; Violanti & Paton, 1999). As is the case with military personnel, police officers are expected to experience moral injury, which may be a precursor to compassion fatigue as well as PTSD. To illustrate, approximately 25% of a police sample reported either killing or seriously injuring a suspect in the line of duty (Weiss et al., 2010). Of 60 different operational and organizational stressors common to the policing profession, officers ranked killing someone during a use of force encounter as the most stressful experience in terms of coping with the aftermath (Violanti & Aron, 1995). Interestingly, when presented with a list of 34 potentially traumatic incidents commonly experienced in the line of duty (e.g., being threatened with a gun, witnessing someone being killed), officers in two different studies reported that making a mistake that resulted in the death of a colleague would be the most stressful (also in terms of coping with the aftermath; Chopko, Palmieri, & Adams, 2015; Weiss et al., 2010).

Thus, police officers’ underlying feelings of guilt, shame, and distress that result from harming others may have commonalities with soldiers. Komarovskaya et al. (2011) found that killing or severely injuring a perpetrator was significantly related to PTSD symptoms among police officers. Similarly, other researchers found that trauma-related guilt and shame
were accounted for PTSD symptoms experienced by law enforcement officers (Chopko, Palmieri, & Adams, 2013). Lastly, Chopko, Facemire, Palmieri, and Schwartz (2016) reported that greater posttraumatic spiritual growth was positively related with greater distress (e.g., PTSD, depression) among overwhelmingly Christian (i.e., “Thou shall not kill”) officers. The authors of this research proposed that a spiritual quest is initiated by traumatic experiences in order to cope with guilt and shame produced by those events (e.g., harming a fellow human being).

As noted above, current literature has not addressed moral injury experienced by first responders. As with soldiers, first responders are expected to experience moral injury which is suggested to be a precursor to compassion fatigue (Nash & Litz, 2013; Morley, 2003). From a theoretical perspective, and based on the definitions provided by scholars in terms of moral injury and compassion fatigue, it is expected that exposure to potentially traumatic incidents may cause first responders to experience moral injury, which in turn may lead to compassion fatigue.

1.7 Identifying the Gap in the Scientific Literature

Until 2015, empirical research in the study of police compassion fatigue and compassion satisfaction had been exiguous, with many scholars emphasizing the need for more empirical exploration of this topic (Papazoglou & Andersen, 2014; Violanti & Gehrke, 2004). In an extensive review of the literature, Andersen and Papazoglou (2015) found only two articles—which are described in the following paragraph—examining the issue of compassion fatigue and compassion satisfaction among police officers. In both cases, the samples were small and non-representative.
In a study of officers \((n=45)\), Tehrani (2010) found that participants reported high levels of job satisfaction, personal growth as helping professionals, and skepticism that there is justice in the world. In another study with police detectives \((n=47)\), researchers reported that detectives with high compassion fatigue experienced low satisfaction in their personal relationships (Lane et al., 2010). Anecdotal evidence suggests that compassion fatigue, and even burnout, may be pervasive during the initial stages of a police officer’s career: “within two years of finishing the police academy, my officers are burned out and jaded, different people than the vibrant officers that joined the force in order to help people” (Personal communication, Director Michael Schlosser, PhD, Police Training Institute, State of Illinois, July 22, 2014). Based on the above-mentioned observations, I realized that an empirical study of police compassion fatigue was imperative.
Chapter 2
Study 1

2 Study 1: Exploring the Association between Authoritarianism, Compassion Fatigue, and Compassion Satisfaction among Police Officers.

2.1 Introduction

Individuals in care-giving professions (e.g., medical doctors, nurses, clinicians, police officers) often encounter traumatized populations that need support and care. Over time, alleviating the suffering of traumatized individuals may come with a cost. Compassion fatigue is a term coined by Figley (1995, p.9) and refers to the “cost of caring” shown by care-giving professionals to those who suffer. Compassion fatigue may have numerous implications for care-giving professionals’ health and wellbeing (e.g., behavioral, cognitive, physical health, emotional; Bride, Radey, & Figley, 2007; Figley, 2002). Research has shown that ultimately, compassion fatigue leads to professional burnout, which is associated with poor job performance and reduced quality of life (Conrad & Kellar-Guenther, 2006). The repercussions for burnout among police are significant and may impact the use-of-force decisions made by an officer. Poor use-of-force decisions carry severe implications for the safety of both the officer and individual they work with (Ariel, Farrar, & Sutherland, 2014). Further, hostile or apathetic behavior by police officers may lead to increased citizen complaints and decreased compliance. Conversely, civilians’ fair and respectful treatment by police can positively affect civilians’ attitudes and behaviors concerning the law (Mazerolle et al., 2012). However, not all caring comes with negative consequences. Individuals who are drawn to helping professions may derive purpose and meaning from helping those who suffer, achieving what Stamm (2002) terms as “compassion satisfaction” (p. 108). Stamm
(2002) argued that helping professionals who experience compassion satisfaction feel successful and highly satisfied in their occupation, which leads to enhanced job performance, commitment, and enhanced wellbeing.

Police officers routinely face unpredictable and potentially traumatic situations involving violent offenders, terrorist attacks, intense crime scenes, and irate civilians or suffering children (Papazoglou & Andersen, 2014). While police officers are mandated to handle intense critical incidents effectively, they often provide care and support for victims of crimes (Rudofossi, 2009). For example, in the mass school shooting in Newton, Connecticut, police officers responding to the incident provided, among other things, support for the wounded children until medical help arrived (Draznin, 2013). As a result, police officers often experience what Gilmartin (2002) described as a “hypervigilance biological rollercoaster” (p. 91). Gilmartin referred to this symbolic term to emphasize police officers’ intense physiological states while on duty and their emotional exhaustion at the end of each shift. The intense physiological states of police work combined with operational and organizational stress are significant risk factors for compassion fatigue and professional burnout (Violanti & Gehrke, 2004; Gilmartin, 2002). Once compassion fatigue is present, hostility, apathy, and cynicism may prevent feelings of compassion satisfaction, leading to a further lack of commitment to occupational duties (Andersen & Papazoglou, 2015). In principle, caregiving professionals – including police officers - with higher levels of compassion satisfaction, may find their role more meaningful despite the adversities experienced in their work (e.g., emotional caring for victims of crimes, stress; Radey & Figley, 2007).

The experience of compassion fatigue and compassion satisfaction is understudied among police officers, despite the fact that officers routinely face situations that increase the risk of compassion fatigue and burnout (Andersen & Papazoglou, 2015). Although it has yet to be
empirically examined, it may be the case that police officers are at particular risk for high compassion fatigue and low compassion satisfaction, given their chronic exposure to potentially traumatic critical incidents and victims’ suffering. An extensive review of the literature revealed only three articles examining the topic of compassion fatigue and compassion satisfaction among police officers, all with small, non-representative samples. In a study of caregiving professionals, Tehrani (2010) found that police officers \((n=45)\) believed the world lacks justice since they have supported many traumatized victims in the line of duty and often vicariously experienced the suffering of traumatized victims (e.g., a child that has been abused, a woman who has been battered). Thereby, the exposure to the suffering of others led them to the belief that the world lacks justice since innocent human beings are abused and humiliated. Nonetheless, these officers’ experienced higher levels of personal growth and job satisfaction, a proxy for compassion satisfaction, compared to other caregiving professionals (e.g., counselors, human resource advisors). Tehrani (2007) found similar results in a related study, also with a sample size of \((n=45)\) officers. In another study of 47 male and female police detectives, Lane and colleagues (2010) found that elevated compassion fatigue among detectives reduced their personal relationship satisfaction. In summary, very few studies have explored the experience of compassion fatigue and compassion satisfaction among police and no studies have examined how authoritarian attitudes may impact the development of fatigue, burnout, or satisfaction.

2.1.1 **The Fascist Ideology and its Relationship with Authoritarianism**

Fascism refers to a type of authoritarian regime that rules a country while denying its citizens the option of questioning its orders (Stone, Lederer, & Christie, 1993). The term fascism is derived from the Latin word, “fasces,” which refers to a bundle of rods tightly wrapped around an axe (Marriam-Webster Online Dictionary, 2017). The term, *fascism*, was
initially developed by the Italian dictator, Benito Mussolini, who used it as a metaphor to represent all Italian people’s expected obedience to the single power of the state; therefore, the “axe” (referring to Mussolini’s regime) was symbolically ready to decapitate whoever attempted to obstruct “its mission” (Billig, 1990; Lyons, 2008). The fascist ideology aimed to unite the Italian people and to spark a renaissance of Italy’s power as the epicenter of the Roman Empire’s glory. Since that time, fascism has been widely used to refer to other authoritarian regimes, such as Soviet Communism and German Nazism (Lyons, 2008). In his theory, Griffin, a political philosopher at Oxford, suggested that fascism contains three main components that are integral to the dominant group’s primacy: collective re-birth (palingenesis), populism, and ultra-nationalism (Lyons, 2008). In addition, the fascist ideology condemns any form of pluralism, individual rights, multi-culturalism, and internationalism; hence, it aims to purge any perspective that is considered to be a form of opposition (Lyons, 2008; McKeown & Mercer, 2010; Paxton, 1998). Therefore, proponents of fascist ideology despise groups who may threaten their ideology: Jewish people, racial and sexual minorities, foreigners in general, people with disabilities, and other groups who are different from the dominant group and, thus, may “jeopardize” the fascist regime’s ability to demand obedience from and exert rigid emotional control over its citizens (Billig, 1990; Duriez & van Hiel, 2002; McKeown & Mercer, 2010).

2.1.2 Measuring Authoritarian “Power and Toughness”

In their seminal book, The Authoritarian Personality, Adorno et al. (1950) attempted to explain how fascist ideology had been able to influence millions of people in Europe by using a psychoanalytic perspective to illustrate the inner conflicts and driving forces that lead people to idealize authority figures and admire fascist ideologies. Furthermore, Adorno et al. (1950) argued that strict discipline, harsh and punitive child-rearing practices, the
repression of unconscious desires and drives, and the internalization of values such as absolute obedience are some of the projection mechanisms that lead otherwise normal people to unconsciously justify aggression towards those who are considered “safe targets.” In order to better analyze the authoritarian personality, Adorno et al. (1950) developed the Fascism scale, or also called F-scale. The F-scale was the result of Adorno et al.’s (1950) interpretation of the authoritarian personality, and it incorporates nine personality traits that were identified as a result of this interpretation: conventionalism, authoritarian submission, authoritarian aggression, anti-intraception, superstition and stereotypes, power and toughness, destructiveness and cynicism, projectivity, and sex. Adorno et al. (1950) defined the above-mentioned personality traits as “subsyndromes” of the authoritarian personality; specifically, the trait of “power and toughness” (or subsyndrome based on Adorno et al.’s perspective) refers to the “Tough Guy [where] the repressed Id tendencies gain the upper hand, but in a stunted and destructive form” (p.753).

Later, Altemeyer would offer an understanding of the authoritarian personality in his seminal books Right Wing Authoritarianism (1981) and Enemies of Freedom: Understanding Right Wing Authoritarianism (1988). In these works, Altemeyer (1981, 1988) draws upon social learning theory to argue that the authoritarian personality should not solely be traced back to inner conflicts, strictly forbidden desires, and drives of childhood experiences; rather, he contends that authoritarianism is more malleable and is dependent on a progressive interaction and lifelong developmental process between individuals and various social situations (e.g., modeling, teaching). Based on this conceptualization of the authoritarian personality, Altemeyer (1981) developed the Right-Wing Authoritarianism (RWA) scale, which includes only three of the nine personality traits of Adorno et al.’s (1950) F-scale: conventionalism, authoritarian submission, and authoritarian aggression. The three
personality traits in the RWA scale appear to be sufficiently internally consistent and correlated (Duriez, Klimstra, Luyckx, Beyers, & Soenens, 2012).

2.1.2.1 Facing the Dilemma: F-scale vs. RWA

As discussed above, Adorno et al. (1950) and Altemeyer (1981, 1988) drew upon psychoanalysis and social learning theory, respectively, to study the authoritarian personality (Duriez et al., 2012). Furthermore, Altemeyer’s (1981, 1988) RWA scale only incorporates three (conventionalism, authoritarian submission, and authoritarian aggression) of the nine personality traits included in Adorno et al.’s (1950) F-scale. Nevertheless, researchers contend that neither scale is superior to the other, as both use foundational psychological theories in their operationalization of authoritarianism (psychoanalytic and social learning theory; Meloen, van der Linden, & de Witte, 1996). Moreover, research has shown that both scales (F-scale and RWA) are highly positively correlated and appear to be highly related to certain variables that they are supposed to predict (e.g., attitudes towards cultural minority groups, trust in authorities, social punitiviness, and submissive behavior; Meloen, van der Linden, & de Witte, 1996). However, unlike the F-scale, the RWA scale does not include “power and toughness” because this trait is accounted for by the other three RWA personality traits (authoritarian aggression, authoritarian submission, and conventionalism; Duriez et al., 2012). Nonetheless, the issue of “power and toughness” in police culture has been extensively explored and discussed in the literature, as some officers may perceive it as a crucial trait that enables them to enforce the law (e.g., Raganella & White, 2004; White, Cooper, Saunders, & Raganella, 2010).

2.1.3 The Role of Authoritarianism in Police

In the strictest definition, authoritarianism refers to the belief that individuals should comply to laws or rules with complete obedience or subjection to authority, rather than expressing
individual freedoms or behaviors (Pratto, 2010; Smith & Hung, 2011). The layperson may be concerned that individuals attracted to a career in law enforcement may overvalue power and authoritarian discipline and that this may influence their behavior on the job (Blumenstein, Fridell, & Jones, 2012; Miller, Forest, & Jurik, 2003). While it is true that officers are often mandated to enforce laws and rules, this aspect of policing should not be misinterpreted as the officer holding authoritarian attitudes per se. Psychological screening of recruits is now a common practice in the US and Canada. Surveys in the US indicated that screening to evaluate normal and abnormal behaviors and personality traits is mandated for candidates in over 90% of police departments (Cochrane et al., 2003; Reaves, 2010; Serafino, 2010). Despite screening precautions, personality characteristics that are conservative and inflexible, such as authoritarianism, may occur among police officers.

Individuals with dogmatic attitudes are more likely to get punitive if others do not follow their prescribed rules. Police officers are often mandated to enforce the law and impose negative consequences (e.g., arrest, fine) to those who are not law-abiding. Nevertheless, law enforcement is one of the primary roles of the police so that they make sure they maintain peace and order. Many researchers (Gilmartin, 2002; Toch, 2002) emphasized the fact that even the most idealistic and exceptional officers may become fatigued over time if they do not find a positive way to appreciate the positive outlets of their services. So if the most idealistic officer becomes fatigued, then it is even more likely that an authoritarian officer will become fatigued as well. Therefore, an authoritarian officer may hardly feel grateful for the positive aspects of police work that may lead to compassion satisfaction such as helping others, giving back to the community, protecting victims of crimes, and so forth (Toch, 2002). Furthermore, motivations for becoming a police officer may be relevant to examine, in that they may indicate evidence of authoritarian attitudes. Thus, to extend prior research in
the field of police health and wellbeing, the author examined how authoritarian attitudes and motivations to be a police officer, shape the experience of compassion fatigue, compassion satisfaction, and burnout. Further, the author distinguishes the role of authoritarian attitudes on compassion fatigue, compassion satisfaction, and burnout from other variables that may impact police health and wellbeing (e.g., length of service).

2.1.4 The Current Study

This study comes at a critical time, as highlighted by growing public concern over police performance and engagement with civilians (Ariel, Farrar & Sutherland, 2014). Because of historical reluctance among police officers to collaborate with academic researchers (Buerger et al., 2012; Whalen, 2012), much of the available research is restricted to small, unrepresentative, or clinical samples of officers. However, the opportunity to explore the issues in this paper are timely, given that police organizations are now seeking collaborations with academic researchers to assess how police stress impacts the quality of life and health among officers (Buerger et al., 2012; Duxbury & Higgins, 2012; Whalen, 2012). The present study aimed to overcome prior sampling limitations by recruiting a sample of participants that represented the gender, racial, and regional demographics of North American police officers. The author aimed to estimate the occurrence of compassion fatigue, compassion satisfaction, burnout, and authoritarian attitudes among officers (i.e., prevalence rates). The author hypothesized the following: 1). There would be a higher prevalence of elevated compassion fatigue compared to the prevalence of elevated levels of compassion satisfaction, burnout, and authoritarian attitudes among officers. 2). That compassion fatigue, burnout, and authoritarian attitudes would be negatively correlated with compassion satisfaction. 3). To explore how length of service and motivations for policing were related
to compassion fatigue, compassion satisfaction, and burnout. That authoritarian attitudes would moderate the relationship between compassion fatigue and burnout.

2.2 Method

2.2.1 Participants

Participants were law enforcement officers from North America (US and Canada). Of the total participants (n=1,351), 87.3% were males and 89.4% were European American (or Canadian). More detailed demographic information is shown on Tables 1a and 1b. A smaller percentage of participants (n=864) completed all the survey items. Questions regarding authoritarianism were added after data collection had begun. Consequently, a smaller number of participants (n=315) answered the questions about authoritarianism.1

2.2.2 Procedures

Over the course of a year, undergraduate research assistants involved in the data collection of this study identified publicly available email addresses of police organizations (e.g., departments, training academies, state and provincial organizations) in each US state and Canadian province. By “publicly available email addresses” the author means contact information that police organizations’ posted on their website or were accessible on state or provincial websites. As a result, it was developed a contact database with publicly available email information from US and Canadian police organizations listed (n=16,198). Some police organizations provided a telephone number but not an email address on their public website. If a police organization’s email address was not available, present study research assistants called the police organization and requested that they provide research team their official email address for research purposes. During the phone call, a research assistant informed the

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1 This specific sample (n=315) was only included in authoritarianism-related analyses. The rest of analyses included the overall collected sample (n=864). Number of participants appears in each table for clarity.
police organization of the aims of current research program and that this study was being conducted by a group of experts with appropriate ethics board approval. Once an email address had been attained, then research team forwarded the present study survey weblink to the organizations’ administration with the request that they email the link to their entire staff. Officers interested in filling out current study on compassion fatigue and satisfaction clicked on the survey link. Officers then filled out a consent form followed by questions about demographics, length of service, and the compassion fatigue and satisfaction survey. Another sampling strategy it was employed included posting the survey link to social media (i.e., LinkedIn)- and invited members of law enforcement networks to participate in present study provided that they served in the US or Canada. It is unknown how many police organizations actually forwarded our survey link to their officers, but it was calculated how many officers responded to present study survey by region in the US and Canada (see results section).

2.2.3 Measures

Compassion Satisfaction and Fatigue (CSF) Test. In this study, the author used the established scale “Compassion Satisfaction and Fatigue Self-Test for Helpers” (CSF; Figley & Stamm, 1996) to assess these variables. This CSF test has been used in numerous studies around the globe with many types of front-line care providers (Stamm, 2002). The CSF test is a self-report scale that consists of three sub-scales with a total of 66 items on a Likert-type scale (0 – never to 5 – very often). Three sub-scales measure compassion fatigue, burnout, and compassion satisfaction. Participant’s sub-scale scores refer to one of the following categories based on the construct (compassion fatigue, compassion satisfaction, burnout) measured: extremely low, low, moderate, high, extremely high. The scale shows good reliability, internal consistency, with Cronbach’s alpha reliability values of: .87 for compassion satisfaction, .90 for burnout, and .87 for compassion fatigue (Bride, Radey, &
Figley, 2007). The CSF scale was found to be reliable in this study with Cronbach’s alpha as follows: .89 for compassion fatigue, .84 for burnout, and .92 for compassion satisfaction.

