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Moral Injury And Its Connection To Compassion Fatigue, Compassion Satisfaction, And Burnout

Authors	Floyd, Catherine
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ABSTRACT

MORAL INJURY AND ITS CONNECTION TO COMPASSION FATIGUE, COMPASSION SATISFACTION, AND BURNOUT

By

CATHERINE FLOYD

AUGUST, 2024

Committee Chair: Dr. Joshua Hinkle

Major Department: Criminal Justice

Recent research demonstrates the need to examine the concepts of moral injury and professional quality of life (compassion fatigue, compassion satisfaction, and burnout) in police officers. Building on these findings, the current study aims to determine the prevalence of these psychological concepts in a large municipal police department, as well as potential group differences in the prevalence of these concepts. Further, the study explores whether the psychological concepts of moral injury and compassion fatigue, also known as secondary traumatic stress, are associated within the sample of police officers. Finally, the study examined the potential of moral injury being a significant predictor of compassion fatigue (Papazoglou & Chopko, 2017). Initial Spearman's correlation coefficient analyses found significant relationships between moral injury and compassion fatigue. Exploratory linear regression analyses determined that moral injury and burnout consistently predicted compassion fatigue, even while controlling for sex, education level, and years of experience.

MORAL INJURY AND ITS CONNECTION TO COMPASSION FATIGUE, COMPASSION
SATISFACTION, AND BURNOUT

BY

CATHERINE FLOYD

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree
of
Master of Science
in the
Andrew Young School of Policy Studies
of
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2024

ACCEPTANCE

This thesis was prepared under the direction of the candidate's Thesis Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Master of Science in Criminal Justice in the Andrew Young School of Policy Studies of Georgia State University.

Thesis Chair:

Dr. Joshua Hinkle

Committee:

Dr. Dean Dabney

Dr. Thaddeus Johnson

Dr. Brian Bride

Electronic Version Approved:

Thomas J. Vicino, Dean
Andrew Young School of Policy Studies
Georgia State University
August, 2024

TABLE OF CONTENTS

Chapter I: Introduction	1
Problem Statement	2
The Current Study	5
Nature of the Current Study	6
Morality and Related Concepts	7
Moral Injury	9
Moral Injury and Policing	11
Compassion Fatigue and Related Concepts	11
Compassion Fatigue and Satisfaction	13
Compassion Fatigue and Satisfaction in Policing	15
Moral Decision Making in Policing	15
Police Stress and Stress Responses	17
The Police Culture	19
Chapter II: Literature Review	21
Moral Injury Literature Review	21
Moral Injury Research	21
Moral Injury Theoretical and Conceptual Basis	25
Moral Injury and Law Enforcement	27
Potentially Morally Injurious Events (PMIES) and Transgressive Events	30
Compassion Fatigue and Compassion Satisfaction Literature Review	35
Compassion Fatigue and Law Enforcement	36
Compassion Satisfaction and Law Enforcement	40
Compassion Fatigue and Satisfaction Theoretical and Conceptual Basis	41
Burnout Literature Review	43
Moral Injury and Compassion Fatigue Literature Review	44
Chapter III: Data and Methods	48
Participants	48
Data Collection	49
Measures	50
<i>Moral Injury</i>	50
<i>Compassion Fatigue</i>	51
<i>Control Variables</i>	52
Data Preparation and Analysis	52
Chapter IV: Results	56
Descriptive Statistics	56
Bivariate Analyses	57
Correlational Analysis	61
Linear Regression Analyses	62

Chapter V: Discussion	66
Limitations	70
Conclusion	72
Appendix A: Informed Consent Statement.....	73
Appendix B: Survey Instrument: Demographic Items	76
Appendix C: Survey Instrument: Compassion Satisfaction, Fatigue, and Burnout	78
Appendix D: Potentially Morally Injurious Events Scale Items	83
References	86
Vita.....	102

LIST OF TABLES

Table 1: Descriptive Statistics for Sample of Police Officers	58
Table 2: Summary Statistics for Study Variables.....	59
Table 3: Percentages of CF, CS, and BO in Sample	59
Table 4: Spearman's Rank Correlation Matrix	62
Table 5: Models 1-3: Effect of MI, BO, and Demographic Variables on CF	65

LIST OF FIGURES

Figure 1: Missing Data by Variable	55
Figure 2: Histograms of Moral Injury, Compassion Fatigue, Compassion Satisfaction, and Burnout	61

Chapter I: Introduction

Police officers are dedicated to serving communities, safeguarding public safety, and reducing crime. The accomplishment of these goals is accompanied by unique and extreme occupational stressors. Difficult decision making, high stress, and trauma exposure are endemic to the police profession. Law enforcement officers are, by nature of their career, required to fluidly move between and balance multiple positions, responsibilities, and expectations in any given situation. When responding to a call to service, officers may be required to secure the safety of the public, conduct a preliminary investigation in the midst of a brutal crime scene, apprehend offenders, defend their own safety, render time-sensitive medical care, act as empathetic figures to potential victims, and maintain vigilance for potential future risks to safety (Waters & Ussery, 2007). The institution of policing is in the midst of a historic identity crisis. As the profession grapples with holding onto legitimacy in the eyes of the public and identifying the best practices for achieving their long-held goals of public safety and crime-solving, becoming a police officer is getting more and more difficult. Related to the many mental stressors of policing, the struggles of public perception have been particularly salient over the course of the last decade. Since the notable surge in protests following the deaths of George Floyd and Breonna Taylor at the hands of police officers, the national position on the institution of policing has been increasingly negative. It is unclear whether there will be long-term effects of the national shift in perceptions of police officers. However, on a more individual level, it is quite possible that police officers are experiencing new and unprecedented challenges resulting from these perception shifts. Police resignations and retirements sharply increased in the six months following the summer of 2020 (Adams et al., 2023). News outlets report continued high numbers of resignations and retirements in the years following 2020 (The Associated Press,

2023). A safe assumption is that the last decade has led police departments to become occupational environments of heightened fervor, even more so than is in their nature. Dr. John Violanti, an acclaimed police stress researcher, has suggested that the era of civil unrest that policing has recently entered may have significant negative effects on individual officers' physical and mental health (2021). The current cultural state in which policing finds itself has led to more severe social consequences of being a police officer than in years past, this coupled with the many potential organizational and operational stressors of policing, may mean that the cons outweigh the pros in the process of deciding to become a police officer.

Problem Statement

Significant mental stressors in policing such as post-traumatic stress disorder (PTSD) pose a threat to public safety and have major implications for the future of policing. Exposure to the forms of critical incidents that are typical of law enforcement careers can lead to long-term negative mental and physical repercussions. Police officers may experience the emergence or exacerbation of depression, anxiety, and PTSD as a result of the dangerous daily responsibilities associated with police work (Sherwood et al., 2019). Police officers have been found to report much higher levels of PTSD, depression, and anxiety than the general population (Asmundson & Stapleton, 2008). While on the job, mental health issues can contribute to increased job-related injuries and increased physical altercations with citizens (Craddock & Telesco, 2022). According to the FBI's Law Enforcement Officers Killed and Assaulted report, the number of police officers killed while performing their duties in the year 2022 was 118 (LEOKA, 2022). In addition to the line of duty deaths for 2022, 169 police officers died by suicide (Blue H.E.L.P., 2022). The current study is aimed at the examination of two particular forms of stress exposure and their individually related outcomes: moral injury and compassion fatigue. Both of these

stressors have purported symptoms that are related to those of post-traumatic stress disorder but are distinct from PTSD in definitional attributes, developmental processes, and collateral harms (Litz et al., 2009). The emergence of research into these concepts represents the refinement and nuance of the current understanding of psychological suffering, especially for those in dangerous occupations. Moral injury and compassion fatigue are specific and insidious psychological stress outcomes that may exist in policing. People in caregiving and first responding roles can be especially vulnerable to these concepts and these are populations that often struggle with identifying and treating mental health harms. Furthermore, the exposure to these harms happens on the job, making it the responsibility of specific organizations and agencies to acknowledge and address them. It is essential that the literature on the psychological suffering that can be attributed to policing reflect these improvements in psychological understanding.