**Authoritarianism.** To better examine the association between authoritarian attitudes and compassion fatigue and satisfaction, the author added items from the Fascism (F) scale. The Fascism (F) – scale (Adorno et al., 1950) is comprised of 30 items on a 6-point scale (1 = *Strongly Disagree*, 6 = *Strongly Agree*). In the Fascism (F)-scale, a number of questions assess different domains of authoritarianism such as authoritarian aggression, power and toughness, destructiveness, and cynicism. In this study, the 6 items of the Fascism (F)-scale reflecting authoritarian attitudes (i.e., power and toughness) were used. “No weakness or difficulty can hold us back if we have enough will power,” “What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country,” “What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith,” “An insult to our honor should always be punished,” “People can be divided into two distinct classes: the weak and the strong,” “The true North American way of life is disappearing so fast that force may be necessary to preserve it.” The 6 items used a 5-point scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*). The 6 items used demonstrate reliability (Cronbach’s alpha = .71). Each question was scored in the following manner: Strongly Disagree – 1 point; Disagree – 2 points; Neutral – 3 points; Agree – 4 points; Strongly Agree – 5 points. The final authoritarianism score was calculated based on the average of the points given from participants’ responses to every authoritarianism-related question. Therefore, a total authoritarianism score close to 1 represents low authoritarianism as opposed to a total score close to 5 that shows high authoritarianism.
Motivations to Become a Police Officer. Several statements aimed to measure reasons that motivated participants join the police force and continue to work as a police officer were asked (e.g., “power,” “enforce the law,” “help others”). The questions and statements used in this study to explore participants’ motivation to join the police force and continuing working as a police officer were similar to statements used in other research studies examining job satisfaction among police officers (Carlan, 2007; Johnson, 2012). Analytically, the questions were framed in terms of motivation for joining the police force: “For what reasons did you join the police force?” A question examining motivation for continuing to work as an officer was: “What aspects of the job do you find meaningful now?” Response stems were as follows: Respect (scored positive, “1” point), Help other people (scored positive “1” point), Money (scored negative, “1” point), Power (scored negative, “1” point), Enforce the law (scored as neutral, no points). Participants were able to choose more than one option out of the 6 offered to them. The reliability for the motivation questions was assessed using Kruder Richardson 20, a test to assess reliability in categorical items. The Kruder Richardson test is interpreted in a similar manner as Cronbach’s alpha (i.e. the range is 0 to 1; closer to 1 means higher reliability). For our study motivation-related items showed a KR20=.527, which indicates moderate reliability.

2.2.4 Data Analysis Plan

One of the present study primary interests was to estimate prevalence rates of compassion fatigue, compassion satisfaction, burnout, and authoritarian attitudes among police officers in this study. To this end, descriptive statistics (calculation of percentages) were utilized to calculate percentage of participants who reported different levels of compassion fatigue, compassion satisfaction, burnout, and authoritarian attitudes. In addition, Pearson r correlation was conducted to assess the relationship between study variables (compassion
fatigue, compassion satisfaction, burnout, authoritarianism), since Pearson $r$ correlation measures the association (strength) between two variables. Furthermore, to examine one of the research questions, multiple regression was implemented as a way to evaluate the role of certain variables in adding to the prediction of the dependent variable. To this end, Adjusted $R^2$ – the adjusted multiple correlation coefficient of determination – was utilized to examine how much variance in the dependent variable can be explained by a set of independent variables. A multiple regression model was performed to explore the role of demographics (gender, years of experience), authoritarian attitudes, motivations, and compassion satisfaction in the prediction of compassion fatigue. A similar regression model was implemented to examine the role of aforementioned independent variables in the prediction of burnout. Similarly, a third regression model was implemented to determine how much variance in the dependent variable (compassion satisfaction) can be accounted for by predictor variables: demographics (gender, years of experience), authoritarian attitudes, motivations, and compassion fatigue. Finally, a moderation analysis was conducted to assess if authoritarian attitudes would moderate the relationship between compassion fatigue and burnout.

2.3 Results

Aim 1: Recruit a sample of police officers from the US and Canada: Of the total participants in this convenience sample ($n=1,351$), 87.3% were males and 89.4% were European American or Canadian (Asian/Pacific American 1.40%, Black American 2.50%, Hispanic/Latino 3.50%, Native American 0.4%, Other 2.70%; Table 1). Participants’ average length of service was 24.52 years (SD=9.48). The percentage of our participants based on the US regions was as follows: Midwest 27.60%, Northeast 19%, Southeast 25.19%, Southwest
10.71%, West 16.74%, Other 0.75% (Table 2). From Canada, the percentage of participants was: Eastern Canada 71.43%, Western Canada 28.57% (Table 2).

Hypothesis 1: Estimate the prevalence rates of compassion fatigue, compassion satisfaction, burnout, and authoritarian attitudes among officers in present study. A greater percentage of officers reported high to extremely high levels of compassion satisfaction (31.7%) as opposed to the percentage of officers reporting high to extremely high levels of compassion fatigue (23%) (Table 3; Figure 1; Figure 2). Few participants (n=28) reported high or extremely high levels of burnout (Table 3) (Figure 3). Less than a quarter of participants reported moderately high (17.48%) or high (0.61%) authoritarian attitudes (Table 4).

Hypothesis 2: Compassion Fatigue, Burnout, and Authoritarian Attitudes would be Negatively Correlated with Compassion Satisfaction. A Pearson’s correlation (n=864) showed a moderate negative correlation (r = -.40; p < .000) between compassion fatigue and compassion satisfaction. Similarly, burnout and compassion satisfaction (n=864) were negatively correlated (r = -.51; p < .000). Further, compassion fatigue and burnout (n=864) were strongly correlated (r = .74; p < .000). The authoritarian attitudes variable (n=315) was positively correlated with compassion fatigue (r = .13; p = .018) and burnout (r = .13; p = .016). No significant correlation (n=315) was found between compassion satisfaction and authoritarian attitudes (r = -.022; p = .70).

Hypothesis 3: To explore how length of service, type of occupational duties and motivations for policing were related to fatigue, satisfaction and burnout. A multiple regression model, adjusting for demographic variables, was used to examine variables that may predict levels of compassion satisfaction (Table 5). Being motivated by positive aspects of police work was positively associated with compassion satisfaction (p’s < .05). The authoritarian attitudes variable did not significantly predict compassion satisfaction. The greatest amount of
variance in compassion satisfaction was explained by the presence of compassion fatigue 
\(B = -.492; SE = .068; \beta = -.393; t = -7.2; \) Adjusted \(R^2 = .22, p < .000;\) Table 5).

A multiple regression model, adjusting for demographic variables, was used to explore variables that could potentially predict levels of compassion fatigue (Table 6). The authoritarian attitudes variable was positively associated with compassion fatigue \((p < .05)\). The greatest amount of variance in compassion fatigue was explained by compassion satisfaction \(B = -.331; SE = .046; \beta = -.415; t = -7.2; \) Adjusted \(R^2 = .177; p < .000,\) Table 6).

A multiple regression model, adjusting for demographic variables, was used to explore variables that could potentially predict levels of burnout (Table 7). The authoritarian attitudes variable was positively related to burnout \((p < .05)\). The greatest amount of variance in burnout was explained by compassion satisfaction \(B = -.338; SE = .035; \beta = -.511; t = -9.6; \) Adjusted \(R^2 = .299; p < .000,\) Table 7).

**Hypothesis 4:** That authoritarian attitudes would moderate the relationship between compassion fatigue and burnout. A multiple regression model was used to assess whether the association between compassion fatigue and burnout depends on authoritarian attitudes. After centering authoritarian attitudes and compassion fatigue and computing an interaction term between authoritarian attitudes and compassion fatigue (Aiken & West, 1991; Baron & Kenny, 1986), the two predictors and their interaction were entered into a simultaneous regression model, adjusting for years of service. Results revealed that authoritarian attitudes do not moderate the relationship between compassion fatigue and burnout, as the interaction between compassion fatigue and authoritarian attitudes was not significant \(B = -.050; SE = .054; \beta = -.039; p = .353; t = -9.31\).
2.4 Discussion

Overall, it is encouraging to observe that, contrary to our hypothesis, nearly three quarters of the sample experienced moderate to high levels of compassion satisfaction, compared to a little over one-quarter that experienced moderate to high levels of compassion fatigue and even fewer reported burnout. In line with our hypothesis, our data counteract the layperson theory (Griffin & Bernard, 2003; Laguna, Linn, Ward, & Rupslaukyte, 2010) that many officers hold authoritarian attitudes. Less than one-quarter of our sample expressed moderately high or high authoritarian attitudes.

2.4.1 Compassion Fatigue

The prevalence of compassion fatigue among police officers in our sample was lower than that of other caregiving professionals. For example, Conrad and Kellar-Guenther (2006) reported that approximately 50% of Colorado child protection workers displayed high to extreme levels of compassion fatigue. Similarly, researchers found that 86% of emergency nurses showed moderate to high levels of compassion fatigue (Hooper et al., 2010). In our sample, although high levels of burnout were reported by fewer than 5% of officers, it is important to note that around 14% reported moderate levels of burnout. Taken together that number is a significant proportion of active duty officers. Once an officer is experiencing burnout they are at high risk of debilitating health and occupational effects such as PTSD and mental health conditions, early retirement and increased sick days (Burke & Mikkelsen, 2006; Martinussen, Richardsen, & Burke, 2007). These findings highlight the urgency for prevention programs addressing the issue of compassion fatigue and burnout for those officers most at risk. Interestingly, levels of compassion fatigue did not differ between males and females, nor was it related to years of service – indicating that becoming fatigued over
the course of a policing career is not a normative trajectory, as some may have assumed (Gershon, Lin, & Li, 2002; Martinussen, Richardsen, & Burke, 2007).

As demonstrated by our statistical models, the most significant finding regarding compassion fatigue is that fatigue increases as compassion satisfaction lessens. Furthermore, lower levels of compassion satisfaction comprise the best predictor of burnout. Present study data suggest that, for example, on a police force of 1000 officers, approximately 230 would be functioning with high levels of compassion fatigue, which potentially places them on a trajectory for negative wellbeing and occupational outcomes. Psychological support for these officers is highly recommended.

2.4.2 Authoritarian Attitudes

Current study findings are in line with prior research showing that police officers tend to be psychologically healthy and, overall, indicate low prevalence of authoritarian traits (Laguna et al., 2010). Fewer than 18% reported moderate authoritarian attitudes and fewer than 1% endorsed extreme authoritarian attitudes. It is sensible that individuals who are motivated to become police officers would be more likely to report that the population should strictly obey the rules and regulations of the society in which they live in order to maintain social order and safety; mainly because maintaining social order and safety are duties that police officers are required to perform. However, as present study data suggested, there is a debilitating side to maintaining rigid and extreme authoritarian attitudes. Specifically, high levels of authoritarian attitudes are related to both compassion fatigue and burnout.

Individuals who possess strong authoritarian attitudes perceive other people as either “good” or “bad” (Pratto, 2010; Smith & Hung, 2011). The practice of categorizing others in such a strict manner may increase the likelihood that authoritarian individuals will experience
alienation from others because they are less willing to foster and maintain collegial relationships. Authoritarian individuals often exclude and separate from people who challenge their system of beliefs, rather than engage or adjust their belief systems. Furthermore, authoritarian individuals may become aggressive when others challenge or disregard their authority and established values (Pratto, 2010; Smith & Hung, 2011). Certainly policing is a career in which an officer encounters routine instances when civilians challenge and disregard their authority and established laws. It is possible that repeated encounters with civilians who counter an authoritarian individual’s belief system and the chronicity of being unable to change this pattern may engender compassion fatigue and burnout. This idea is supported by a study by White and colleagues (2010) who found that officers with unfulfilled motivations of power and authority experienced low job satisfaction in their policing careers. In our study, authoritarian attitudes were significantly correlated with both compassion fatigue and burnout. According to the moderation analyses, it was found that holding an authoritarian attitude did not change the relationship between compassion fatigue and burnout. Compassion fatigue and burnout are highly related, even among individuals with authoritarian attitudes. This indicates that authoritarian individuals are just as at risk of burnout when compassion fatigue is high as are officers who do not hold authoritarian attitudes. However, given the likelihood that an authoritarian individual will remain isolated from peers and support systems may mean that they do not seek help when compassion fatigue or even burnout becomes apparent, placing both themselves and the civilians they interact with at risk.

What is noteworthy is the lack of a correlation between authoritarian attitudes and compassion satisfaction. It is possible that highly authoritarian individuals do not derive satisfaction from helping others (e.g., victims) in need because they already view those individuals as “good” but unfortunate victims of the “bad” people that do not obey laws.
Another possibility is that those who are highly authoritarian also have less capacity for empathy (Pratto, 2010; Smith & Hung, 2011). It is the inability to assist or prevent the pain and suffering of others that results in compassion fatigue. In any case, prior research has established that compassion fatigue is a sign of secondary trauma (Figley, 2002). Secondary trauma is associated with psychological distress and alienation from peers, the latter of which is already more likely among highly authoritarian individuals. Encouraging research shows that officers with established social support (e.g., peers, family, friends) are more likely to experience a reduction in psychological distress over time and, hence, a reduction in secondary trauma and burnout (Perez, Jones, Englert, & Sachau, 2010) and even PTSD symptoms (Yuan et al., 2011).

2.4.3 Compassion Satisfaction

Although some research indicates that female officers may display a different communication style than male officers when interacting with civilians (Rabe-Hemp, 2008), current study data suggests that men and women are equally likely to experience compassion satisfaction. Not surprisingly, higher levels of compassion satisfaction were associated with positive motivations for joining the police as well as currently being motivated by the positive aspects of policing. The most encouraging finding is the significant reduction in compassion fatigue that is observed when compassion satisfaction is increased. This finding provides preliminary evidence that intervening to improve levels of compassion satisfaction may be a successful way to reduce compassion fatigue and burnout among police officers.
2.4.4 The Challenge of Measuring Authoritarianism in Police

As previously noted, the F-scale includes “power and toughness” as one of its nine authoritarian personality traits. On the other hand, RWA does not measure “power and toughness” of authoritarianism since it was contended that the three measured traits (authoritarian aggression, authoritarian submission, conventionalism) offered sufficient consistency to measure authoritarianism sufficiently. F-scale and RWA are emanated from two different psychological theories; that is, psychoanalytic and social learning theory respectively. Therefore, Altemeyer (1981, 1988) suggested that authoritarianism (as opposed to Adorno’s theory on authoritarian personality) may not be explained by childhood inner conflicts, forbidden desires, and repressed conflicts per se. Rather, he explored authoritarian personality through the lenses of social learning theory and supported the notion that authoritarianism is an on-going process and widely depends on individuals’ social interactions and lifelong developmental experiences. Indeed, recent research findings endorsed Altemeyer’s perspective; in their study with Canadian military students, researchers found that males tended to score more highly on the RWA scale than females (Nicol, Charbonneau, & Boies, 2007). In addition, researchers used previous research in this area to predict that RWA would increase in proportion to a student’s years of military training; however, they interpreted the fact of non-significant differences in RWA levels over the years of military training on the grounds that RWA may not “adequately capture existing differences” (Nicol, Charbonneau, & Boies, 2007, p.254) among military students. Nevertheless, prior research has successfully utilized the RWA scale to measure authoritarian tendencies and prejudice towards minority cultural groups (e.g., Duriez & van Hiel, 2002; Rattazzi, Bobbio, & Canova, 2007). Similarly, other researchers (e.g., Hodson, Hogg, & MacInnis, 2009) have found that RWA more likely refers to within-group conformity compared to other perspectives on authoritarianism (e.g., dark triad personality
traits) that refer to between-group hierarchies (“us vs. them”, which in the police field may become “cops vs. civilians”). Therefore, the F-scale appeared to be the only viable option for use in the current study since it is able to measure “power and toughness” within the context of police officers’ authoritarian attitudes towards civilians. Indeed, while the F-scale’s “power and toughness” items do not directly address cultural minority groups, they do refer to authoritarian attitudes towards out-group members in general.

Nonetheless, theoretical background concerns arise. As previously noted, the F-scale was developed using an exclusively psychoanalytic approach; hence, it views authoritarianism strictly though the psychoanalytic perspective. However, as Altemeyer’s (1981, 1988) findings suggest, authoritarianism is shaped by social interactions, learning, and other developmental experiences that occur over the course of a person’s life. Moreover, the F-scale was developed by Adorno et al. (1950) to explore the authoritarian ideologies that dominated European and other countries during World War II and cost millions of people their lives just for being different (and thus, “inferior”) from the dominant group. As Altemeyer (1981) observed, the F-scale was developed by investigators who theorized that authoritarianism “was often caused by a fascist personality syndrome” (p.14); however, he goes on to question its validity on the grounds that social conditions have dramatically changed since 1940s. Even though they may share overlapping traits, modern authoritarian personalities may be quite different from their World War II counterparts. Although Adorno et al.’s (1950) theory posits that authoritarian individuals may be psychopathic, eccentric, and manipulative, the dark triad of personality perspective appears to combine three core personality traits that better correspond to the reality of modern societies (Ferrarotti, 1994; Lee et al., 2013). Therefore, the author suggests that authoritarianism among police officers
may be better measured by using a scale that considers modern societal norms and is not solely dependent on psychoanalytic theory.

Many scholars have recently studied authoritarianism by measuring dark triad (DT) personality traits (Machiavellianism, narcissism, psychopathy); they argue that measuring the DT of personality traits offers a valuable way of studying authoritarianism, particularly among those who occupy positions of power in the workplace (e.g., supervisors in business; Lee et al., 2013; Wisse & Sleebos, 2016). Kiazad et al.’s (2010) study of employees and their supervisors in the business sector aimed to explore supervisors’ authoritarianism (or they also called it abusive supervision) by measuring DT personality traits (specifically Machiavellianism). They justified their decision to focus on Machiavellianism on the grounds that those with high levels of Machiavellianism have a greater ability to pay attention to external cues than those with high levels of psychopathy and narcissism. To this end, those with high levels of Machiavellianism may exercise control, issue rules, promise rewards for compliance, threaten punishment for disobedience, and dominate employees by controlling social interactions in the workplace. Similarly, Wisse and Sleebos (2016) contend that people who hold positions of power in their workplace and possess at least one of the three DT personality traits have been shown to be ineffective because they attempt to punish others, stimulate negative behaviors, and show self-serving behaviors.

Wisse and Sleebos’ (2016) interpretation of DT of personality traits can be adapted to the field of police work; that is, police officers employ positions of power when they respond to crime scenes and they communicate with civilians or victims of crimes. For instance, when civilians request police help, officers with high levels of authoritarianism may demand that civilians obey to their orders. In crime scenes, it is logical that the victims of crimes are totally dependent on police officers’ directions. Therefore, it is possible that officers with
high levels of DT personality traits may desire power over victim of crimes who happened to request their help. However, exposure to trauma may affect officers with high levels of authoritarianism differently compared to officers with low levels or an absence of DT personality traits.

2.4.5 Study Limitations

As opposed to prior studies examining compassion fatigue and compassion satisfaction among police (e.g., Tehrani, 2010) that recruited a small number of police officers, present study aimed to recruit a larger number of participants in North America. A limitation of this study is the use of survey methods using a convenience sampling strategy. In the future, a representative sample of law enforcement officers is recommended for a more complete assessment of personality and compassion fatigue, satisfaction, and burnout. As is known, surveys suffer from the biases of self-reported information. Even though present survey was anonymous, present study participants may have been cautious in disclosing personal information. Given the time and space limitations, only five statements were used from the “authoritarian power and toughness” category of the Fascism (F) scale (Adorno et al., 1950) instead of using longer and more complex personality assessment tools (e.g., The Dark Triad of Personality (Jones & Paulhus, 2014).