The issues presented by moral injury and compassion fatigue are of extreme significance to criminal justice academics, police leaders, and reform advocates. In acknowledgment of the many mental dangers of policing, both recently emerging and longstanding, many national and local efforts have been taken to provide solutions. Take, for example, the President's Task Force on 21st Century Policing. This expert panel was convened for the purpose of diagnosing and treating damaged public trust in the police. The panel's solutions were presented in six broad categories: building trust and legitimacy; policy and oversight; technology and social media; community policing and crime reduction; training and education; and officer wellness and safety (2015). As this task force indicated, national attention has been turned toward the improvement of the institution of policing and one of the many ways to face the current deficits in policing is to focus on improving the mental health of police officers. The obvious research-based corollaries of this recommendation are the examinations of the specific forms, correlates, and

outcomes of police stress, as well as effective treatment strategies. The Law Enforcement Mental Health and Wellness Act of 2017 also supported these claims by recommending that all federal, state, and local policing agencies offer stronger mental health services (LEMHWA, 2017). In response to attention from the federal government, the creation of policing environments that prioritize the mental wellbeing and retention of officers is at the forefront of policing agencies across the country. The current state of policing presents an extreme risk of the development of mental health issues for officers; however, understanding how morality and exposure to trauma victimization can present unique psychological harms for police officers can only improve the effectiveness of current mental health programs and policies.

The present research is intended to examine several psychological concepts that are believed to be risks of experiencing the occupational stressors that are endemic to police work. Primary to this research are the concepts of moral injury and compassion fatigue. Moral injury is the experience of intense guilt and shame that can result from exposure to events that violate one's moral standards or expectations (Litz et al., 2009). Compassion fatigue is the presentation of symptoms of PTSD that arrives from exposure to traumatized individuals, particularly from seeing or hearing about the trauma of others (Figley, 1995). The other psychological concepts that are central to this research are compassion satisfaction and burnout. Compassion satisfaction is conceptually connected to compassion fatigue. It is the sense of personal satisfaction that results from working with and providing aid to traumatized individuals (Stamm, 2010). Burnout is a form of stress (work-related exhaustion or inefficacy) that results from prolonged exposure to workplace-specific stresses (Maslach et al., 2001). Police work necessitates frequent exposure to both directly traumatic situations and the traumatization of others. The specific forms of psychological suffering examined in this research (i.e., moral injury, compassion fatigue, and

burnout) are understudied in police populations. Additionally, the consequences of these forms of psychological harm in policing are similarly unknown. While ~~current~~ researchers have found associations between these concepts in different populations, it is necessary to examine compassion fatigue and moral injury in police officers to inform policy and clinical work with this population. Therefore, the current study attempts to fill some of the gaps in the understanding of the mental responses of police officers to the complex and intensive requirements of police work. It is crucial to measure the prevalence and correlates of various psychological outcomes in police officers in order to ameliorate the harms that may be associated with them.

The Current Study

There are three primary aims of the research, described herein. The first aim of the study is to simply determine the prevalence of moral injury, compassion fatigue, compassion satisfaction, and burnout in a sample of a large U.S. police department. Thus, the first research question is:

Research Question 1: How prevalent are moral injury, compassion fatigue, compassion satisfaction, and burnout in the sample of police officers?

It is difficult to make confident assumptions given the extreme paucity of research involving the collection of these specific psychological variables among police officers. Considering the existing research to be outlined below, the first hypothesis for this research is that reported levels of moral injury and compassion fatigue in the sample will be moderate to low. The assumption for compassion satisfaction is that it will also be moderate to low (Grant et al., 2019; Brady, 2017; Davies et al., 2023). For burnout, the assumption is that reported levels of burnout will be high (Hawkins, 2001). This assumption is made due to the high level of exposure to

organizational stressors in patrolling police officers. The second research question is related to the study's demographic groups and potential differences therein.

Research Question 2: Do age, sex, years of experience, and educational background relate to moral injury, compassion fatigue, compassion satisfaction, and burnout in the sample of police officers?

The second research hypothesis of the study is there will be demographic differences in reported compassion fatigue and moral injury. The third aim of the study is related to the two negative psychological trauma-related outcomes of moral injury and compassion fatigue. Papazoglou and Chopko (2017) first proposed that there may be a pathway between moral injury and compassion fatigue in law enforcement populations, with morally injurious experiences contributing to traumatization both directly and indirectly (p. 3). The third aim is to investigate this claim and examine potential associations between moral injury and compassion fatigue.

Research Question 3: Is there an association between reported compassion fatigue and moral injury in the sample of police officers?

The third hypothesis of the study is that higher levels of reported compassion fatigue (measured in the ProQOL 5) will be associated with higher levels of reported exposure to morally injurious events (measured in the MIES).