2.4.6 Implications and Recommendations

Although the majority of officers in this sample reported a healthy level of compassion satisfaction and low levels of burnout, the prevalence of compassion fatigue warrants attention. Furthermore, variables such as rigid authoritarian attitudes may contribute to the trajectory of compassion fatigue and burnout. The good news is, as this study demonstrated, that when compassion satisfaction increases, compassion fatigue and burnout are reduced.
The author recommends that police organizations routinely (e.g., annually) assess compassion fatigue and satisfaction within their officers. This can be accomplished by administering the Compassion Satisfaction /Fatigue Self-Test for Helpers (Figley & Stamm, 1996), which is available for no cost. The present study findings may be valuable in the development of future studies that test interventions as well as the development of policy program. For instance, future programs aimed at enhancing compassion satisfaction may be a recommended investment. For example, peer support programs may be developed with a focus of recruiting officers with high compassion satisfaction as the “peer role models” for officers in need of support. Peer role models can be educated on how to reach out to officers with higher levels of authoritarian attitudes, engaging them rather than encouraging isolation. However, present study is a first step for future research that would examine the efficacy of such programs in police organizations. Alternative assignments or rotation of assignments perceived as valuable - transferring from child exploitation/child pornography to criminal intelligence services, for example - could be offered to those suffering from compassion fatigue (Conrad & Kellar-Guenther, 2006). The current study results support Stamm’s (2002) recommendations to caregiving professionals with scores similar to those found in this study (low burnout, moderate compassion satisfaction, elevated compassion fatigue) - individuals are encouraged to stay in their careers as police officers. However, enhancing compassion satisfaction will help police officers develop a psychological shield against the detrimental effects of compassion fatigue in their lives.

This study has the potential for high impact given that there are approximately 850,000 police officers in the US and Canada (Bureau of Labor Statistics, 2013; Federal Bureau of Investigation, 2013; Statistics Canada, 2013) who have an exponential impact on civilians. Compassion fatigue and burnout confer high costs to individuals (e.g., quality of life),
organizations (e.g., missed work due to illness), and society at large (e.g., tax-payers’ dollars, public safety). In addition, aside from general contributions to knowledge, the findings of the present study could shape police training and support in ways that improve officers’ wellbeing and performance as well as public safety and trust.
Chapter 3
Study 2

3 Study 2: Examining the Relationship between Dark Triad of Personality Traits, Compassion Satisfaction, and Compassion Fatigue among Police Officers.

3.1 Introduction

3.1.1 Compassion Fatigue

Caregiving professionals (e.g., first responders, nurses, clinicians, therapists, and emergency medical doctors) often respond to potentially traumatic events incidents and are required to help traumatized individuals as part of their duties (Blau, Bentley, & Eggerichs-Purcell, 2012; Jacobson, 2012; Musa & Hamid, 2008). Exposure to traumatized populations can have a debilitating impact on frontline professionals’ wellbeing (e.g., Berzoff & Kita, 2010; Collins & Long, 2003; Craig & Sprang, 2010; Jacobson, 2012; Musa & Hamid, 2008). Specifically, trauma researchers have found that caregiving professionals who work with victims of trauma may experience negative effects, such as hopelessness, feeling of helpless and isolation, agitation, and lack of concentration (Randall & Buys, 2013; Salston & Figley, 2003). As noted by Figley (1995), compassion fatigue is experienced by professionals who work with victims of traumatic incidents or experience extreme stress in the line of duty; in turn, compassion fatigue is accompanied by a number of negative consequences in relation to caregiving professionals’ work performance and their personal and professional relationships. Compassion fatigue shares symptoms with post-traumatic stress disorder (PTSD), which is a condition that has been defined by the American Psychiatric Association (APA) Diagnostic and Statistical Manual (DSM-V; APA, 2013). Rather than experiencing symptoms as a result of personal trauma, caregivers often develop symptoms of compassion fatigue from their
encounters with trauma survivors and secondary traumatization from working in the aftermath of traumatic events. Compassion fatigue is made up of cognitive, behavioral, and emotional aspects (Berzoff & Kita, 2010; Figley, 1995; Hooper et al., 2010). The cognitive aspects of compassion fatigue include apathy, lack of concentration, depersonalization, negativity, low self-esteem, and preoccupation with trauma. Compassion fatigue’s behavioral components include sleep problems, hypervigilance, and irritability (Jacobson, 2012; Salston & Figley, 2003). Similarly, the emotional aspect of compassion fatigue includes feelings of powerlessness, guilt, fear, anhedonia, sadness, and rage (Conrad & Kellar-Guenther, 2006; Salston & Figley, 2003). Without intervention or a personal strategy for addressing secondary trauma, caregiving professionals may experience a cumulative increase in compassion fatigue that can have increasingly degenerative effects on their personal and professional lives (Collins & Long, 2003; Craig & Sprang, 2010; Salston & Figley, 2003). If caregiving professionals who work with traumatized populations do not seek help for compassion fatigue, they may experience physical health issues (e.g., headaches, stomach aches), existential angst related to life and death, and burnout (Berzoff & Kita, 2010; Conrad & Kellar-Guenther, 2006; Musa & Hamid, 2008).

Other scholars have emphasized that compassion fatigue can be contagious and can spread from a caregiving professional to the rest of their organization or family members (Hormann & Vivian, 2005; Salston & Figley, 2003). Indeed, if a caregiving organization (e.g., a hospital or a police child abuse unit) is perceived as a systemic entity that aims to help traumatized individuals, then such organizations’ professionals are susceptible to the debilitating impact of compassion fatigue (Burns, Morley, Bradshaw, & Domene, 2008; Hormann & Vivian, 2005). On the other hand, other researchers have emphasized the crucial role of the organization in supporting frontline professionals, which, in turn, can decrease
emotional exhaustion and promote general wellbeing among its members (Ramarajan, Barsade, & Burack, 2008).

3.1.2 Compassion Satisfaction

Could compassion fatigue’s incapacitating impact on caregiving professionals’ physical and mental wellbeing be mitigated? Many researchers have emphasized the important role of compassion satisfaction in reversing or preventing the adverse effects of compassion fatigue (e.g., Conrad & Kellar-Guenther, 2006; Salloum, Kondrat, Johnco, & Olson, 2015). Compassion satisfaction refers to the satisfaction that caregiving professionals experience when they help traumatized individuals (Stamm, 2002) and it is viewed as a major protective factor against the impact of compassion fatigue (Collins & Long, 2003; Craig & Sprang, 2010; Wagaman, Geiger, Shockley, & Segal, 2015). Thus, caregiving professionals with high compassion satisfaction experience positive feelings (e.g., recognition, caring, satisfaction, and altruism) by connecting with and supporting survivors of trauma through their caregiving services (Chopko, 2011; Salloum et al., 2015).

3.1.3 Police Compassion Fatigue and Compassion Satisfaction

Police officers are often mandated to respond to critical situations, such as domestic violence, child abuse, and terrorist attacks, and it is estimated that police officers may encounter more than 900 potentially traumatic incidents over the course of their career (Papazoglou, 2013; Rudofossi, 2009). Police officers may experience direct or vicarious trauma in the line of duty (Conn & Butterfield, 2013; Burns, Morley, Bradshaw, & Domene, 2008). In a survey study of British police officers (n=603), Brown, Fielding, and Grover (1999) found that the major traumatic stressors reported by their study participants were exposure to death and disaster, violence and injury, and sexual crime. Furthermore,
operational and organizational stress may exacerbate compassion fatigue’s impact on the mental and physical wellbeing of police officers (Burke & Mikkelsen, 2006; Randall & Buys, 2013). Police officers who work in Internet child exploitation units (e.g., investigation of Internet child pornography cases) are particularly vulnerable to compassion fatigue (Bourke & Craun, 2014; Burns et al., 2008). Nonetheless, officers who investigate Internet child pornography cases and feel that their mission has a positive impact on victims’ lives (or reported experiencing high compassion satisfaction) indicated high professional satisfaction (Perez, Jones, Englert, & Sachau, 2010).

In many instances, police officers must arrest the perpetrator and provide support to the victims until they can receive medical and psychological assistance. For instance, in the mass school shooting that occurred in Newtown, Connecticut, police officers were the first responders on the scene, which required them to provide support to children who had been severely wounded during the attack (Draznin, 2013). Therefore, a police officer often needs to simultaneously adopt the roles of crime fighter and social service worker (Manzella & Papazoglou, 2014). This dual role gives rise to what Chopko (2011) refers to as the “compassionate-warrior mindset” that is often pervasive in police work. The aforementioned findings from the police trauma literature support the notion that police officers and other caregiving professionals are vulnerable to the adverse effects of compassion fatigue. Previous studies (e.g., Tehrani, 2010) have indicated that police officers are susceptible to high levels of compassion fatigue; however, compassion satisfaction may reverse or prevent the deleterious impact of compassion fatigue among police officers (Andersen & Papazoglou, 2015; Chopko, 2011). Previous research (e.g., Tehrani, 2010) has either included a small sample police officers (n=45) as part of their study sample with other caregiving professionals (n=276) or it has engaged with police compassion fatigue and
compassion satisfaction from a theoretical standpoint (e.g., Violanti & Gehrke, 2003). The idiosyncratic nature of police work signifies the fact that the empirical study of police compassion fatigue and compassion satisfaction is of paramount importance (Andersen & Papazoglou, 2015; Miller, 2000; Woody, 2005).

3.1.4 The Dark Triad (DT) Personality Traits

The Dark Triad (DT) refers to a constellation of three subclinical personality traits; namely, narcissism, psychopathy, and Machiavellianism (Jonason, Koenig, & Tost, 2010; Jonason & Webster, 2010). DT personality traits overlap in many ways, and all three are significantly positively correlated; this leads to the assumption that the DT personality traits formulate a cluster of personality traits (Vernon, Villani, Vickers, & Harris, 2008). More specifically, research has suggested that individuals with elevated levels of DT personality traits show low positive emotionality/affect, antisocial behavior, distrust of others, and substance abuse (Miller et al., 2010). Furthermore, individuals with DT personality traits may be self-centered, dishonest, impulsive, and they may also maintain callous attitudes towards others (Jones & Paulhus, 2011; Miller et al., 2010). Other researchers contended that individuals with high levels of DT personality traits also tend to exhibit the following common behaviors: exploitation, manipulativeness, sense of grandiosity, and sense of self-importance (Lee & Ashton, 2005), as well as social malevolence, emotional coldness, duplicity, and aggressiveness (Paulhus & Williams, 2002). Therefore, the sense of cooperation, altruism, inclusion, compassion, and other pro-social skills seems to be low or even absent among individuals with DT personality traits (O’Boyle, Forsyth, Banks, & McDaniel, 2012).

Nevertheless, each DT personality trait is distinct in some ways from the other two. Narcissism encompasses excessive love for one’s self, self-centeredness, feelings of superiority, and the tendency towards dominance (Vernon et al., 2008). Machiavellianism is
characterized by cold and manipulative behavior as well as insincerity, self-interest, and deception, especially in periods of acquaintance (Jakobwitz & Egan, 2006; Jonason, Li, Webster, & Schmitt, 2009; Jonason & Tost, 2010; Jones & Paulhus, 2011). Psychopathy is distinguished by the tendency to exploit others, a lack of empathy or remorse, high impulsivity, stimulation-seeking behavior, and manipulation of others (Hodson, Hogg, & MacInnis, 2009; Jones & Paulhus, 2011). In addition, individuals with psychopathic subclinical personality traits may exhibit anti-social behavior, selfishness, and a lack of self-control (Jonason, Koenig, & Tost, 2010; Jonason & Tost, 2010).

In a study with undergraduate students (n=84), Ali, Amorim, and Chamorro-Premuzic (2009) presented their participants with sad images. Their results revealed that elevated levels of Machiavellianism and psychopathy were positively associated with experienced sadness by other people; that is, the participants in the study experienced (or at least self-reported) pleasurable affect when they looked at images of people who were sad. Furthermore, their findings indicated that, when participants were presented with neutral images, elevated levels of Machiavellianism and psychopathy were both associated with experienced negative affect among study participants. In their meta-analysis, O’Boyle et al. (2012) explored the relationship between DT personality traits and job performance. Their findings suggested that the presence of DT personality traits was often an indication of counterproductive work behavior and poor job performance. Consequently, O’Boyle et al. (2012) posited that elements pervasive in DT personality traits may lead to disrupted workplace relationships and ostracism. Indeed, high levels of Machiavellianism in an individual may be accompanied by a tendency for them to be overpowering in workplace relationships and to manipulate their co-workers. Similarly, narcissism may be manifested in the form of hyper-competitiveness and a sense of superiority in the work environment.
Furthermore, psychopathic tendencies may find their outlet in emotionless, violent, and aggressive behavior that jeopardizes the safety of other employees.

3.1.5 Study Aims and Hypotheses

*Aim 1.* The present study aims to examine the prevalence rates of the following variables among police officers: compassion fatigue, compassion satisfaction, burnout, Machiavellianism, narcissism, and psychopathy.

*Hypothesis 1.* It is expected that officers will report elevated compassion fatigue and moderately elevated levels of burnout that are consistent with chronic exposure to trauma. Based on the existing literature, it is also expected that compassion satisfaction will be moderately elevated, and that the prevalence rates of DT personality traits (Machiavellianism, narcissism, and psychopathy) will be low.

*Aim 2.* To explore the relationship among the following variables: compassion fatigue, compassion satisfaction, burnout, years of experience, Machiavellianism, narcissism, and psychopathy.

*Hypothesis 2.* Compassion fatigue and burnout will be positively correlated with one another and negatively correlated with compassion satisfaction. Furthermore, it is also expected that all three DT personality traits will be positively correlated. Significant correlation is expected between the DT personality traits and compassion fatigue, compassion satisfaction, and burnout. The author argues that the negative components (e.g., self-centered, manipulative, ego-centricism) pervasive among individuals with DT personality traits prevent those individuals from experiencing compassion satisfaction, as individuals with DT traits may remain aloof and emotionally disconnected from victims of crimes. In addition, the author contends that years of experience will be associated with compassion fatigue,
compassion satisfaction, and burnout due to the fact that police officers experience multiple potentially traumatic incidents over the course of their career.

Aim 3. To examine the role of certain variables (compassion satisfaction, years of police experience, Machiavellianism, narcissism, and psychopathy) in predicting compassion fatigue.

Hypothesis 3. It is expected that DT personality traits, compassion satisfaction, burnout, and years of experience are significant predictors of compassion fatigue.

3.2 Method

3.2.1 Participants

All participants were White European (Finnish) individuals who, at the time of data collection, served with the National Police of Finland. There was a total of \( n = 1,173 \) participants, of which 880 were male. The participants in this study were employed in different positions with the organization (e.g., police dispatchers, investigations officers) and reported that they had experienced critical incidents during their police career (Table 8).

3.2.2 Procedures

Survey responses for this study were collected using an online internal police survey program named “Webropol.” Webropol is a high-security web network that is commonly used to distribute surveys to everyone employed by the National Police of Finland. Survey study weblinks were sent to officers within various police departments in Finland as well as to members of the National Bureau of Investigation, Police University College, and Finland’s Security Intelligence Service. The officers that were included in this study were individuals in positions where secondary trauma may be experienced on a regular basis. Participation in the
study was completely voluntary and officers did not receive any compensation for completing the survey. The response rate was 15.24% (1,173 respondents out of 7,695 officers who received the study weblink). After clicking the weblink, participants were asked to give their consent for their participation in the study; once consent had been obtained, the participants were asked to provide demographic information related to topics such as their length of service and their current area of work. Following the demographic questions, they then completed the survey questionnaires, which are described in the following section.

3.2.3 Measures

Compassion Satisfaction and Fatigue (CSF) Test. The “Compassion Satisfaction and Fatigue Self-Test for Helpers” (CSF) was used to assess the compassion satisfaction and fatigue variables (Figley & Stamm, 1996). The CSF test is a scale based on self-reporting and consists of three subscales with a total of 66 items that are presented on a Likert-type scale ranging from 0-5 (0=never to 5=very often). The three subscales measure a participant’s level of compassion fatigue, compassion satisfaction, and burnout, and their score for each subscale corresponds to one of the following categories: extremely low, low, moderate, high, and extremely high. The CSF shows good reliability with high Cronbach’s alpha reliability values on all three subscales; this reliability has been demonstrated in previous research wherein compassion fatigue, compassion satisfaction, and burnout had reliability levels of .87, .87, and .90, respectively (Bride, Radey, & Figley, 2007). Within the measures of this study, compassion fatigue showed a reliability score of .89, compassion satisfaction yielded a score of .92, and burnout had a reliability score of .84.

Short Dark Triad of Personality (SD3). The short dark triad (SD3) is a scale used to measure a cluster of three different personality traits—namely, Machiavellianism, narcissism, and sub-clinical psychopathy—that provide insight into the individual characteristics of
participants (Paulhus & Williams, 2002; Jones & Paulhus, 2014). The SD3 scale is composed of 27-items in total with 9-items for each of the three targeted personality characteristics. These 27-items have been found to have good construct, convergent, and discriminant validity in previous research (Jonason & McCain, 2012). In addition, the Cronbach’s alpha reliability scores for this study yielded similar values to those found in previous studies in which narcissism yielded reliability scores of .84 and .86, psychopathy produced scores of .75 and .78, and Machiavellianism scored of .75 and .58 (Jonason, Li, Webster, & Schmitt, 2009; Jonason & Tost, 2010). More recently, research into the reliability of the short dark triad has shown narcissism as having a score of .68, psychopathy having a score of .72, and Machiavellianism with a score of .74 (Jones & Paulhus, 2014). Within the present study, Machiavellianism received a reliability score of .76, narcissism had a score of .61, and psychopathy yielded a score of .70.2

3.2.4 Data Analysis Plan

One of the present study primary research questions was to estimate prevalence rates of compassion fatigue, compassion satisfaction, burnout, and DT personality traits (Machiavellianism, narcissism, psychopathy). Thereby, descriptive statistics (calculation of percentages) were utilized to calculate percentage of participants who reported different levels of compassion fatigue, compassion satisfaction, burnout, and DT personality traits (Machiavellianism, narcissism, psychopathy). Moreover, Pearson r correlation was conducted to investigate the relationship between study variables (compassion fatigue, compassion satisfaction, burnout, years of experience, and DT personality traits). Since one of the research questions in present study aims to assess relationships between present study

2 Factor analysis on psychopathy subscale items showed that two items (Item 2: “I avoid dangerous situations”, and Item 7: “I have never gotten into trouble with the law”) indicated low factor loadings (Item 2: .066 and Item 7: .005). Therefore, those items were excluded from the psychopathy subscale used in this study. Indeed, since our sample was comprised of police officers, it was expected that our respondents would not have troubles with the law (Item 7) and they would not avoid dangerous situations (Item 2) as such behavior would result in being expelled from the force.
variables, Pearson \( r \) correlation was the appropriate analysis for this purpose. Furthermore, to examine one of the research questions, multiple regression was implemented as a way to evaluate the role of certain variables in adding to the prediction of the dependent variable. To this end, Adjusted \( R^2 \) – the adjusted multiple correlation coefficient of determination – was utilized to examine how much variance in the dependent variable can be explained by a set of independent variables. Specifically, a multiple regression model was implemented to determine how much variance in the dependent variable (compassion fatigue) can be accounted for by predictor variables: demographics (gender, years of experience), DT personality traits, and compassion satisfaction.

3.3 Results

Aim 1. The first aim of the present study was to examine the prevalence rates of the following variables: compassion fatigue, compassion satisfaction, burnout, Machiavellianism, narcissism, and psychopathy. The results revealed that 67.46% of the study participants (\( n=817 \)) reported low levels of compassion fatigue, while 10.24% (\( n=124 \)) reported high levels of compassion fatigue (Figure 4). In terms of compassion satisfaction, the results indicated that 40.46% of participants (\( n=490 \)) reported low levels of compassion satisfaction, while 10.57% (\( n=128 \)) indicated high levels of compassion satisfaction (Figure 5). Finally, the majority of study participants (78.03% or \( n=945 \)) indicated low levels of burnout (Figure 6). For further information on the estimated prevalence rates of compassion fatigue, compassion satisfaction, and burnout please refer to Figure 7.

In terms of the DT personality traits, most study participants (\( n=709 \) or almost 70% of participants) revealed moderate levels of Machiavellianism. Similarly, 94.67% of study participants (\( n=959 \)) indicated moderate levels of narcissism. Conversely, most participants
(81.44% of participants or n=825) reported low levels of psychopathy. More information on the prevalence rates of the DT personality traits in this study’s participants is presented in Figure 8.

**Aim 2.** The second aim of current study was to explore the relationship among the following variables: compassion fatigue, compassion satisfaction, burnout, and years of experience, Machiavellianism, narcissism, and psychopathy. Correlation analyses (Pearson r) revealed that DT personality traits (n=1,010) were significantly correlated (positive correlations among DT variables; Table 9). Furthermore, compassion fatigue (n=1,013) was found to be negatively correlated with compassion satisfaction (r= -.33; p<.01), positively correlated with burnout (r= .76; p<.01; Table 9), and significantly positively correlated with all DT personality traits (Table 9). Burnout (n=1,013) was found to be positively correlated (p<.01) with all DT personality traits (Table 9), while compassion satisfaction (n=1,010) was negatively correlated with Machiavellianism (r= -.22; p<.01) and psychopathy (r= -.32; p<.01). However, compassion satisfaction was not correlated with narcissism (Table 9). Furthermore, years of police experience (n=1,013) was found to have a small but significant correlation with compassion fatigue (r=.16; p<.01) and burnout (r=.10; p<.01; Table 9).

**Aim 3.** Multiple regression analysis was performed to assess predictors of compassion fatigue (Table 10). The results showed that years of service (B= .201; SE= .033; β= .175; t= 6.047; Adjusted $R^2$=.194; p<.000), dark triad personality traits —Machiavellianism (B= 1.128; SE= .714; β= .056; t= 1.579; Adjusted $R^2$=.194; p= .115), narcissism (B= 5.181; SE= .943; β= .168; t= 5.496; Adjusted $R^2$=.194; p<.000), and psychopathy (B= 1.816; SE= .863; β= .076; t= 2.105; Adjusted $R^2$=.194; p<.036)—and compassion satisfaction (B= -.200; SE= .021; β= -.287; t= -9.428; Adjusted $R^2$=.195; p<.000) were significant predictors of compassion fatigue (Table 10).
3.4 Discussion: Clinical and Training Implications

3.4.1 Compassion Fatigue

The findings of this study revealed that, while the majority of participants reported low levels of compassion fatigue, approximately 10% indicated elevated levels of compassion fatigue. Although this percentage may seem low, in practical terms it means that in a large police department of 5,000 officers, there may be roughly 500 who suffer from compassion fatigue. Therefore, the relatively low percentage of officers with high levels of compassion fatigue should not be ignored; rather, they should be provided with support in order to relieve their compassion fatigue. In the above scenario, the considerable number of officers who suffer from compassion fatigue are still required to carry out their important duties, and, as such, the organization’s intervention is important if they are to be able to do so effectively. Police organizations should aim to establish systematic assessments and interventions (e.g., workshops, peer support, counseling) in order to identify officers who are suffering from compassion fatigue and to provide them with adequate psychological support. Indeed, previous research has shown that intervention programs are critical in preventing compassion fatigue or reversing its effects on an individual’s wellbeing (Cameron & Payne, 2011; Decety, Yang, & Cheng, 2010; Zeidner, Hadar, Matthews, & Roberts, 2013).

3.4.2 Compassion Satisfaction

Another finding to be emphasized is that almost 40% of study participants reported low levels of compassion satisfaction. This percentage suggests that almost half of the surveyed officers did not experience their role as police officers in a way that gave them job satisfaction. The findings also revealed that a considerable number of study participants did not feel satisfied by helping those who suffer or that they were not able to appreciate the value of their important work. It is, therefore, important to develop ways of promoting
officers’ ability to experience compassion satisfaction. Previous research outcomes have emphasized the important role of compassion satisfaction and empathy training in preventing compassion fatigue and burnout among caregiving professionals (Figley, 2002; Radey & Figley, 2007; Wagaman, Geiger, Shockley, & Segal, 2015). Furthermore, training in strengths-based techniques should be offered to new and senior police officers alike, as it may help foster compassion satisfaction and appreciation for the service they provide. Strengths-based techniques have been previously applied to uniformed individuals, such as police and military personnel, with positive outcomes (Kobau et al., 2011; Manzella & Papazoglou, 2014; Reivich, Seligman, & McBride, 2011). The present study’s results showed that compassion fatigue and burnout were negatively correlated with compassion satisfaction. It may be the case that compassion satisfaction training can help to prevent, and even reverse, the adverse effects of compassion fatigue (and burnout) on officers’ wellbeing.

3.4.3 Dark Triad of Personality Traits

This study’s findings revealed that most participants reported low levels of psychopathy. This finding is not surprising since officers undergo psychological assessments during the recruitment process; applicants who score high in psychopathy would almost certainly not be selected to begin their training to become police officers (Cochrane, Tett, & Vandecreek, 2003; Reaves, 2010; Sarafino, 2010). Furthermore, police work is primarily team-oriented and officers are supposed to maintain close relationships with their peers (Andersen & Papazoglou, 2014; Stephens & Long, 2000). Thus, even if some officers with high levels of psychopathy pass the psychological assessment during recruitment, they would likely find themselves isolated from their colleagues or expelled from the organization due to their inability to work collaboratively in the line of duty.
Interestingly, present study results revealed moderate levels of Machiavellianism and narcissism. The fact that those DT personality traits are slightly elevated, but not in highly elevated (moderate vs. high DT personality levels), may be explained by police culture norms and values. In the Machiavellianism subscale, statements such as, “It’s not wise to tell your secrets” and “There are things you should hide from other people because they don’t need to know,” are often closely related to some aspects of police work. For instance, the aforementioned items would definitely be endorsed by detectives or intelligence services officers. Similarly, the narcissism subscale includes items that are inherent to police work and police culture, such as, “I insist on getting the respect I deserve” and “I know that I am special because everyone keeps telling me so.” For instance, police officers are supposed (and expected) to be respected by motor vehicle drivers during traffic stops. Likewise, homicide detectives or Special Forces officers may endorse the aforementioned narcissism items because many civilians (especially victims of crimes) praise officers and show their respect (or appreciation) for police services. These plausible explanations as to why police officers may naturally agree to statements designed to detect DT personality traits highlights the necessity for the development of a customized assessment scale (e.g., Police SD3) that considers the unique role and mission of police officers.

In the present study, DT personality traits were positively correlated with compassion fatigue and burnout. Conversely, with the exception of narcissism, DT personality traits were negatively correlated with compassion satisfaction. This last finding lends itself to multiple interpretations. It is possible that officers with DT personality traits may experience distress, isolation, and lack of support from their peers when they face extreme stress or potentially traumatic incidents in the line of duty. Previous research has emphasized the important role of empathy in mitigating the adverse impact of compassion fatigue among caregiving
professionals (Blau, Bentley, & Eggerichs-Purcell, 2012; Wagaman et al., 2015). However, it is important to note that these last findings were the product of research conducted with non-DT personality participants. Indeed, other studies have suggested that individuals with DT personality traits are unable to experience and show empathy (Ali, Amorim, & Chamorro-Premuzic, 2009). Previous research outcomes indicated that individuals with elevated levels of narcissism who are exposed to severe stress and life-threatening stressors were more susceptible to experience PTSD and other acute anxiety symptomatology (Bachar, Hadar, & Shalev, 2005; Besser, Zeigler-Hill, Pincus, & Neria, 2013). Furthermore, other findings suggested that individuals with DT personality traits are more likely to dissociate and employ immature defense tactics when they are faced with extremely stressful experiences (Richardson & Boag, 2016). Moreover, prior research has revealed that individuals with DT personality traits lack the capacity to maintain social support, employ maladaptive coping styles, and make a strong effort to control their emotional reactions when faced with adversity (Birkás, Gács, & Csáthó, 2016; Richardson & Boag, 2016). Dissociation, lack of social support, and maladaptive coping strategies were found to be some of the main risk factors for the development of PTSD and other mental-health-related issues (Herman, 1997; Marmar et al., 2006; Regambal et al., 2015). Thus, it may be concluded that the findings of previous research in this field are in accordance with the outcomes generated by the analyses conducted in the current study.

3.4.4 Limitations and Future Research

The present study was conducted with White European police officers from Finland. Future research should explore similar research questions among police officers from different geographical areas (e.g., US, Asia, Australia). In addition, future research may employ a culturally-diverse sample of police officers in order to examine whether the present study’s
outcomes differ among officers from different cultural groups (e.g., officers from the dominant cultural group vs. officers from racial, ethnic, or sexual minority groups). Another potentially fruitful area for future research would be to explore how the severity of exposure to critical incidents and the resultant degree of experienced suffering impacts compassion fatigue and satisfaction among police officers (Cameron & Payne, 2011; Ferguson, Prenzler, Sarre, & de Caires, 2011). The role of empathy in mitigating the impact of compassion fatigue and promoting compassion satisfaction may also be examined in future studies particularly among officers with DT personality traits. In addition, trauma researchers have emphasized the understudied roles of moral injury and experienced by frontline professionals in the development of secondary trauma (Corley, 2002; Litz et al., 2009). Thus, it may be beneficial to empirically examine how moral injury contributes to officers’ susceptibility to compassion fatigue and whether moral injury mediates the relationship between negative personality traits and compassion fatigue (Nash & Litz, 2013).

Based on the results of this study and prior work (Kapoulitsas & Corcoran, 2015; Weidlich & Ugarriza, 2015), it is recommended that police officials and police health professionals develop evidence-based, customized training aimed at improving compassion satisfaction and preventing/mitigating compassion fatigue among police officers. Such training programs should be utilized throughout police officers’ careers.
Chapter 4
Study 3

4 Study 3: Exploring the Role of Moral Injury and Personality towards Police Traumatization

4.1 Introduction

4.1.1 The Integral Role of Moral Injury for the Study of Police Trauma

In the early spring of 2014, the author was collecting data through a field research study that was conducted during a police special forces tactical training session. In one of the critical incident training scenarios (a hostage situation), the person playing the role of the violent criminal was lying on the ground pretending to be severely injured as a result of being shot by the officers. When the incident had been resolved and the hostages were safe, one of the police officers began to administer first aid care to both the criminal and the wounded hostages. When asked why he chose to treat the criminal as well as the victims, he responded that, “We are cops, we are not killers. We need to take care of everybody injured in the scene.” The author contends that such scenarios (e.g., the attempt to take care of a criminal who tried to kill you, your fellow officers, or civilians) generate moments of moral conflict and distress. Moral conflict’s prominent role in trauma has been highlighted by many trauma scholars (e.g., Litz et al., 2009) who suggest that current trauma research has not efficiently investigated the phenomenon of “inner conflict” or moral conflict in frontline professionals’ exposure to traumatic incidents (Kopacz et al., 2016; Maguen & Litz, 2016; Nash & Litz, 2013).

Trauma researchers and clinicians have recently undertaken studies that examine the experience of moral injury among military personnel and veterans who have seen combat duty (e.g., Litz et al., 2009; Nash & Litz, 2013). The results of these studies have suggested
that moral injury may have an incapacitating impact on the health and wellbeing of military personnel who have seen combat duty, as soldiers are exposed to numerous potentially traumatic incidents on the battlefield that may, in turn, affect their moral values and beliefs.

The issue of moral injury should be also studied within a law-enforcement context given that all police officers (those with either high or low levels of dark triad personality traits) experience morally injurious incidents in the line of duty. Such incidents may take multiple forms during an officer’s service, including: officer vs. officer, officer vs. civilian, and officer vs. organization. Although officers often explore their options so that they act in a way that is consistent with their own morals and beliefs, they may nevertheless experience inner moral conflict on multiple occasions throughout a shift. For example, an officer may experience inner moral conflict if his partner acts against a civilian in a manner that he considers morally wrong, or he may need to act in a way that is at odds with his moral values in order to comply with the organization’s policies (or their supervisor’s orders). One such instance where conflict may arise between an officer’s personal moral beliefs and their duty to adhere to departmental policy or a direct order is crowd management. In crowd-control situations, officers may be ordered to use force on protestors—some of whom may be teenagers—and such action may be inconsistent with an officer’s personal moral beliefs. Similarly, an officer may view her partner’s behavior towards an elder as disrespectful, but she may elect to not say anything in order to avoid conflict with her partner.

The author contends that such inner moral conflicts become intensified when officers are exposed to critical incidents, which are defined in the literature as the moments in which morally injurious incidents occur (e.g., Litz et al., 2009). Such incidents may not be traumatic per se, but they can be potentially morally injurious because they may lead first responders to question their tactical decision-making in response to the incident, their
capacity to prevent what happened, and so forth. For instance, officers are called to respond to a domestic violence situation, but their arrival is delayed due to traffic congestion. When they finally arrive, they find two family members severely wounded. In this scenario, the officers may question whether there was anything they could have done differently to prevent that incident from happening. In addition, their actions may be reviewed by their shift supervisor to determine whether they had performed their duties as they were supposed to. Such an incident may not lead officers towards PTSD or compassion fatigue per se. However, it is possible that the officers in this scenario may have experienced moral injury (especially if they were found accountable by their shift supervisor) due to feelings of guilt and shame about the incident’s outcome.

Morally injurious incidents are omnipresent in police work; thus, incorporating moral injury into the present study is of great value because it represents a possible “entrance gate” that can allow for the examination of the different pathways that officers follow and that make them susceptible to traumatization.

### 4.1.2 Compassion Fatigue and Moral Injury among Police Officers

In his seminal book, *Treating Compassion Fatigue*, Charles Figley (2002) argued that compassion fatigue refers to a type of indirect traumatic stress that is associated with the “cost of caring” for those who suffer psychological pain. Furthermore, Figley (2002) noted that compassion fatigue is related to professional caregivers’ cognitive schemata, and that some of these cognitive schemata are akin to frontline professionals’ morale. Based on Figley’s (2002) perspective, it seems that compassion fatigue is related to moral conflicts experienced by first responders in the line of duty. Other scholars have argued along similar lines, suggesting that compassion fatigue and stress-related moral conflict are distinct but interrelated phenomena among health and social service professionals (Forster, 2009).
Police officers are mandated to maintain peace and order, to be compassionate towards victims of crimes and accidents, and to save those who are in danger. From the time they first join the police academy, police officers are instilled with the ethos that dedication, integrity, and even self-sacrifice ought to play a prominent role in their conduct, and that their objective is to save and support civilian victims. As a result, the “God’s syndrome” (Beaton & Murphy, 1995, p.69) tends to be pervasive among police officers, since they attempt to respond to all emergency calls, save all victims, and provide support to all who suffer. Unfortunately, first responders are not always able to protect or support victims, or arrest violent criminals. Consequently, first responders may experience moral suffering if they are unable to execute their plans of action, if their willingness to help those who suffer wanes, or if they fail to complete their mission (Corley, 2002; Morley, 2003).

The ongoing experience of moral injury may lead to compassion fatigue, which may eventually lead to PTSD and other comorbid disorders (e.g., major depressive disorder, panic disorder; Andersen & Papazoglou, 2015; Morley, 2003). In an article in the Royal Canadian Mounted Police (RCMP) magazine (called Gazette), police clinical psychologist, Jeff Morley (2003), stated that moral suffering is an “unfixable suffering” that may lead to compassion fatigue. Likewise, researchers have argued that moral suffering among caregiving professionals may eventually lead to compassion fatigue, emotional paralysis, avoidance of responding to certain critical incidents, and even job resignation (Beaton & Murphy, 1995; Morley, 2003; Sundin-Huard & Fahy, 1999). In addition, moral suffering may lead first responders to feel helpless, powerless, shame, embarrassment, that their integrity and sense of justice have been compromised, grief, misery, anguish, and a reduced sense of dignity (Corley, 2002; Elpern, Covert, & Kleinpell, 2005; Lützen & Ewalds-Kvist, 2013; Pendry, 2007). However, there have been no empirical studies examining the role of
moral suffering in compassion fatigue. In a recent conversation between the author and a first responder, the first responder reported that he had been intensely avoiding any incidents involving babies or children because he considered himself incompetent as a result of failing to save a severely wounded baby during one of his past emergency calls. The first responder reported that this early experience had intensified his traumatization.

4.1.3 Moral Injury and the Dark Triad of Personality Traits

To date, the current project’s research findings (study 1 and study 2) have demonstrated that officers with high levels of dark triad (DT) personality traits are likely to experience trauma (or, more specifically, compassion fatigue). These findings presumably contradict previous research that suggests that those who show excessive empathy for traumatized victims are most likely to experience compassion fatigue (e.g., Figley, 2002; Salston & Figley, 2003). Indeed, the findings of prior studies indicated that individuals with DT personality traits showed poor emotional self-regulation (Jones & Paulhus, 2011), which is a trait that has been found to be closely associated to the experience of compassion fatigue (Zeidner et al., 2013).

The present project builds upon these findings by analysing the different pathways that lead individuals to experience compassion fatigue. That is, officers with high and low (or absent) levels of DT personality traits may both experience compassion fatigue, but for different reasons. Although the notion that different mechanisms of traumatization are related to different levels of negative personality traits is one that is derived from the PTSD literature, the author contends that a similar process may underlie the development of compassion fatigue due to the fact that PTSD and compassion fatigue are highly-correlated trauma outcomes (Figley, 1995, 2003). Analytically, the author posits that there are two different pathways that may lead individuals to experience compassion fatigue. The first pathway
concerns caregiving professionals with low (or absent) levels of negative personality traits; these professionals tend to focus their attention on the experiences of traumatized victims ("others-focused"), and they have a very difficult time emotionally disengaging from those whom they help. The second pathway concerns caregiving professionals with high levels of negative personality traits; these professionals focus their attention on themselves ("self-focused"), and their exposure to traumatized individuals leads them to experience increased distress, poor emotional-regulation, an inability to connect and share experiences with others, and feelings of isolation or a lack of social support.