Nature of the Current Study

To address the research questions, the current study employs an associational, nonexperimental design. This design was chosen because the literature on both moral injury and compassion fatigue is relatively limited. Thus, the study can be considered an exploratory study. A quantitative survey-based design was chosen to ease the process of statistical analysis and to ensure consistency with the existing literature bases. Quantitative study designs are common in

both moral injury and compassion fatigue research. Surveys were selected as a data collection method for ease in development and extensive administration. Two pre-existing instruments were used in the study, and they were slightly modified to better fit police populations. The surveys were administered with the purpose of quantitatively measuring the prevalence of three professional quality of life measures: compassion fatigue, compassion satisfaction, burnout and exposure to potentially morally injurious events. The study involved participants from the Atlanta Police Department, Field Operations Division. The Field Operations Division houses the majority of the street-level police force and is the chief patrolling division for the department. This facet of the department has primary responsibility for patrolling neighborhoods in marked police cars and responding to 911 calls; thus, members of this division have high levels of contact with citizens and active crime scenes.

Morality and Related Concepts

Prior to an exploration into moral injury, it is necessary to provide explanations for the many prerequisite and adjacent terms to moral injury. The morality literature is an apparatus of terms that are used to represent various definitions and usages of morality. The concept of morality is of dramatic historical significance. Many ancient epics, religious texts, and philosophical theories are built upon accepted moral norms, some that are reduced to the relevance of their specific times or geographic bounds, and others that have maintained a perpetual impact on the foundations of modern society. Dr. Johnathan Haidt (2008) provided the following cross-disciplinary definition of morality: “Moral systems are interlocking sets of values, practices, institutions, and evolved psychological mechanisms that work together to suppress or regulate selfishness and make social life possible” (p. 70). From this definition, it can be assumed that morality is an ongoing reflection of society’s agreed upon norms that

promote social cohesion. The dimensions of morality; however, are not as simple as this definition. Within each of us there is a moral conscience developed to internally regulate personal choices and actions to ensure adherence to rules delineated by moral systems (Kochanska & Aksan, 2006). Thus, morality is a concept that can encompass societal, personal, and inter-personal judgments and can guide decision making.

Another concept that is essential to the understanding of moral injury is moral emotions. Haidt (2003) defines moral emotions as “those emotions that are linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent” (p. 853). Through this definition, moral emotions can be seen as those that arise out of internal judgments, both positive and negative, over the morality of one’s actions. There are certain “families” of emotions that are associated with negative moral emotions, or those that would occur as a result of some violation of one’s moral standards (Tangney et al., 2007; Haidt, 2003). Negative moral emotions that are directed at oneself include guilt, shame, embarrassment, contempt, anger, and disgust. Positive moral emotions include compassion, gratitude, pride, and elevation (Tangney et al., 2007; Haidt, 2003). Moral emotions are directly related to the concept of moral injury in ways that will be explicated further on.

The final concept that requires elaboration and is strongly related to moral injury is moral distress. Moral distress suffers from a wide variety of definitions, often used to highlight particular antecedents of moral distress or occupations of those who feel moral distress (Deschenes et al., 2020). The term was originally defined by Jameton (1984); however, a highly adopted expansion of this definition is provided by Corely et al. (2001). Moral distress can be defined as the psychological distress that occurs as a result of recognizing the morally correct action in a situation, yet being prevented from taking it, whether by institutional, time, or legal

restraints (Corely et al., 2001). Moral distress is considered to be a related, but not synonymous term to moral injury. Some have theorized moral distress to be a precursor to moral injury, with different antecedents and especially persistent and severe consequences in moral injury (Litz & Kerig, 2019; Lentz et al., 2021). Litz and Kerig make a distinction between moral distress and moral injury by highlighting the moral emotions associated with each concept. Moral distress is thought to be less severe and characterized by feelings of guilt, while moral injury is more severe and characterized by shame and negative self-perceptions (Litz & Kerig, 2019). In addition to this, some have connected moral distress and moral injury together under the umbrella term “moral suffering”.

Regardless of the specific conditions of every action, our actions very often do not reflect our moral standards. On some occasions carrying out actions that violate our moral standards can create long-term negative consequences, resulting in moral injury.