4.1.4 Conceptualizing Two Types of Moral Injury

Moral injury plays an integral role in enabling the exploration of the aforementioned mechanisms of compassion fatigue, but prior scholarly literature has only considered moral injury in relation to an "others-focused" approach (e.g., atrocities committed or observed by soldiers; Litz et al., 2009). However, the author posits that two types of moral injury may exist: one that is "self-focused" (e.g., sense of vulnerability due to self-centeredness) and one that is "others-focused" (e.g., concern for impact of violence on victims). In taking into consideration the two types of moral injury ("self-focused" and "others-focused"), we can examine how different levels of negative personality traits (or absence thereof) may cause a caregiving professional to experience compassion fatigue. The author postulates that caregiving professionals with high levels of negative personality traits are traumatized via the "self-focused" pathway of traumatization and will show higher scores in the "self-focused" items of the moral injury scale (i.e., MIES – Nash et al., 2013). In contrast, the author argues that caregiving professionals with low levels of negative personality traits are traumatized (i.e., experience of compassion fatigue) via the "others-focused" pathway of traumatization and will show higher scores in the "others-focused" items of the moral injury scale (i.e.,
MIES – Nash et al., 2013). As such, moral injury was assessed by measuring (i.e., MIES – Nash et al., 2013) two types of items: “self-focused” (e.g., “I feel betrayed by leaders who I once trusted”), and “others-focused” (e.g., “I saw things that were morally wrong”).

4.1.5 Research Questions and Hypotheses

Research question 1: What is the relative difference in moral injury experience (“self-focused” vs. “others-focused”) between individuals with high and low levels of dark triad personality traits?

Hypothesis 1: Individuals with high levels of dark triad personality traits have significantly higher levels of “self-focused” moral injury than those with low levels of dark triad personality traits. In addition, individuals with low levels of dark triad personality traits have significantly higher levels of “others-focused” moral injury than those with high levels of dark triad personality traits.

Research question 2: What are the roles of moral injury, dark triad personality traits, years of service, and compassion satisfaction in predicting compassion fatigue and PTSD?

Hypothesis 2: Moral injury, dark triad personality traits, years of service, and compassion satisfaction will significantly predict compassion fatigue and PTSD.

4.2 Method

4.2.1 Participants

The participants in this study were police officers serving with the National Police of Finland. Of the participants (n=453) who agreed to participate in the survey study, 63 discontinued their participation after completing the demographic questions. As a result, the participants who completed the survey study (n=390) were all White Europeans, and the
majority (73.5%) were male. In addition, the respondents reported having a mean of 16.87 (SD=9.11) years of police experience. Finally, the participants were all uniformed operational officers who served in units where they were likely to experience direct or indirect psychological trauma. Further descriptive statistics regarding the study sample are shown in Table 11 and Table 12.

4.2.2 Procedures

As with the previous study involving the Finnish National Police, the present study collected data using “Webropol,” which is a high-security web network used by the National Police of Finland to distribute surveys among their staff. A weblink to the survey study was sent to police officers within various departments across Finland, as well as to the National Bureau of Investigation, the Police University College, and the Security Intelligence Service. Participation was voluntary and participants did not receive any compensation for completing the survey. After clicking the weblink, the participants were asked to give their consent to participate in the study; once consent had been provided, the participants were asked to answer demographic questions on topics such as their length of service and their current area of work. Following the demographic questions, they were instructed to complete the survey questionnaires, which are described in the following section (“Measures”). Study participation occurred during work shift hours. As in study 2, the present study was first approved by the University of Toronto Research Ethics Board as well as the National Research Board of the National Police of Finland before data collection was initiated.

A previous research collaboration (study 2) with the National Police of Finland had a response rate of 15.24% (1,173 respondents out of 7,695 officers who had received the study’s weblink), which was similar to those of other survey studies that had been conducted in collaboration with the National Police of Finland (i.e., Andersen et al., 2015b). In an
attempt to improve this response rate, the current study was promoted via Webropol as well as the organization’s newsletter. Despite these efforts, however, the present study’s participation rate was substantially less than in previous survey research studies with the National Police of Finland. The reduced participation rate may be attributable to the fact that the current survey encompassed more items (questions) than previous studies had. Another possible reason for the lower participation rate may be the repetitive nature of some of the scales used in current study (e.g., Compassion Fatigue and Satisfaction); some of these scales had been used in previous studies conducted with the National Police of Finland, and this may have discouraged some officers from participating in the present study.

4.2.3 Measures

Demographics. Demographic questions entailed the following components: age, years of service, and gender. Although prior research with National Police of Finland revealed that the respondents were all White Europeans, the present study also incorporated demographic questions related to the participants’ racial (Asian, Black, White, Other) and ethnic backgrounds (Arab, Jewish, Hispanic/Latino, Other).

Compassion Satisfaction and Fatigue Test (CSF - Figley & Stamm, 1996). The established “Compassion Satisfaction and Fatigue Self-Test for Helpers” (CSF) will be used to assess the compassion fatigue and satisfaction variables (Figley & Stamm, 1996). The CSF test is a scale based on self-reporting and consists of three subscales with a total of 66 items. These items are presented on a Likert-type scale ranging from 0-5 (0=never to 5=very often). The three subscales measure a person’s level of compassion fatigue, compassion satisfaction, and burnout, and the person’s score for each variable will accordingly fall into one of the following categories: extremely low, low, moderate, high, and extremely high. The CSF shows good reliability with high Cronbach’s alpha reliability values on all three subscales;
this is consistent with what was reported in previous research wherein compassion fatigue was .87, compassion satisfaction was .87, and burnout was .90 (Bride, Radey, & Figley, 2007). Within the measures of this study, compassion fatigue showed a reliability score of .90 and compassion satisfaction yielded a score of .91. The burnout subscale was not included in the survey questionnaire since burnout was out of the scope of present study.

*Moral Injury Events Scale (MIES – Nash et al., 2013)*

MIES is a 9-item self-report scale that assesses moral injury on a scale from 1(*strongly agree*) to 6(*strongly disagree*), with higher scores indicating greater moral injury (Bryan, Bryan, Morrow, Etienne, & Ray-Sannerud, 2014). Individuals are invited to answer questions (9 items) in reference to their exposure to “perceived transgressions” committed by the respondent and/or others and “perceived betrayals” by other individuals (e.g., “*I am troubled by having acted in ways that violated my own morals or values,*” “*I feel betrayed from fellow service members who I once trusted.*”). MIES shows excellent internal consistency with Cronbach’s alpha .90. The MIES scale is not comprised of “self-focused” (e.g., “*I feel betrayed by leaders who I once trusted*”) and “others-focused” (e.g., “*I saw things that were morally wrong*”) moral injury subscales. However, author divided MIES items to “self-focused” and “others-focused” (based on the items’ content) in order to assess “self-focused” and “others-focused” type of moral injury respectively. Then, high and low levels were defined based on a median-split of the 1-6 Likert-type scale in each MIES item as other researchers did as well (Jordan, Eisen, Bolton, Nash, & Litz, 2017). To this end, an exploratory factor analysis was performed of the MIES scale items. The Kaiser-Meyer-Olkin measure of sampling adequacy was .70 indicating that the present data was suitable for exploratory factor analysis. Similarly, Bartlett’s analysis test of sphericity was significant (*p*<.000), indicating sufficient correlation

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1 Item #6 of the MIES scale was not included in the data collection survey questionnaire by accident.
between the variables to proceed with the analysis. Analysis generated two factors accounted for the 43.58% of the total variance and two factors clearly distinguished between “others-focused” and “self-focused” moral injury. As predicted, the following items were associated with each MIES subscale: Items 1-5 (“others-focused” moral injury) and items 7-9 (“self-focused” moral injury). Within the measures of this study, moral injury showed a reliability score of .75, moral injury (“others-focused”) yielded a score of .72, and moral injury (“self-focused”) had a reliability score of .78.

*PTSD Checklist-Civilian (PCL-C* - Weathers, Litz, Herman, Huska, & Keane, 1994). This 17-item checklist assesses symptoms of PTSD (Weathers, Litz, Herman, Huska, & Keane, 1994) such as recurring and disturbing memories, thoughts, or images of a stressful experience from the past. PCL-C is consistent with the DSM-IV criteria for PTSD with its three sub-scales corresponding to the three PTSD symptom clusters. Rated on a 5-point Likert scale (*not at all, a little bit, moderately, quite a bit, extremely*) and with possible scores ranging from 17 to 85, respondents are instructed to indicate how much they have been bothered by each symptom in the past month. A total PCL-C score that is greater than 50 suggests a PTSD diagnosis (cut-off method). In the symptom cluster method, an item rating of moderate or higher (e.g., a score of 3 or more on a 5-point scale) shows endorsement for that symptom; that is, if individuals report that they are at least moderately bothered by one or more recurring symptoms, three or more avoidance symptoms, and two or more arousal symptoms over the last month, then they are classified as having PTSD (Smith et al., 1999; Weathers et al., 1994). In previous research on veterans, PCL-C has demonstrated a coefficient alpha of .97, a test-retest reliability of .96, and convergent validity with other recognized PTSD scales (e.g., Mississippi Scale, Keane PTSD;
Andrykowski et al., 1998; Conybeare et al., 2012). Within the measures of this study, moral injury showed a reliability score of .93.

**Short Dark Triad of Personality (SD3).** The short dark triad (SD3) is a scale used to measure a cluster of three different personality traits—Machiavellianism, narcissism, and sub-clinical psychopathy—that provide insight into the individual characteristics of participants (Paulhus & Williams, 2002; Jones & Paulhus, 2014). The SD3 is a 27-item scale consisting of 9-items for each of the three targeted personality characteristics. Each item is rated on a Likert type scale from 1 (“strongly disagree”) to 5 (“strongly agree”). The high and low levels of each subscale of SD3 will be defined based on the median of the 1-5 Likert-type scale in each SD3 item. These 27-items have been found to have good construct, convergent, and discriminant validity in previous research (Jonason & McCain, 2012). In previous studies using the SD3, the reliability scores for narcissism were .84 and .86, the scores for psychopathy were .75 and .78, and the scores for Machiavellianism were .75 and .58 (Jonason, Li, Webster, & Schmitt, 2009; Jonason & Tost, 2010). More recently, the SD3 has shown reliability scores for narcissism, psychopathy, and Machiavellianism of .68, .72, and .74, respectively (Jones & Paulhus, 2014). Within the present study, Machiavellianism received a reliability score of .78, narcissism had a score of .70⁴ (Appendix A), and psychopathy yielded a score of .78⁵ (Appendix B). Reliability score of the overall SD3 scale was .85.

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⁴ Initial Cronbach’s alpha for the narcissism subscale was unacceptable at .67. When items 2, 6, & 9 were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptable .70 (Appendix A).

⁵ Initial Cronbach’s alpha for the psychopathy subscale was unacceptable at .63. When items 2, 7, & 8 were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptable .78 (Appendix B).
4.2.4 Data Analysis Plan

Initially, prevalence rates of compassion fatigue, compassion satisfaction, PTSD symptoms, moral injury, and DT personality traits (Machiavellianism, narcissism, psychopathy) were estimated. To this end, descriptive statistics (calculation of percentages) were utilized to calculate percentage of participants who reported high levels of compassion fatigue, compassion satisfaction, PTSD symptoms, moral injury, and DT personality traits (Machiavellianism, narcissism, psychopathy). Furthermore, Pearson $r$ correlation was implemented to assess the relationship between study variables (compassion fatigue, compassion satisfaction, PTSD symptoms, moral injury (self- and others-focused), and DT personality traits). Since one of the research questions in the present study aimed to examine relationships between present study variables, Pearson $r$ correlation was the appropriate analysis for this purpose. Furthermore, Fisher’s test was performed to assess if the correlation coefficient between “self-focused” moral injury and DT personality traits was significantly stronger compared to the correlation coefficient between “others-focused” moral injury and DT personality traits. One of the present study primary interests was to investigate the role of DT personality traits, moral injury (self- and others-focused), years of service, and compassion satisfaction in predicting compassion fatigue and PTSD symptoms. To this end, structural equation modeling (SEM) was performed to investigate relationships (associations between variables and not causation) among aforementioned variables based on a theoretical model that conceptualizes the association between study variables and it is based on researcher’s theoretical conceptualization between study variables. After the measurement model first tested to show acceptable fit, three structural models were tested. Eventually, the structural model that best fits the data was accepted. Finally, a mediation analysis was conducted to assess if “self-focused” and “others-focused” moral injury
mediate the relationship between DT personality traits and traumatization (compassion fatigue and PTSD symptoms).

4.3 Results

Compassion fatigue and satisfaction. The results (Figure 9; Figure 11) showed that almost 20% of study participants reported moderate to high levels of compassion fatigue. Furthermore, nearly 65% of study respondents reported low levels of compassion satisfaction (Figure 10; Figure 11).

PTSD symptoms. The results indicated that approximately 5% of study participants suffered from re-experiencing and avoidance-related symptoms of PTSD (Figure 12) and almost 10% reported hyperarousal-related symptoms of PTSD. In terms of overall PTSD symptomatology (re-experiencing, avoidance, hyperarousal), nearly 18% of the participants reported suffering from symptoms belonging to one of the PTSD symptomatology clusters (Figure 12).

Dark Triad of personality traits. Participant responses for each of the DT personality traits (moderate level) indicated the following prevalence rates: Machiavellianism (36.34%), Narcissism (46.25%), Psychopathy (10.42%). In addition, the percentage of participants with moderate levels of DT personality traits was almost 24% (Figure 13).

Moral injury. The results (Figure 14) revealed that the percentage of study participants with moderate levels of moral injury were approximately distributed as follows: 39% (“self-focused” moral injury), 64% (“others-focused” moral injury), and 74% (overall moral injury). In addition, almost 24% of study participants reported high levels of “others-focused” moral injury, while roughly 10% indicated high levels of “self-focused” moral injury.
Correlations between study variables. Correlations between study variables are shown on Table 13.

Research question 1. The results \((n=370)\) indicated that DT personality traits were significantly positively associated with “self-focused” moral injury \((r=.47; p<.001)\) and “others-focused” moral injury \((r=.29; p<.001; \text{Table 13})\). Fisher’s test showed that correlation coefficient between “self-focused” moral injury and DT personality traits was significantly greater compared to correlation coefficient between “others-focused” moral injury and DT personality traits \((Z=2.87; p=.004)\).

Research question 2. Structural equation modeling (SEM) is a statistical method (or a collection of statistical techniques) that allows for the testing (and validation) of complex and multifaceted theories by assessing empirical relationships among directly observed and latent variables (Meyers, Gamst, & Guarino, 2013). To this end, SEM is used to assess the possibility of an a priori theoretical model to be supported by the collected sample data. As such, the researcher’s theoretical knowledge of the relationships between variables plays a vital role in the development of the theoretical model that is to be tested. However, since SEM attempts to determine the correlations among variables, it cannot establish causal relationships among variables (Crockett, 2012; Games, 1990).

The present study employed a two-step procedure to test the proposed model. The model was first tested using confirmatory factor analysis (CFA), and, once it had shown acceptable fit, three structural models were then tested (Anderson & Gerbing, 1988; Meyers, Gamst, & Guarino, 2013). The fit of both the measurement and structural models was assessed via the following fit indices: Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR; Kline, 2016; Schumacker & Lomax, 2004), the inferential thresholds for which are provided in
Table 14. Since one of the study’s aims was to explore whether DT significantly predicts “self-focused” moral injury, two structural models were generated and tested: one that considered the pathway from DT to “others-focused” moral injury constrained to zero, and another that considered the pathway from DT to “others-focused” moral injury unconstrained. In addition, a third model was generated and tested in order to determine whether DT would directly or indirectly (via moral injury) predict compassion fatigue and PTSD symptoms.

Measurement model. Initially, the measurement model did not fit the data well, as the CFI was below the threshold criterion (.95, Table 14 & Table 15). The proposed measurement model was trimmed to better fit the data following two conditions (Kline, 2016): first, the modification indices as suggested by LISREL output files were examined and error terms were made to co-vary only if it made theoretical sense (items were measured from the same scale); and second, items with standardized factor loadings below .50 were removed if the construct had at least three indicators left. Thus, in the revised measurement model, the first two items (Items 1 and 2) of “others-focused” moral injury were removed, and the error of the first item measuring compassion satisfaction was made to correlate with the errors of third and fifth items measuring compassion satisfaction (Appendix C). The revised measurement model appeared to fit the data well (Table 15; Appendix C). Specifically, the likelihood ratio test between the initial and revised models was statistically significant ($\Delta \chi^2 (46)=301.82; p<.001$), and the CFI was .95, RMSEA was .06 (90% CI: [0.5-0.6]) , and SRMR was .06.

Structural models (Model 1) – Model with the path from DT to “others-focused” moral injury constrained to zero. The results indicated that Structural Model 1 had close to acceptable fit (Table 16, Appendix D): the CFI was .93, RMSEA was .06 (90% CI: [0.5-0.7]), and SRMR was .09. In addition, Model 1’s predictors accounted for 23.7% of the
variance in “self-focused” moral injury, 18.1% of the variance in compassion fatigue, and 39% of the variance in PTSD symptoms.

**Structural models (Model 2) – Model with the unconstrained path from DT to “others-focused” moral injury.** Results indicated that for Structural Model 2 the CFI was .94, RMSEA was .06 (90% CI: [0.5-0.7]), and SRMR was .08. Therefore, Structural Model 2 (Figure 15, Appendix E) showed a better fit among indices than in Structural Model 1 (Table 16, Δχ²(1)=24.38; p<.001), which indicates that the unconstrained path from DT to “other-focused” moral injury improved model fit. Structural Model 2’s (Figure 15) predictors accounted for 12.7% of the variance in “others-focused” moral injury, 26.4% of the variance in “self-focused” moral injury, 18.7% of the variance in compassion fatigue, and 40% of the variance in PTSD symptoms. Furthermore, the results indicated that DT positively predicted “others-focused” moral injury (β=.36; t=4.75; p<.001) and “self-focused” moral injury (β=.51; t=6.60; p<.001), but did not significantly predict (direct effect) compassion fatigue or PTSD symptoms (Table 17; Figure 15). In addition, the results showed that neither DT nor “others-focused” moral injury significantly predicted compassion fatigue and PTSD symptoms (Table 17; Figure 15). However, it was found that “self-focused” moral injury significantly predicted compassion fatigue (β=.21; t=2.86; p<.01) and PTSD symptoms (β=.22; t=3.40; p<.01; Table 17; Figure 15). Finally, the results revealed that years of experience significantly predicted compassion fatigue (β=.11; t=2.12; p<.05) but not PTSD symptoms, and that compassion satisfaction significantly predicted (negatively) both compassion fatigue (β=-.26; t=-4.43; p<.001) and PTSD symptoms (β=-.50; t=-8.37; p<.001; Table 17, Figure 15).

**Structural models (Model 3) – Model without direct paths from DT to compassion fatigue and PTSD symptoms.** Structural Model 3 (Table 16; Figure 16; Appendix F) was generated and tested for its ability to fit the data. Results showed that for Structural Model 3 the CFI was
.94, RMSEA was .06 (90% CI: [0.5-0.7]), and SRMR was .08. Structural Model 3’s predictors accounted for 12.9% of the variance in “others-focused” moral injury, 27.1% of the variance in “self-focused” moral injury, 17.8% of the variance in compassion fatigue, and 39.1% of the variance in PTSD symptoms. As is shown in Table 18, the results indicated that DT positively predicted “others-focused” moral injury ($\beta = .36; t=4.77; p<.001$) and “self-focused” moral injury ($\beta = .52; t=6.67; p<.001$). In addition, the results showed that “others-focused” moral injury did not significantly predict compassion fatigue and PTSD symptoms (Table 18; Figure 16). However, it was found that “self-focused” moral injury significantly predicted compassion fatigue ($\beta = .27; t=4.32; p<.01$) and PTSD symptoms ($\beta = .27; t=4.94; p<.01$; Table 18; Figure 16). Furthermore, the results showed that years of experience did not significantly predict compassion fatigue or PTSD symptoms, and that compassion satisfaction significantly predicted (negatively) both compassion fatigue ($\beta = -.27; t=-4.60; p<.001$) and PTSD symptoms ($\beta = -.51; t=-8.54; p<.001$; Table 18; Figure 16). Furthermore, it appeared that Structural Model 3 was capable of fitting the data as well as Structural Model 2 ($\Delta \chi^2(2)=2.29, p=.20$, Table 16). Therefore, Model 3 should be considered because it appears to be more parsimonious than Model 2 (Kline, 2016; Meyers, Gamst, & Guarino, 2013).

The mediating role of moral injury. The results (Table 18; Figure 16) revealed that DT significantly predicted “others-focused” moral injury, but that “others-focused” moral injury did not significantly predict the endogenous variables (compassion fatigue and PTSD symptoms). This finding indicates that “others-focused” moral injury did not significantly mediate the relationship between DT and the dependent variables (compassion fatigue and PTSD symptoms). On the other hand, it was found that DT significantly predicted “self-focused” moral injury, which in turn significantly predicted the dependent variables (compassion fatigue and PTSD symptoms; Table 18, Figure 16). In addition, the results
showed that DT’s indirect effect on both compassion fatigue (Sobel $Z=2.36; p=.019$) and PTSD symptoms (Sobel $Z=2.73; p=.006$) via “self-focused” injury was significant, but that its direct effect on both endogenous variables was not significant. That is, the results showed that “self-focused” moral injury significantly mediated DT’s effects on both dependent variables (compassion fatigue and PTSD symptoms; Table 18, Figure 16).

4.4 Discussion

4.4.1 Compassion Fatigue and Satisfaction

The results showed that nearly 25% of the study’s participants reported moderate to high levels of compassion fatigue, and almost 65% indicated low levels of compassion satisfaction (Figure 11). These findings may be a cause for concern among clinicians and anyone in administration in a police agency with concern over the health and wellbeing of their officers as well as the public in general, as they suggest that a significant number of the officers who participated in this study do not seem to appreciate the value that they provide to their communities through their work. It is possible that these officers perform their duties as they are supposed to during their shift; however, they may not feel that their communities adequately appreciate the work that they do. For instance, officers may provide support to victims of crimes or arrest a violent criminal, but they may approach such incidents dispassionately, which can give the impression that they are ignoring their crucial role as preservers of peace and order in the communities they serve.

A considerable percentage of the study participants also reported moderate to high levels of compassion fatigue. This finding signified the fact that a considerable number of police officers may suffer from police compassion fatigue. As was discussed in this manuscript’s introduction, frontline professionals with moderate to high levels of compassion fatigue may suffer from a variety of symptoms that can have a negative effect on their health and
wellbeing, and that can also preclude them from performing their duties and making sound decisions while on the job.

4.4.2 PTSD Symptoms

For the present study, the author used the PTSD Checklist-Civilian (PCL-C - Weathers, Litz, Herman, Huska, & Keane, 1994) to assess PTSD symptoms. It should be noted that the term “PTSD symptoms” has been used throughout the study since PCL-C scores refer to PTSD symptomatology rather than PTSD diagnosis.

The PCL-C scores indicated that more study participants suffered from hyperarousal symptoms than they did from re-experiencing and avoidance symptoms (Figure 12). This finding appeared to diverge from prior research, which found that more police officers tended to experience more re-experiencing symptoms rather than avoidance and hyperarousal symptoms (Carlier, Voerman, & Gersons, 2000). Nevertheless, it may be the case that officers are more likely to admit to experiencing hyperarousal symptoms (e.g., “feeling irritable,” “being super alert”) due to the fact that these symptoms are body-oriented, and therefore may be considered more acceptable within police culture, which prioritizes physical survival on the streets (Rudofossi, 2009; Woody, 2005). Moreover, almost 19% of study participants reported overall PTSD symptomatology (Figure 8). This last finding is consistent with previous research, which discovered that nearly 18% of first responders (police officers and fire fighters) reported overall PTSD symptomatology (Maia et al., 2007; Wagner, Heinrichs, & Ehlert, 1998).

4.4.3 Dark Triad of Personality Traits

The results showed that most participants reported low to moderate levels of DT personality traits (Figure 13). Specifically, the results indicated that participants reported higher levels of
Machiavellianism and narcissism compared to psychopathy. This finding may be related to the fact that some items in the Machiavellianism and narcissism scales may be endorsed by police culture (e.g., “It’s not wise to tell your secrets,” “I insist on getting the respect I deserve”). Nevertheless, the percentage of study participants with high levels of DT personality traits appeared to be low. This finding was unsurprising given the extensive assessment procedures for screening out candidates with subclinical or clinically-related personality trait issues during the recruitment process (Cochrane, Tett, & Vandecreek, 2003). In addition, it is possible that officers with excessively high levels of negative personality traits lack the capacity to collaborate with their peers, communicate with civilians, and generally perform their duties efficiently. Especially in police work, officers rely on their partners because they recognize that a collaborative partner can save their lives during a threatening situation. As a result, officers with excessive levels of negative personality traits may realize that they are not compatible for police work and decide to resign. Indeed, previous research has found that individuals with very high levels of negative personality traits tend to have disruptive relationships with their co-workers and a low quality of job performance (O’Boyle et al., 2012).

4.4.4 Moral Injury

Most of the officers who participated in the current study reported moderate levels of moral injury (Figure 14). However, the results indicated that almost 10% of study participants reported high levels of “self-focused” moral injury, and nearly 25% reported high levels of “others-focused” moral injury. These results appeared to be consistent with the findings of prior research on military personnel in which more participants reported experiencing “others-focused” moral injury compared to “self-focused” moral injury (Bryan et al., 2014). Based on Nash et al. (2013) findings upon development of the MIES scale (Nash et al.,
2013), items 1-6 of the MIES scale refer to moral transgression whereas items 7-9 refer to the sense of betrayal (e.g., leadership failure, perceived betrayal by peers or civilians). The findings of the present research indicated that, after being exposed to morally injurious events, more study participants reported experiencing a sense of moral transgression than a sense of personal betrayal. That is, the majority of officers in this study reported high levels of “others-focused” moral injury, while only a minority reported high levels of “self-focused” moral injury. One possible explanation for this finding is that, rather than experiencing moral injury in the form of a personal betrayal (e.g., perceived leadership failure, perceived betrayal from peers or civilians), most respondents had experienced a transgression of their moral values as a result of being exposed to human suffering and trauma (e.g., “there is no justice in the world,” “I was not in the scene on time and I feel I did not help enough”).

### 4.4.5 Relationships among Study Variables

The present study’s findings showed significant association between PTSD and compassion fatigue, which was unsurprising given that both constructs are akin to traumatization. Thus, high levels of PTSD symptoms are expected to be associated to high levels of compassion fatigue. Analogously, compassion satisfaction appeared to be negatively associated with both PTSD symptoms and compassion fatigue. This finding appeared to agree with those of previous studies (Figley 1995, 2002) with frontline professionals, which also found that compassion satisfaction and traumatization were negatively associated. It seems that high levels of appreciation and satisfaction for helping those who suffer are associated with lower levels of traumatization (compassion fatigue and PTSD symptomatology). Furthermore, the present study’s findings also showed that negative personality traits are positively associated with traumatization. This finding may appear to be paradoxical since it would be expected
that high levels of DT personality traits may be related to low levels of traumatization. Nevertheless, the positive association between DT personality traits and traumatization may be explained by the tendency for those with elevated DT personality traits to lack the capacity to connect with peers and civilians, and to experience vulnerability due to their egocentrism and their tendency to eschew social support networks (O’Boyle et al., 2012). Analogously, moral injury was found to be positively associated with compassion fatigue, PTSD symptoms, and DT personality traits. It should be also noted that, compared to “others-focused” moral injury, “self-focused” moral injury appeared to have stronger correlations with the aforementioned constructs. Therefore, high levels of moral injury (both “self-focused” and “others-focused”) is related to high levels of traumatization and DT personality traits.

4.4.5.1 Exploring Different Pathways towards Police Traumatization

The present study was the first empirical study to examine the role of negative personality traits and moral injury in predicting traumatization among law enforcement officers. One of the main findings in the present study was that DT personality traits did not directly predict traumatization (compassion fatigue and PTSD symptoms). Rather, the pathway between DT personality traits and traumatization was significantly mediated by “self-focused” moral injury. That is, the role of “self-focused” moral injury is integral in predicting traumatization among officers with elevated DT personality traits. The study’s findings showed that those with elevated DT personality traits experience morally injurious incidents as a betrayal of their egos (“self-focused” moral injury); in turn, “self-focused” moral injury was found to be significant predictor of compassion fatigue and PTSD symptomatology. Conversely, while “others-focused” moral injury was significantly predicted by DT personality traits, it did not significantly predict traumatization. Therefore, it appears that, while officers with elevated
DT personality traits may also experience “others-focused” moral injury, this type of moral injury does not predict traumatization. These results confirm current study hypothesis that those with elevated DT personality traits become traumatized via the experience of “self-focused” moral injury, or, as Nash et al. (2013) suggested, their traumatization stems from a sense of betrayal resulting from exposure to morally injurious incidents. This last finding is significant because it strongly suggests that “self-focused” moral injury plays a vital role in explaining the pathway that leads those with elevated DT personality traits towards traumatization.

One unexpected finding was that years of experience did not appear to be a significant predictor of compassion fatigue and/or PTSD symptoms. This finding may be explained in a number of ways. For example, it is possible that officers who experience compassion fatigue and/or PTSD symptoms decide to resign from the police force or opt to move to another position that does not involve exposure to traumatic incidents. Another possible explanation is that, over the course of their careers, officers adopt self-care techniques or seek professional assistance to help prevent the negative impacts of exposure to trauma. While both explanations are possible, previous research has found that officers are skeptical of professional psychological help and fear the stigmatization that is associated with seeking it. (Hansson & Markstrom, 2014; Miller, 1995; Royle, Keenan, & Farrell, 2009) Thus, it is likely that the first explanation more accurately explains why years of service did not predict compassion fatigue and PTSD symptoms.

4.4.6 Clinical Implications

One of this study’s main findings is that personality traits should be considered when trying to understand and treat police trauma. Indeed, the results revealed that officers with elevated negative personality traits could still be traumatized via certain pathways. Specifically, the
role of “self-focused” moral injury appeared to be vital, as it significantly mediated the relationship between DT personality traits and traumatization. Given this, attention must be paid to “self-focused” moral injury in future clinical research work with officers who have elevated levels of negative personality traits. It is possible that future research may provide with valuable findings for clinical directions indicating that future clinical work can mitigate or prevent traumatization among officers with high levels of DT personality traits by addressing perceived betrayals that result from exposure to morally injurious incidents. In addition, clinical work with traumatized populations might also consider utilizing different techniques or developing customized treatment plans based on the traumatized officers’ particular personality traits. Conversely, trauma treatment that targets officers’ “others-focused” moral injury may not be effective if those officers have elevated levels of negative personality traits. On the other hand, if trauma treatment with officers with elevated DT personality traits focuses on “self-focused” moral injury issues (e.g., perceived betrayal by others) it will probably be effective in impeding traumatization. However, further research is required in order to shed light on effective techniques that might be tailored to complement traumatized officers’ personality traits. Another finding that appears to be vital for clinical work is the role of compassion satisfaction and its negative association with compassion fatigue and PTSD symptoms. That is, trauma treatments that focus on promoting and enhancing compassion satisfaction may be effective in helping officers decrease their compassion fatigue and PTSD symptoms.

4.4.7 Study Limitations and Future Research

The participants in the present study were all White Europeans, and majority of them were male. Therefore, caution should be exercised when generalizing the current study’s findings to include officers from cultural minority groups. In addition, future research may recruit
officers from cultural minority groups (e.g., sexual, racial, ethnic minority, female officers) in order to explore whether there are variations in how negative personality traits, moral injury, compassion satisfaction, and years of experience predict compassion fatigue and PTSD symptoms. Analogously, a study that is similar to the present one may be conducted with police officers from North America (US and Canada), as it is possible that some findings may differ between European (Finland) and North American (US/Canada) police officers.

Current study results pave the way for future research to examine causality between present study variables; however, they do not imply causality since present study only examined correlational relationships among the variables. However, current study mediation results can support a causal theory but cannot prove a causal theory at this point. Despite this, the present study’s results can pave the way for future experimental studies. For instance, future clinical research may explore the effectiveness of certain techniques based on officers’ personality traits, or it might examine which interventions are most effective in alleviating the negative impact of “self-focused” and “others-focused” moral injury on officers’ health and wellbeing. That is, future research may attempt to determine which certain clinical treatments are most effective for those who mainly suffer from “self-focused” moral injury, and which ones are most effective for treating those who suffer from “others-focused” moral injury. Furthermore, future research may explore self-care techniques that promote compassion satisfaction. Such research would be highly beneficial, as compassion satisfaction appeared to be one of the constructs negatively associated with compassion fatigue and PTSD symptoms.
Chapter 5
General Discussion

5 General Discussion

5.1 Compassion Fatigue

As was discussed in previous chapters, there had been no prior empirical studies of police compassion prior to the development of the current project. Indeed, earlier investigations into police fatigue largely used theoretical approaches or samples that included a very small percentage of police officers as study participants. The results of the present project’s three empirical studies indicated that a significant number of police officers may experience compassion fatigue. Although the percentage of those who suffer from compassion fatigue may seem low from a purely statistical point of view, the current project’s findings should nonetheless be cause for concern when viewed from a real life perspective. For instance, at a glance, the statistic that 15% of officers suffer from compassion fatigue may not be alarming; however, in a large police department of 1,000 officers, such a percentage indicates that 150 officers in that department may possibly be suffering from compassion fatigue. Moreover, the current project drew upon a diverse sample, recruiting officers from North America (US and Canada) as well as Europe (Finland); in all three studies, it became obvious that the number of officers who suffer from compassion fatigue is substantial, regardless of geographic area. This represents a compelling finding that asserts the importance for further analysis of compassion fatigue and the development of strategies for addressing it.

5.2 Compassion Satisfaction

As with compassion fatigue, there had also been no empirical studies of compassion satisfaction among police officers prior to the current project. As noted in the introduction,
compassion satisfaction is correlated to job satisfaction, and it refers to a police officer’s sense of appreciation regarding the services they provide to their communities. Thus, it is highly noteworthy that all of the studies in this project indicated that a considerable percentage of officers reported low levels of compassion satisfaction. Much the same as with the findings for compassion fatigue, the low rates of compassion satisfaction pose a significant problem. For instance, it is concerning to discover that 40% of officers reported low compassion satisfaction because this means that almost half of the police officers in an agency do not recognize the value of their services, or they do not view their service to their communities as meaningful. Therefore, while these officers still serve their communities, there is a greater likelihood that they engage in their work perfunctorily as they are unable to appreciate the value of their services (“just the facts m’am”). Moreover, all three studies of current project revealed that compassion satisfaction was negatively associated with compassion fatigue; that is, an increase in compassion fatigue was associated with a decrease in compassion satisfaction, and vice versa. As will be discussed in the following paragraphs, this relationship has multiple applications for future research and clinical practice.

5.3 Negative Personality Traits

The dark triad (DT) of personality traits has been studied in prior research, particularly by organizational psychologists (Kiazad et al., 2010; O’boyle et al., 2012). Researchers in these areas contend that the DT traits entail malevolent personality traits that can lead to disruption in workplace relationships, authoritarian leadership, and low job performance. In this project, the relationship between DT personality traits and police traumatization was explored. The findings of studies 2 and 3 showed that DT personality traits were positively associated with compassion fatigue; that is, officers with high levels of DT personality traits are more likely to suffer from compassion fatigue. Analogously, the findings of study 1
indicated similar results despite using a different psychosocial scale to measure authoritarianism than was used in studies 2 and 3. In addition, the results of study 3 showed that DT personality traits were also positively associated with PTSD symptoms among police officers. This finding appeared to be antithetical to what was initially expected. For instance, one might have expected to find that officers with high levels of authoritarianism (or DT personality traits) would be less likely to experience high levels of compassion fatigue or PTSD symptoms because their tendency towards “toughness and power” may insulate them from the negative impact of trauma exposure. Thus, this finding was essential because it illuminated the crucial role of negative personality traits vis-a-vis police traumatization. Indeed, it appeared that officers with high levels of negative personality traits were susceptible to trauma exposure in the form of compassion fatigue or PTSD symptomatology, and this relationship was consistent among officers in North America as well as those in Finland. Furthermore, results in all three studies indicated that negative personality traits were negatively associated with compassion satisfaction. As such, officers with high levels of authoritarianism (or negative personality traits) reported low levels of compassion satisfaction. This finding was unsurprising. Previous research suggested that it is possible that officers with high levels of authoritarianism (or negative personality traits) may maintain superficial relationships with their colleagues and may lack any social support network within the organization. Consequently, these officers may be forced to deal with trauma-induced experiences on their own. Moreover, since malevolent personality traits likely impact every aspect of their professional and personal life, an officer’s authoritarianism (or high levels of negative personality traits) may preclude them from experiencing a sense of appreciation or value regarding their service to the community. In addition, it is possible that such officers view their role as one that requires them to assert
power and authority over civilians and their colleagues instead of as a source of support for those who suffer and a guarantor of peace and order in their communities.

5.4 Moral injury

To the best of the author’s knowledge, study 3 of the current project was the first empirical study of moral injury among law enforcement officers. This study’s findings were consistent with those of previous research on military personnel and veterans; namely, moral injury was found to be significantly associated with compassion fatigue and PTSD symptoms among police officers. In addition, moral injury appeared to have a vital role in the current project because its components (“self-focused” and “others-focused” moral injury) shed light on the relationship between negative personality traits and police traumatization. Therefore, the results of study 3 indicated a positive association between DT personality traits and moral injury. This finding constitutes one of this study’s contributions to the current literature, as previous research has consistently overlooked the two components of moral injury (“self-focused” and “others-focused”) in favor of considering moral injury as a concrete construct. Furthermore, officers with high levels of DT personality traits appeared to experience trauma (PTSD symptoms and compassion fatigue); which is a relationship mediated by “self-focused” moral injury. This finding has significant implications for clinical practice as well as policy formation, and potential future research to these ends is discussed in the following sections.

5.5 Clinical Practice Implications

The current project’s results indicated that compassion fatigue is an increasingly prevalent issue in the law enforcement, and clinical practice can be a major source of support for police officers, who are suffering from it. Previous literature has discussed various self-care techniques that frontline professionals can use to help deal with compassion fatigue (Figley
1995, 2002). To this end, clinicians could teach police officers certain practical and easily applied self-care techniques that can be used to mitigate the effects compassion fatigue. Furthermore, these self-care techniques could be taught to police cadets and officers in the early stages of their careers as preventative strategies for dealing with the deleterious impact of compassion fatigue on their health and wellbeing. Moreover, veteran officers may also benefit from such self-care training, as compassion fatigue appeared to be positively associated with years of service. Clinicians may collaborate with police trainers, union representatives, and high-ranking police managers to incorporate self-care strategies in order to provide officers with support in managing compassion fatigue. Analogously, clinicians may play a vital role in helping officers improve their levels of compassion satisfaction. Clinicians may partner with high-ranking police managers to develop practices that identify and celebrate the successes of the department’s police officers during their last shift. For instance, briefing or de-briefing sessions are often mainly focused on the facts and any issues that may have emerged during the previous shift. However, clinicians could attend these meetings and work with officers and their supervisors to identify and focus on their successes, moments of gratitude, and pleasant social interactions that may have occurred during their shift. It appears that officers consider these types of acts to be routine aspects of their work (e.g., helping an elder cross the street, appreciating a civilian’s gesture to thank them) and, hence, they may not take the time to reflect upon and feel grateful for the services they provide for their communities.