Moral Injury

Moral injury is a complex concept that has garnered ongoing debates in the literature. While a single agreed upon definition is one such point of debate, for the purposes of this research the definition is from the seminal work by Litz (2009) who offered the working definition of moral injury: “the lasting psychological, biological, spiritual, behavioral, and social impact of perpetrating, failing to prevent, or bearing witness to acts that transgress deeply held moral beliefs and expectations, that is, moral injury” (p. 400). Moral injury is often described as arising out of high-stakes situations, most often situations that involve internal conflict-inducing violence (Shay, 1994). Examples of such situations in military populations include within-rank betrayal or violence, injuring or killing civilians, and the inability to prevent death or injury (Drescher et al., 2011; Vargas et al., 2013; Farnsworth et al., 2014).

Despite the dissensus in definitions of moral injury, it is generally accepted to be an intense, identity-based psychological wound, that is caused by high-stakes transgressive or morally injurious events (Litz & Kerig, 2019; Nash, 2019). Such events can be self-inflicted or inflicted on them by others. There are three potential forms of morally injurious acts: acts of commission (e.g., killing), acts of omission (e.g., failing to prevent or stop someone from killing), or acts of betrayal (Bonson et al., 2023). As a concept, moral injury is characterized by intense moral emotions, or feelings of shame, guilt, meaninglessness, and despair. While both emotions are intense negative self-appraisals, there are important differences between shame and guilt. Guilt is typically related to an individual's actions, and it is accompanied by severely negative perceptions of said actions. Alternatively, shame is characterized by attempts to socially isolate and negative self-perceptions, but it does not need to arise out of one's own actions (Dorahy, 2010; Lloyd et al., 2021). The other purported potential collateral outcomes of moral learning are self-harming behaviors, self-handicapping behaviors, and demoralization (Litz et al., 2009). Examples of self-harming behaviors include alcohol abuse, reckless behavior, and social isolation. Self-handicapping behaviors include the denial of positive feelings or life events.

Demoralization is described as an extreme loss of meaning and hope (Litz et al., 2009). Although the theoretical and empirical exploration into moral injury and suffering is fairly novel, researchers observed the concept in many ancient religious and mythological texts (McDonald, 2017). Litz and Kerig (2019) describe the challenge faced by moral injury researchers as the concept of moral transgressions has historically fallen under religious, sociological, anthropological, philosophical, and social-psychological consideration. The burgeoning research on moral injury has expanded well past its combat-related origins.

Moral Injury and Policing

Moral injury and moral injurious incident exposure are now beginning to be measured in many civilian populations such as journalists, refugees, and social workers (Feinstein et al., 2018; Nickerson et al., 2015; Hoffman et al., 2018; Mooren et al., 2022). Measurement of moral injury is also emerging in first responder populations (police officers, healthcare workers, firefighters). As a concept, moral injury is extremely in line with the forms of trauma exposure that police officers are subjected to in their daily responsibilities. An interesting example of moral distress which, as noted earlier, is theorized to be a precursor to moral injury, can be found in Coghlan (2011, p. 51). The author describes the toll that undercover work can take on individual police officers. These officers are tasked with dangerous work that would likely force them to partake in actions that they would consider to be morally wrong. The conflict of the roles of the individual could cause significant moral disequilibrium in that individual. Should the disequilibrium contribute to a damaged sense of identity, enduring feelings of shame and guilt, and other potential collateral harms to the individual, the position could result in moral injury (Litz et al., 2009).

Compassion Fatigue and Related Concepts

Similar to moral injury, compassion fatigue has a rather complex etymological background as well as a number of essential related concepts. Figley & Ludick (2017) use the Webster's Encyclopedic Unabridged Dictionary of the English Language (1989) to present a definition of compassion: the "feeling of deep sympathy and sorrow for another who is stricken by suffering or misfortune, accompanied by a strong desire to alleviate the pain or remove its cause" (p. 229, as cited in Figley & Ludick, 2017). Historical examinations of compassion have existed largely in religious contexts and in evolutionary psychology. After reviewing the

literature on the concept, Gilbert (2015) put forward two dimensions of compassion: (i) the intentional interacting and engaging with others who are in pain; and (ii) the intention to gain the knowledge required to actually alleviate that pain and the act of alleviation.