Clinical practice can also address the impact of moral injury on police officers’ health and wellbeing. In partnership with police trainers and supervisors, clinicians can address moral dilemmas that officers may have experienced (or might potentially experience) during critical incidents. This approach will help mentally equip officers to deal with these
dilemmas when they are experienced in the line of duty, and it will also allow clinicians to explore any negative impacts on their health and wellbeing that may result from morally injurious incidents that occur in the line of duty. Research has indicated that, when morally injurious situations are addressed and processed among clinicians, high-ranking managers, and front line professionals, caregiving professionals are less likely to experience moral injury and are more likely to feel better equipped to confidently navigate morally injurious incidents. This recommendation is supported by prior clinical work with traumatized veterans and soldiers, which strongly suggests the effectiveness of addressing, exploring, and treating moral injury as part of clinical trauma work. Thus, clinicians who work with traumatized police officers should also consider the moral injury component as part of their treatment plan.

The current project’s outcomes indicated that clinical work with traumatized police officers should also consider personality traits in order to provide more individualized treatments. That is, officers with elevated negative personality traits may benefit from receiving trauma treatment that is more focused on the impact of trauma on officers’ own selves (or sense of personal betrayal from others). Conversely, officers with absent or low levels of negative personality traits may respond better to treatments that focus on potential victims and how their experiences might have affected officers’ health and wellbeing. For instance, a cognitive-behavioral-therapy-oriented clinician may recognize that traumatized officers with elevated negative personality traits are more likely to use cognitive distortions regarding their experienced betrayal from others (e.g., “victims did not follow my orders”); similarly, traumatized officers with absent or low levels of negative personality traits may be more likely to use cognitive distortions concerning their inability to help victims, their role in the
organization, or their service to society-at-large ("see what happened to the crime victims when I responded to the incident? I am not a good cop").

5.6 Policy Implications

Upper-level managers can incorporate the compassion satisfaction component by inviting police officers to also report any successes or accomplishments that may have occurred during their shift. This approach would give officers the opportunity to share the value of their work with their supervisors and peers, and to appreciate their accomplishments (even the minor ones). Similarly, since local community clubs and organizations often form partnerships with local police departments, members of these organizations can also help to foster compassion satisfaction by sharing their stories of police-related accomplishments and expressing their appreciation for them. This feedback can help officers to view their work as being about more than just “the facts,” and it can help them gain a grounded perspective of how their work plays a vital role in maintaining peace and order within the community. It is common for city, county, and state law-enforcement agencies to offer ride-along programs in which civilians can ride with officers during the course of their tour of duty (Payne, Sumter, & Sun, 2003; President’s Task Force on 21st Century Community Policing, 2015). These programs allow members of the public to gain insight into the day-to-day duties of police officers. Ride-along programs are also useful for increasing transparency on behalf of the police department and for providing interested citizens and potential recruits with an opportunity to get an intimate look at the realities of police work. While the ride-along experience has the benefit of allowing civilians a chance to familiarize themselves with law enforcement operational stressors and police jargon, it also presents a direct opportunity for civilians to express their appreciation for the officers and the services they perform. One example is the New York City Police Department’s community participation program
In terms of moral injury, some hospitals require medical personnel to record any moral dilemmas that they experience with patients in order to create a system wherein staff can receive recommendations and support from their peers. The moral dilemma component may be also incorporated in police briefing and de-briefing meetings in ways that are similar to those used by medical personnel in hospitals.

5.7 Limitations and Future Research

The present project’s findings indicated that, overall, compassion fatigue and compassion satisfaction are negatively associated. In addition, the results showed a positive association between compassion fatigue and negative personality traits, as well as between “self-focused” moral injury and negative personality traits. Although traumatization among those with high levels of negative personality traits appeared to be mediated by “self-focused” moral injury, one of the present project’s major limitations is that it was unable to establish causal relationships between the variables. As previously mentioned, the present project explored the relationships between the above-mentioned variables; however, association between variables does not lead to any concrete conclusions about their causal relationships. Moreover, the samples for two of the project’s studies were comprised of all White and predominantly male operational officers. Therefore, caution must be exercised when extending any of this project’s conclusions to officers from minority groups (e.g., gender, racial, ethnic, sexual minority groups), since they may experience discrimination from civilians as well as their peers, which may render them more susceptible to traumatization. In addition, studies 2 and 3 were conducted with European samples. Thus, caution should also
be exercised when applying the findings of those studies to the North American (US and Canada) police population.

Participants for the studies contained in this thesis were gathered from North America (US and Canada) as well as Finland. Future research may replicate present project in police organizations in North America, Europe, as well as other democratic countries. The author refers to the notion of studying police traumatization in democratic countries given the fact that police role in totalitarian regimes violates human rights and any attempt to study police traumatization in countries controlled by totalitarian regimes would defeat the purpose of developing research to help those who serve. Nonetheless, the development of cross-cultural research that examines police traumatization in democratic countries will allow future research to explore police compassion fatigue taking into consideration police national-cultural context among other factors. To this end, future research may replicate the current project’s studies using officers from minority cultural groups in order to explore whether there are differences in how they experience moral injury and traumatization as well as to examine whether negative personality traits play a similar role in contributing to police traumatization. Similarly, officers who serve in low socio-economic status (SES) communities may experience different levels of compassion fatigue and satisfaction compared to officers who serve in high SES communities. That being said, future research may explore the aforementioned crucial research questions that approach police traumatization from different perspectives.

Moreover, future research may investigate police traumatization considering officers’ specific positions. For instance, future research may attempt to answer the question on what would be the difference (if so) between officers who serve in two different operational units: officers who serve in a child exploitation unit versus officers who serve in a crowd
management unit and so forth. Perhaps, different police positions may be associated with the experience of different levels of compassion fatigue or even different types of traumatization. For instance, a SWAT team officer may experience PTSD symptoms considering the experience of life-threatening situations in the line of duty as opposed to an officer who serves in a child pornography unit and s/he is exposed to child abuse cases by investigating child pornography materials on a regular basis and s/he may experience high levels of compassion fatigue.

As mentioned, police work is unique considering the multiple potentially traumatic incidents that officers often experience in the line of duty. Nevertheless, current research project findings may not be generalized to the general population since it is likely that most civilians do not experience compassion fatigue or moral injury in their workplace. However, trauma is often embedded in human life and, hence, the association among variables explored in current research project may pave the way for the investigation of mechanisms towards traumatization among civilians (e.g., survivors of natural disasters, victims of violent crimes). For instance, future research may consider the association of variables explored in present project aiming to investigate mechanisms towards traumatization based on civilians’ levels of negative personality traits; analogously, future research may examine moral injury (self- and others-focused) among civilians who happened to experience traumatic incidents and the association of moral injury with traumatization.

One challenge that emerged in all three studies was related to the method used to measure negative personality traits (or authoritarianism). The authoritarianism scale employed in study 1 was replaced by the DT personality scale (called “SD3”); the reasons for this substitution were discussed in detail in study 1. However, the DT personality scale contains items that seem to be contradictory with the mission of police work. For instance, items such
as, “It’s not wise to tell your secrets,” “I know I am special because everyone keeps telling me so,” and “I avoid dangerous situations” are probably endorsed by many operational police officers (e.g., detectives, intelligence service agents, SWAT team officers). However, endorsement of such items may indicate elevated DT levels among law enforcement officers. Of course, the last suggestion would not preclude the alternative explanation that some law-enforcement officers may really have elevated levels of negative personality traits. Therefore, future research should be conducted to develop an authoritarianism self-report psychosocial scale that is specifically designed to account for the idiosyncrasies of law-enforcement work; for instance, such a scale may consider the values and tenets of police culture as well as the unique nature of police work.

All three studies in the current project were cross-sectional, which indicates that the role of years of service towards traumatization could not be explored in-depth. Even though study 2 findings showed that years of service was one of the significant predictors towards compassion fatigue, results in the other two studies (study 1 and study 3) did not endorse the significant role of years of service in predicting traumatization. Therefore, the role of years of service towards police traumatization appears to be ambiguous across the three studies of present project. However, it should be emphasized that many officers may serve in special units that involve intense exposure to trauma for a certain period of time and, afterwards, they may decide to move to another position that involves minimal exposure to trauma. For instance, an officer who serves in a child pornography unit for 3 years may decide to move to an administrative position because s/he feels that compassion fatigue has deleterious impact on his/her wellbeing, health, and job performance. Nevertheless, a cross-sectional research design (as occurs in present study) is limited to capture such cases as the one aforementioned. As such, future researchers may wish to conduct longitudinal studies of
police compassion fatigue, moral injury, compassion satisfaction, and the role of negative personality traits. A longitudinal approach would allow researchers to explore police traumatization patterns over years of service through the scope of negative personality traits and, perhaps, officers’ occupied positions within the organization.

Over the past, researchers examined etiological approaches of PTSD based on a proposed stress-diathesis model (McKeever & Huff, 2003). To this end, researchers attempted to consolidate medical and psychological research findings towards exploring pathways that shed light on to how PTSD is developed from a biological, psychological stress experience, and ecological perspective. Similar to previous research in the area of traumatization, present research project findings illuminate pathways towards police traumatization (compassion fatigue and PTSD symptoms) taking into consideration levels of negative personality traits and moral injury (self- and others-focused) among police officers. Based on the stress-diathesis model perspective (Salomon & Jin, 2013), it is possible that high levels of negative personality traits (diathesis) interact with “self-focused” morally injurious incidents (situational traumatic stressors). Consequently, officers’ exposure to situational traumatic incidents (“self-focused” morally injurious incidents) may activate the diatheses (negative personality traits) that may then instigate the development of traumatization. That being said, a model that aims to investigate an etiological approach to police traumatization based on the stress-diathesis model appears to be compelling and future research should aim to study it.

As above-mentioned, other factors (e.g., years of service, positions served) may be also considered in the exploration/development of an etiological model towards police traumatization.

Furthermore, future research may study certain techniques that could be used to prevent or decrease police compassion fatigue. To this end, experimental and longitudinal studies may
shed light on certain strategies that could potentially prevent the debilitating impact of police compassion fatigue on officers’ health. In addition, experimental studies may explore the effectiveness of certain techniques that could be employed to help officers who are suffering from compassion fatigue. Clinical research may also study techniques that can be used to increase police officers’ compassion satisfaction. Future research might also explore techniques that officers could use to shield themselves against the significant impact that moral injury can have on their health and wellbeing.

One of the current project’s main contributions is its delineation of the role played by negative personality traits vis-a-vis traumatization. Consequently, future research may further explore interventions that would be more effective in helping officers with elevated levels of negative personality traits effectively cope with traumatization; likewise, future research may also look into approaches that may be more efficient when dealing with officers with low levels of negative personality traits. Such research would not only improve our ability to develop interventions that could be used to support officers against traumatization, but they would also offer approaches that are tailored to officers’ personality traits.
References


Craig, C.D. & Sprang, G. (2010). Compassion Satisfaction, Compassion Fatigue, and Burnout in a National Sample of Trauma Treatment Therapists. Anxiety, Stress, & Coping, 23(3), 319-339. doi: 10.1080/10615800903085818


## Tables

### Table 1. Study 1 – Demographic Data

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Participants</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
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<tr>
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<td>667</td>
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<tr>
<td>Female</td>
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<td>African American/Black</td>
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<td>Asian/Pacific American</td>
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<td>1.4</td>
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<tr>
<td>Caucasian/White</td>
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<td>89.4</td>
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<td>Hispanic/Latino</td>
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<td>3.5</td>
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<tr>
<td>Native/Indian</td>
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<td>0.4</td>
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<tr>
<td>Other</td>
<td>21</td>
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<tr>
<td>Regions</td>
<td>Number of Organizations With Public Contact Information</td>
<td>Percent of Organizations Responding</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------</td>
<td>------------------------------------</td>
</tr>
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<td><strong>U.S.</strong></td>
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<td>Midwest</td>
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</tr>
<tr>
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<tr>
<td>West</td>
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<tr>
<td>Other</td>
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<td><strong>Canada</strong></td>
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<td>Eastern</td>
<td>118</td>
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<td>Western</td>
<td>36</td>
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### Table 3. Study 1 – Compassion Satisfaction, Compassion Fatigue, and Burnout Prevalence Rates

<table>
<thead>
<tr>
<th>Scores</th>
<th>Participants (n)%</th>
</tr>
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<tbody>
<tr>
<td><strong>Compassion Satisfaction</strong></td>
<td></td>
</tr>
<tr>
<td>Low (0 to 81)</td>
<td>234 (27.08)</td>
</tr>
<tr>
<td>Moderate (82 to 99)</td>
<td>356 (41.20)</td>
</tr>
<tr>
<td>High (100 to 188+)</td>
<td>274 (31.72)</td>
</tr>
<tr>
<td>Total</td>
<td>864 (100.00)</td>
</tr>
<tr>
<td><strong>Compassion Fatigue</strong></td>
<td></td>
</tr>
<tr>
<td>Low (30 or less)</td>
<td>573 (66.52)</td>
</tr>
<tr>
<td>Moderate (31 to 35)</td>
<td>92 (10.65)</td>
</tr>
<tr>
<td>High (36 to 41+)</td>
<td>199 (23.03)</td>
</tr>
<tr>
<td>Total</td>
<td>864 (100.00)</td>
</tr>
<tr>
<td><strong>Burnout</strong></td>
<td></td>
</tr>
<tr>
<td>Low (36 or less)</td>
<td>715 (82.75)</td>
</tr>
<tr>
<td>Moderate (37 to 50)</td>
<td>121 (14.00)</td>
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<tr>
<td>High (51 to 85)</td>
<td>28 (3.24)</td>
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<tr>
<td>Total</td>
<td>864 (100.00)</td>
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</table>
Table 4. Study 1 – Authoritarian Attitudes Prevalence Rates

<table>
<thead>
<tr>
<th>Authoritarian Score</th>
<th>Participants (n) %</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>4(1.23)</td>
</tr>
<tr>
<td>2</td>
<td>65(19.94)</td>
</tr>
<tr>
<td>3</td>
<td>198(60.74)</td>
</tr>
<tr>
<td>4</td>
<td>57(17.48)</td>
</tr>
<tr>
<td>5</td>
<td>2(0.61)</td>
</tr>
<tr>
<td>Total</td>
<td>326(100.00)</td>
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*Authoritarian Score of 1 = strongly disagree and score of 5 = strongly agree.*
Table 5. Study 1 – Regression Model Predicting Compassion Satisfaction (n=276)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>(\beta)</th>
<th>t</th>
<th>p</th>
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</thead>
<tbody>
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<td><strong>Demographics</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gender*</td>
<td>1.902</td>
<td>2.678</td>
<td>.039</td>
<td>.710</td>
<td>.478</td>
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<tr>
<td>Region of residence</td>
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<td>6.551</td>
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<td>-.934</td>
<td>.351</td>
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<td>Years of Service</td>
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<td>.092</td>
<td>.106</td>
<td>1.950</td>
<td>.052</td>
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<td><strong>Authoritarian Attitudes</strong></td>
<td>1.394</td>
<td>1.450</td>
<td>.053</td>
<td>.961</td>
<td>.337</td>
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<tr>
<td>Motivation</td>
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<td></td>
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<tr>
<td>Negative motivation in joining police</td>
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<td>2.066</td>
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<td>-.870</td>
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<tr>
<td>Positive motivation in joining police</td>
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<td>3.117</td>
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<tr>
<td>aNegative aspects of policing</td>
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<td>.090</td>
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<td>.191</td>
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<td><strong>Compassion Fatigue</strong></td>
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<td><strong>Overall Model</strong></td>
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<tr>
<td><strong>Adjusted R^2</strong></td>
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<td>.22</td>
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*Reference group for gender: males

abDoes the officer focus on the negative or positive aspects of policing?
Table 6. Study 1 – Regression Model Predicting Compassion Fatigue (n=276)

<table>
<thead>
<tr>
<th>Demographics</th>
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<th>β</th>
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<tr>
<td>Gender*</td>
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<td>.914</td>
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<td>Authoritarian Attitudes</td>
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<td>1.181</td>
<td>.121</td>
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<td>.032</td>
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<tr>
<td>Motivation</td>
<td></td>
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<tr>
<td>Negative motivation in joining police</td>
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<td>.423</td>
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<td>2.562</td>
<td>.102</td>
<td>1.797</td>
<td>.073</td>
</tr>
<tr>
<td>aNegative aspects of policing</td>
<td>1.326</td>
<td>1.774</td>
<td>.049</td>
<td>.748</td>
<td>.455</td>
</tr>
<tr>
<td>bPositive aspects of policing</td>
<td>-2.153</td>
<td>2.805</td>
<td>-.045</td>
<td>-.767</td>
<td>.444</td>
</tr>
<tr>
<td>Compassion Satisfaction</td>
<td>-.331</td>
<td>.046</td>
<td>-.415</td>
<td>-7.200</td>
<td>&lt;.000</td>
</tr>
<tr>
<td>Overall Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;.000</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.177</td>
</tr>
</tbody>
</table>

*Reference group for gender: males
abDoes the officer focus on the negative or positive aspects of policing?
### Table 7. Study 1 – Regression Model Predicting Burnout (n=276)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender*</td>
<td>.782</td>
<td>1.679</td>
<td>.024</td>
<td>.466</td>
<td>.642</td>
</tr>
<tr>
<td>Region of residence</td>
<td>-3.489</td>
<td>4.095</td>
<td>-.043</td>
<td>-.852</td>
<td>.395</td>
</tr>
<tr>
<td>Years of Service</td>
<td>-.111</td>
<td>.058</td>
<td>-.099</td>
<td>-1.907</td>
<td>.058</td>
</tr>
<tr>
<td>Authoritarian Attitudes</td>
<td>1.805</td>
<td>.903</td>
<td>.104</td>
<td>1.998</td>
<td>.047</td>
</tr>
<tr>
<td><strong>Motivation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative motivation in joining police</td>
<td>.701</td>
<td>1.296</td>
<td>.033</td>
<td>.541</td>
<td>.589</td>
</tr>
<tr>
<td>Positive motivation in joining police</td>
<td>1.065</td>
<td>1.959</td>
<td>.029</td>
<td>.544</td>
<td>.587</td>
</tr>
<tr>
<td>Negative aspects of policing</td>
<td>-1.504</td>
<td>1.357</td>
<td>-.067</td>
<td>-1.109</td>
<td>.269</td>
</tr>
<tr>
<td>Positive aspects of policing</td>
<td>-2.482</td>
<td>2.145</td>
<td>-.063</td>
<td>-1.157</td>
<td>.248</td>
</tr>
<tr>
<td>Compassion Satisfaction</td>
<td>-.338</td>
<td>.035</td>
<td>-.511</td>
<td>-9.606</td>
<td>&lt;.000</td>
</tr>
</tbody>
</table>

Overall Model \(<.000\)

Adjusted R² \(0.299\)

* Reference group for gender: males

\(ab\) Does the officer focus on the negative or positive aspects of policing?
Table 8. Study 2 – Descriptive Results

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1162</td>
<td>63</td>
<td>1</td>
<td>64</td>
<td>42.29</td>
<td>9.516</td>
</tr>
<tr>
<td>Years of Police Experience</td>
<td>1163</td>
<td>42</td>
<td>1</td>
<td>43</td>
<td>18</td>
<td>10.361</td>
</tr>
</tbody>
</table>
Table 9. Study 2 – Correlation Results

<table>
<thead>
<tr>
<th>Years of Police Experience</th>
<th>Compassion Fatigue</th>
<th>Compassion Satisfaction</th>
<th>Burnout</th>
<th>Machiavellianism</th>
<th>Narcissism</th>
<th>Psychopathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>0.16**</td>
<td>-0.04</td>
<td>0.10**</td>
<td>0.01</td>
<td>-0.02</td>
<td>-0.06*</td>
</tr>
<tr>
<td>Compassion Fatigue</td>
<td>--</td>
<td>-0.33**</td>
<td>0.76**</td>
<td>0.20**</td>
<td>0.19**</td>
<td>0.23**</td>
</tr>
<tr>
<td>Compassion Satisfaction</td>
<td>--</td>
<td>-0.49**</td>
<td>-0.22**</td>
<td>0.02</td>
<td>-0.32**</td>
<td></td>
</tr>
<tr>
<td>Burnout</td>
<td>--</td>
<td>0.30**</td>
<td>0.21**</td>
<td>0.33**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>--</td>
<td>0.30**</td>
<td>0.56**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Narcissism</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td>0.30**</td>
<td></td>
</tr>
<tr>
<td>Psychopathy</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at 0.01 level (2-tailed).
*Correlation is significant at 0.05 level (2-tailed).
### Table 10. Study 2 – Regression Model Predicting Compassion Fatigue (n= 1,010)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender*</td>
<td>-3.381</td>
<td>.768</td>
<td>-.128</td>
<td>-4.404</td>
<td>&lt;.000</td>
</tr>
<tr>
<td>Years of Service</td>
<td>.201</td>
<td>.033</td>
<td>.175</td>
<td>6.047</td>
<td>&lt;.000</td>
</tr>
<tr>
<td>Dark Triad of Personality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>1.128</td>
<td>.714</td>
<td>.056</td>
<td>1.579</td>
<td>.115</td>
</tr>
<tr>
<td>Narcissism</td>
<td>5.181</td>
<td>.943</td>
<td>.168</td>
<td>5.496</td>
<td>&lt;.000</td>
</tr>
<tr>
<td>Psychopathy</td>
<td>1.816</td>
<td>.863</td>
<td>.076</td>
<td>2.105</td>
<td>.036</td>
</tr>
<tr>
<td>Compassion Satisfaction</td>
<td>-2.00</td>
<td>.021</td>
<td>-.287</td>
<td>-9.428</td>
<td>&lt;.000</td>
</tr>
<tr>
<td>Overall Model</td>
<td></td>
<td></td>
<td></td>
<td>&lt;.000</td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
<td></td>
<td></td>
<td>.194</td>
<td></td>
</tr>
</tbody>
</table>

* Reference group for gender: males
Table 11. Study 3 – Descriptive Statistics for the Variables Describing the Sample

<table>
<thead>
<tr>
<th>Variables</th>
<th>Range</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>23 to 62</td>
<td>41.21</td>
<td>8.42</td>
</tr>
<tr>
<td>Years in police service</td>
<td>1 to 42</td>
<td>16.87</td>
<td>9.11</td>
</tr>
</tbody>
</table>
Table 12. Study 3 – Descriptive Statistics for the Study Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>α</th>
<th>Range(^1)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compassion fatigue</td>
<td>.90</td>
<td>.04 to 3.57</td>
<td>1.04</td>
<td>.55</td>
</tr>
<tr>
<td>Compassion satisfaction</td>
<td>.91</td>
<td>.84 to 4.40</td>
<td>2.94</td>
<td>.60</td>
</tr>
<tr>
<td>The Dark Triad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>.78</td>
<td>1.11 to 4.67</td>
<td>2.38</td>
<td>.56</td>
</tr>
<tr>
<td>Narcissism</td>
<td>.70</td>
<td>1.00 to 3.67</td>
<td>2.19</td>
<td>.54</td>
</tr>
<tr>
<td>Psychopathy</td>
<td>.78</td>
<td>.99 to 4.17</td>
<td>1.55</td>
<td>.52</td>
</tr>
<tr>
<td>PTSD</td>
<td>.93</td>
<td>.98 to 4.64</td>
<td>1.62</td>
<td>.59</td>
</tr>
<tr>
<td>Moral Injury</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>.78</td>
<td>1.00 to 6.00</td>
<td>2.61</td>
<td>1.19</td>
</tr>
<tr>
<td>Other</td>
<td>.72</td>
<td>1.00 to 6.00</td>
<td>3.77</td>
<td>.98</td>
</tr>
</tbody>
</table>

\(^1\) Note: Range refers to mean composites
Table 13. Study 3 – Correlation Results

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compassion fatigue</td>
<td>.84***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PTSD</td>
<td>.80***</td>
<td>.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Dark Triad</td>
<td>.24***</td>
<td>.29***</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Compassion satisfaction</td>
<td>-.35***</td>
<td>-.59***</td>
<td>-.14**</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Other-focused moral injury</td>
<td>.18**</td>
<td>.28***</td>
<td>.29***</td>
<td>-.21***</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>6. Self-focused moral injury</td>
<td>.36***</td>
<td>.45***</td>
<td>.47***</td>
<td>-.35***</td>
<td>.37***</td>
<td>.79</td>
</tr>
</tbody>
</table>

*p < .05. ** p < .01. *** p < .001.
**Table 14.** Study 3 – Fit Indices and Their Threshold Values

<table>
<thead>
<tr>
<th>Index</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>&gt; .95</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>&lt; .08</td>
</tr>
<tr>
<td>Standardized root mean square residual (SRMR)</td>
<td>&lt; .08</td>
</tr>
</tbody>
</table>
### Table 15. Study 3 – Fit Indices for the Measurement Models

<table>
<thead>
<tr>
<th>Index</th>
<th>Proposed</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.89</td>
<td>.95</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.07</td>
<td>.06</td>
</tr>
<tr>
<td>Lower bound 90% confidence interval</td>
<td>.07</td>
<td>.05</td>
</tr>
<tr>
<td>Upper bound 90% confidence interval</td>
<td>.08</td>
<td>.06</td>
</tr>
<tr>
<td>P-close</td>
<td>.00</td>
<td>.04</td>
</tr>
<tr>
<td>Standardized root mean square residual (SRMR)</td>
<td>.08</td>
<td>.06</td>
</tr>
</tbody>
</table>
Table 16. Study 3 – Fit Indices for the Structural Models

<table>
<thead>
<tr>
<th>Index</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
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</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>518.11</td>
<td>493.73</td>
<td>496.02</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>213</td>
<td>212</td>
<td>214</td>
</tr>
<tr>
<td>Probability level</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.93</td>
<td>.94</td>
<td>.94</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.06</td>
<td>.06</td>
<td>.06</td>
</tr>
<tr>
<td>Standardized root mean square residual (SRMR)</td>
<td>.09</td>
<td>.08</td>
<td>.08</td>
</tr>
</tbody>
</table>

Note:  Model 1 = path between DT and “Others-Focused” Moral Injury constrained to zero.  
Model 2 = path between DT and “Others-Focused” Moral Injury unconstrained.  
Model 3 = path without direct effects from DT to Compassion Fatigue and PTSD symptoms.
Table 17. Study 3 – Path Coefficients for the Structural Model with Path from DT to “Others-focused” Moral Injury Unconstrained (Model 2)

<table>
<thead>
<tr>
<th>Path</th>
<th>$B$</th>
<th>SE</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark Triad to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other-focused moral injury</td>
<td>2.00</td>
<td>.42</td>
<td>.36</td>
<td>4.75***</td>
</tr>
<tr>
<td>Self-focused moral injury</td>
<td>3.01</td>
<td>.46</td>
<td>.51</td>
<td>6.60***</td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>.14</td>
<td>.11</td>
<td>.11</td>
<td>1.30</td>
</tr>
<tr>
<td>PTSD</td>
<td>.15</td>
<td>.11</td>
<td>.10</td>
<td>1.35</td>
</tr>
<tr>
<td>Other-focused moral injury to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>.01</td>
<td>.02</td>
<td>.03</td>
<td>.40</td>
</tr>
<tr>
<td>PTSD</td>
<td>.02</td>
<td>.02</td>
<td>.07</td>
<td>1.22</td>
</tr>
<tr>
<td>Self-focused moral injury to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>.05</td>
<td>.02</td>
<td>.21</td>
<td>2.86**</td>
</tr>
<tr>
<td>PTSD</td>
<td>.06</td>
<td>.02</td>
<td>.22</td>
<td>3.40**</td>
</tr>
<tr>
<td>Years of service to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>.00</td>
<td>.00</td>
<td>.11</td>
<td>2.12*</td>
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<tr>
<td>PTSD</td>
<td>.00</td>
<td>.00</td>
<td>.02</td>
<td>.39</td>
</tr>
<tr>
<td>Compassion satisfaction to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>-.12</td>
<td>.03</td>
<td>-.26</td>
<td>-4.43***</td>
</tr>
<tr>
<td>PTSD</td>
<td>-.28</td>
<td>.03</td>
<td>-.50</td>
<td>-8.37***</td>
</tr>
</tbody>
</table>

Note: * $p < .05.$  ** $p < .01.$  *** $p < .001.$
Table 18. Study 3 – Path Coefficients for the Structural Model without Direct Paths from the DT to Compassion Fatigue and PTSD (Model 3)

<table>
<thead>
<tr>
<th>Path</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark Triad to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other-focused moral injury</td>
<td>1.99</td>
<td>.42</td>
<td>.36</td>
<td>4.77***</td>
</tr>
<tr>
<td>Self-focused moral injury</td>
<td>3.03</td>
<td>.45</td>
<td>.52</td>
<td>6.67***</td>
</tr>
<tr>
<td>Other-focused moral injury to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>.12</td>
<td>.01</td>
<td>.05</td>
<td>.86</td>
</tr>
<tr>
<td>PTSD</td>
<td>.13</td>
<td>.02</td>
<td>.10</td>
<td>1.76</td>
</tr>
<tr>
<td>Self-focused moral injury to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>.06</td>
<td>.01</td>
<td>.27</td>
<td>4.32**</td>
</tr>
<tr>
<td>PTSD</td>
<td>.07</td>
<td>.01</td>
<td>.27</td>
<td>4.94**</td>
</tr>
<tr>
<td>Years of service to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>.00</td>
<td>.00</td>
<td>.10</td>
<td>1.92</td>
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<td>PTSD</td>
<td>.00</td>
<td>.00</td>
<td>.01</td>
<td>.17</td>
</tr>
<tr>
<td>Compassion satisfaction to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassion fatigue</td>
<td>-.12</td>
<td>.03</td>
<td>-.27</td>
<td>-4.60***</td>
</tr>
<tr>
<td>PTSD</td>
<td>-.28</td>
<td>.03</td>
<td>-.51</td>
<td>-8.54***</td>
</tr>
</tbody>
</table>

Note: * p < .05. ** p < .01. *** p < .001.
Figures

**Figure 1.** Study 1 – Distribution of Compassion Fatigue
**Figure 2.** Study 1 – Distribution of Compassion Satisfaction
Figure 3. Study 1 – Distribution of Burnout
Figure 4. Study 2 – Distribution of Compassion Fatigue
Figure 5. Study 2 – Distribution of Compassion Satisfaction
Figure 6. Study 2 – Distribution of Burnout
Figure 7. Study 2 – Prevalence Rates: Compassion Fatigue, Compassion Satisfaction, and Burnout
Figure 8. Study 2 – Prevalence Rates: Machiavellianism, Narcissism, and Psychopathy
Figure 9. Study 3 – Distribution of Compassion Fatigue
Figure 10. Study 3 – Distribution of Compassion Satisfaction
Figure 11. Study 3 – Prevalence Rates: Compassion Fatigue and Compassion Satisfaction
Figure 12. Study 3 – Prevalence Rates: PTSD Symptoms
Figure 13.  Study 3 – Prevalence Rates: Dark Triad of Personality
Figure 14. Study 3 – Prevalence Rates: Moral Injury
Figure 15. Study 3 – Structural Model with Path from DT to “Others-focused” Moral Injury Unconstrained (Model 2)

χ²(212)=493.73; CFI=.94; RMSEA=.06; SRMR=.08
Figure 16. Study 3 - Structural Model without Direct Effects from DT to Compassion Fatigue and PTSD symptoms (Model 3)

$\chi^2(214)=496.02$; CFI=.94; RMSEA=.06; SRMR=.08
Appendices

Appendix A  Study 3 – Short Dark Triad (SD3) Scale – Narcissism Subscale Items Removed

The following items of the SD3 – Narcissism subscale (Paulhus & Williams, 2002; Jones & Paulhus, 2014) were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .70:

Item 2: I hate being the center of attention. (R)

Item 6: I feel embarrassed if someone compliments me. (R)

Item 9: I insist on getting the respect I deserve.
Appendix B  Study 3 – Short Dark Triad (SD3) Scale – Psychopathy Subscale Items Removed

The following items of the SD3 – Psychopathy subscale (Paulhus & Williams, 2002; Jones & Paulhus, 2014) were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .78:

Item 2: I avoid dangerous situations. (R)

Item 7: I have never gotten into trouble with the law. (R)

Item 8: I enjoy having sex with people I hardly know.
Appendix C  Study 3 – Items Used to Identify-Score Latent Variables in Measurement Model

*Compassion Satisfaction and Fatigue Test (CSF - Figley & Stamm, 1996):*
All CSF items utilized (compassion fatigue and compassion satisfaction subscales) for calculating/scoring the variables: Compassion Fatigue and Compassion Satisfaction.

*Moral Injury Events Scale (MIES – Nash et al., 2013):*
Items 1 and 2 (“others-focused” moral injury) of MIES were removed so that the model fit the data well.
Item 1: I saw things that were morally wrong.
Item 2: I am troubled by having witnessed others’ immoral acts.
In addition, Item 6 of MIES was not included in the data collection by accident.
Item 6: I am troubled because I violated my morals by failing to do something that I felt I should have done.

*PTSD Checklist-Civilian (PCL-C - Weathers, Litz, Herman, Huska, & Keane, 1994):* All PCL-C items utilized for calculating/scoring the variable: Posttraumatic stress disorder (PTSD) symptoms.

*Short Dark Triad of Personality (SD3)(Paulhus & Williams, 2002; Jones & Paulhus, 2014):*
The following items of the SD3 – Narcissism subscale were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .70:
Item 2: I hate being the center of attention. (R)
Item 6: I feel embarrassed if someone compliments me. (R)
Item 9: I insist on getting the respect I deserve.
The following items of the SD3 – Psychopathy subscale (Paulhus & Williams, 2002; Jones & Paulhus, 2014) were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .78:

Item 2: I avoid dangerous situations. (R)

Item 7: I have never gotten into trouble with the law. (R)

Item 8: I enjoy having sex with people I hardly know.
Appendix D  Study 3 – Items Used to Identify-Score Latent Variables in Structural Model 1

*Compassion Satisfaction and Fatigue Test (CSF - Figley & Stamm, 1996):*
All CSF items utilized (compassion fatigue and compassion satisfaction subscales) for calculating/scoring the variables: Compassion Fatigue and Compassion Satisfaction.

*Moral Injury Events Scale (MIES – Nash et al., 2013):*
Items 1 and 2 (“others-focused” moral injury) of MIES were removed so that the model fit the data well.

Item 1: I saw things that were morally wrong.

Item 2: I am troubled by having witnessed others’ immoral acts.

In addition, Item 6 of MIES was not included in the data collection by accident.

Item 6: I am troubled because I violated my morals by failing to do something that I felt I should have done.

*PTSD Checklist-Civilian (PCL-C - Weathers, Litz, Herman, Huska, & Keane, 1994):* All PCL-C items utilized for calculating/scoring the variable: Posttraumatic stress disorder (PTSD) symptoms.

*Short Dark Triad of Personality (SD3)(Paulhus & Williams, 2002; Jones & Paulhus, 2014):*
The following items of the SD3 – Narcissism subscale were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .70:

Item 2: I hate being the center of attention. (R)

Item 6: I feel embarrassed if someone compliments me. (R)

Item 9: I insist on getting the respect I deserve.
The following items of the SD3 – Psychopathy subscale (Paulhus & Williams, 2002; Jones & Paulhus, 2014) were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .78:

Item 2: I avoid dangerous situations. (R)

Item 7: I have never gotten into trouble with the law. (R)

Item 8: I enjoy having sex with people I hardly know.
Appendix E  Study 3 – Items Used to Identify-Score Latent Variables in Structural Model 2

Compassion Satisfaction and Fatigue Test (CSF - Figley & Stamm, 1996):
All CSF items utilized (compassion fatigue and compassion satisfaction subscales) for calculating/scoring the variables: Compassion Fatigue and Compassion Satisfaction.

Moral Injury Events Scale (MIES – Nash et al., 2013):
Items 1 and 2 (“others-focused” moral injury) of MIES were removed so that the model fit the data well.
Item 1: I saw things that were morally wrong.
Item 2: I am troubled by having witnessed others’ immoral acts.

In addition, Item 6 of MIES was not included in the data collection by accident.
Item 6: I am troubled because I violated my morals by failing to do something that I felt I should have done.


Short Dark Triad of Personality (SD3)(Paulhus & Williams, 2002; Jones & Paulhus, 2014): The following items of the SD3 – Narcissism subscale were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .70:
Item 2: I hate being the center of attention. (R)
Item 6: I feel embarrassed if someone compliments me. (R)
Item 9: I insist on getting the respect I deserve.
The following items of the SD3 – Psychopathy subscale (Paulhus & Williams, 2002; Jones & Paulhus, 2014) were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .78:

Item 2: I avoid dangerous situations. (R)

Item 7: I have never gotten into trouble with the law. (R)

Item 8: I enjoy having sex with people I hardly know.
Appendix F  Study 3 – Items Used to Identify-Score Latent Variables in Structural Model 3

*Compassion Satisfaction and Fatigue Test (CSF - Figley & Stamm, 1996):*

All CSF items utilized (compassion fatigue and compassion satisfaction subscales) for calculating/scoring the variables: Compassion Fatigue and Compassion Satisfaction.

*Moral Injury Events Scale (MIES – Nash et al., 2013):*

Items 1 and 2 (“others-focused” moral injury) of MIES were removed so that the model fit the data well.

Item 1: I saw things that were morally wrong.

Item 2: I am troubled by having witnessed others’ immoral acts.

In addition, Item 6 of MIES was not included in the data collection by accident.

Item 6: I am troubled because I violated my morals by failing to do something that I felt I should have done.

*PTSD Checklist-Civilian (PCL-C - Weathers, Litz, Herman, Huska, & Keane, 1994):* All PCL-C items utilized for calculating/scoring the variable: Posttraumatic stress disorder (PTSD) symptoms.

*Short Dark Triad of Personality (SD3)(Paulhus & Williams, 2002; Jones & Paulhus, 2014):* The following items of the SD3 – Narcissism subscale were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .70:

Item 2: I hate being the center of attention. (R)

Item 6: I feel embarrassed if someone compliments me. (R)

Item 9: I insist on getting the respect I deserve.
The following items of the SD3 – Psychopathy subscale (Paulhus & Williams, 2002; Jones & Paulhus, 2014) were removed because their item-total correlations were below .20, Cronbach’s alpha increased to acceptance .78:

Item 2: I avoid dangerous situations. (R)

Item 7: I have never gotten into trouble with the law. (R)

Item 8: I enjoy having sex with people I hardly know.