Secondary traumatic stress is a term that preceded compassion fatigue. The term was coined by Figley & McCubbin (1982). In their book, *Catastrophes: an overview of family reactions*, they compare the phenomenon to couvade syndrome, when expecting fathers experience the pregnancy-related pains of their partners. They wrote about the importance of the family system to someone who has been a victim of a traumatic event (“catastrophic event”). In describing the potential harms that family members can amass from caring for victims, they wrote “we too become ‘victims’ because of our emotional connection with our victimized family member” (p. 2). Compassion fatigue, as described by Figley (2002), was originally used as a surrogate term for secondary traumatic stress but was chosen to alleviate the harmful stigma associated with a trauma diagnosis (p. 3). Some researchers have used the terms synonymously (Figley, 2002; Jenkins & Baird, 2002; Maytum et al., 2004) while others have argued that the terms represent distinct, if largely related, concepts. Vicarious traumatization is another term that is considered to be related to compassion fatigue. The concept of vicarious traumatization was proposed by McCann & Pearlman (1990) who posited that the various psychological harms that are associated with PTSD (cognitive and memory schemas) are also associated with a therapist’s exposure to the trauma of a client.

Finally, burnout is a concept that developed alongside compassion fatigue. Burnout is defined as a “prolonged response to chronic emotional and interpersonal stressors on the job” (Maslach et al., 2001). It was coined by Dr. Herbert Freudenberger in 1974 as a label for occupation-based stress. The term is derived from a metaphor for the extinguishing of a flame.

The metaphor is meant to represent employees' emotional exhaustion and inability to effectively complete the tasks required of them (Schaufeli et al., 2009). The three dimensions of burnout are exhaustion, cynicism and job detachment, and ineffectiveness (Maslach and Leiter, 2016). These dimensions were identified in the first theoretical conceptualization of burnout by Maslach & Jackson (1981). Burnout is a related concept to compassion fatigue. They share many antecedents; however, as Henson (2020) recognizes, the concepts have distinct defining attributes. The measurement tool of the current study, the Professional Quality of Life Scale Version 5 (ProQOL 5; Stamm, 2010), includes burnout as a related concept to compassion fatigue.

Compassion Fatigue and Satisfaction

In addition to the routine exposure to traumatic and potentially morally injurious incidents, the police are regularly charged with protecting and interacting with crime victims. This can place the police in a position of receiving direct or adjacent exposure to the traumatization of others, which may contribute to a risk of developing psychological difficulties for the police themselves (Figley, 1995). Accompanying the career of a police officer is the anticipation of traumatic experiences. However, compassion fatigue is a far lesser-known trauma response. The terms compassion fatigue, secondary traumatic stress, and vicarious trauma have been used to describe the various psychological consequences of working with trauma victims. The term compassion fatigue was coined by Joinson (1992) in her work on burnout in ER nurses. Joinson used the term in a way that was theoretically interchangeable with burnout, although she asserted that it was a variant of burnout that was specific to "caregiving professions" (Joinson, 1992, p. 116). The term was picked up by Figley (1995; 2002), whose

seminal works initiated scientific exploration into the concept and its consequences. Figley (1995) offered the following definition for what was then called secondary traumatic stress:

[T]he natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person (p. 7).

Interactions with victims are not the only opportunities for police officers to come into contact with people in crisis. Police officers are responsible for innumerable societal responsibilities. With the relative lack of community-based services for public health issues in the United States, police officers have been described as “streetcorner psychiatrists” (Teplin & Pruett., 1992). Mental health-related encounters have recently become of increased media and academic attention. Providing aid to those in need of mental and emotional help can create potential for developing compassion fatigue for police officers.

Compassion satisfaction, as proposed by Stamm (2002), is believed to be a potential preventative factor for compassion fatigue. The concept was introduced in Figley’s (2002) expansion on the original model of compassion fatigue as a sense of achievement which is derived from helping others and was proposed to decrease or prevent compassion fatigue. Exposure to others’ trauma may present a risk for a helper of developing compassion fatigue; however, not all who are exposed to other’s trauma develop compassion fatigue. As the author describes, the positive feelings associated with helping others may protect individuals from compassion fatigue. Compassion satisfaction is a strong internal satisfaction from being able to help others, even in emotionally taxing and difficult situations. There is strong evidence of an existing negative correlation between compassion satisfaction and compassion fatigue in multiple populations (Zhang et al., 2018).

Compassion Fatigue and Satisfaction in Policing

Since the original use of the term, research on the topic has proliferated, penetrating many caregiving fields. Policing can be considered a “caregiving profession.” Many police officers have described the opportunity to help others as a key motivation for entering into the profession (Raganella & White, 2004; White et al., 2010). It would be unrealistic to expect individuals who work in psychically laborious careers such as construction and agriculture to never experience physical repercussions of the job. Similarly, it is unrealistic to believe that police officers should not feel emotional repercussions from their work. For officers who enter into policing specifically to help people, the constant exposure to the traumatization of others. (which is often unresolvable by officers themselves) may present a significant stressor.

Working with traumatized individuals is not sufficient for developing compassion fatigue. Many people enter caregiving professions because they have a desire to help people. When police officers' compassion is not overwhelmed to the point of fatigue, policing places officers in a unique position to offer assistance to traumatized individuals. Police officers can develop compassion satisfaction by assisting a victim, supporting victims' families, or even by arresting an individual they knew to be dangerous to others. Just as there is opportunity for compassion fatigue in the interactions between the police and the public, there is also opportunity for police officers to feel satisfaction at the good they are able to enact.

Moral Decision Making in Policing

Much of police work involves addressing situations that could be considered noncriminal behavior (Cordner, 1979). Quite often, non-criminal situations lack specifically delineated policies and courses of action for police officers. This leaves a large portion of police work open to discretionary action. Morality is no doubt often involved in deciding a course of action in

ambiguous situations that police officers are faced with. As agents of the law, the police are expected to harbor strong personal and organizational moral codes and face significant backlash for perceived moral shortcomings. Adherence to organizational rules may occasionally present a moral conflict for police officers. Decisions such as when to use physical force to apprehend a suspect may cause moral strain for police officers. In this case, an officer's moral code may be to prevent harm to a suspect, but the suspect may go on to injure innocent civilians. Either outcome could perhaps cause long-term guilt or shame within an officer. To mitigate potential criticism for discretionary action, ethics training is often a training requirement of police agencies to guide on-the-job moral decision making (Wyatt-Nichol & Franks, 2009). Moralism in policing serves as a mechanism inherent in policing actions and as a discourse intended to justify or explain the purpose of difficult actions. On both general and individual levels, policing is an inherently moral enterprise.

The moral dilemmas of policing do not exist exclusively in the police-community relationship but can often come on organizational and even societal levels. The core of law generation, political processes, and law enforcement facilities is inherently moral, as laws are inextricably influenced by moral norms. The use of moral messaging to justify police action has been hypothesized to be an adaptive response to the complex and contradictory goals of policing (Herbert, 1996). By design, police discretion and autonomy create situations that could be considered morally ambiguous. The question is how to mitigate the anxiety and prudence. Officers are often expected to both be a deciding authority in situations with no clear morally correct course of action, and to make said decisions quickly and fairly. Ethical decision making can be extremely precarious because of the unique position of police in society. Complex issues of individual and social importance that represent political shortcomings often fall into the

jurisdiction of the police. The end result leaves the police responsible for the overlapping social roles of law enforcement, order maintenance, and social peacekeeping (Kleinig, 1993), the combination of which has no clear operational course of action. Tim Newburn introduces his Handbook of Policing by stating that public and industry trust in the police to adequately juggle their different societal responsibilities is waning. It is now assumed that “police and policing cannot deliver on the great expectations now placed upon them in terms of crime control.” (Reiner, 2000, p. 217, as cited in Newburn, 2011).

Police Stress and Stress Responses

As mentioned above, there is a spectrum of stressors that police officers experience daily and over the course of their careers. The traumatic experiences of police officers often go far beyond the experiences of members of the general public. The research on elevated stressors in policing generally focuses on either organizational (e.g., high workload, unsupportive supervisors, high emotional demand of the job, etc.) or operational factors (e.g., having to fire a weapon) (Shane, 2010; Webster, 2014). The earliest acknowledgment of the career of policing being one that requires mental and emotional health came in the form of psychological testing prior to hiring. Within the literature on the psychology of law enforcement, Terman et al. (1917) conducted the first published pre-hiring psychological test of police officers and firefighters. The focus of their test, the Stanford-Binet intelligence test, was to capture officer’s IQ scores and they used their study to demonstrate the validity of using psychological testing to determine if officers were fit for their positions (Terman et al., 1917; Marques & Paulino, 2021). From here, the focus of “police psychology” studies remained largely in the examination of cognitive fitness for the role of a police officer, and not in specific stressors of policing, prevalence of mental illness, or treatment for evident illnesses (Marques & Paulino, 2021). The first full-time police

department psychologist was Dr. Martin Reiser in 1968, and he published his first book outlining the features of the role and the psychological criteria used to hire police officers in 1972 (Reiser, 1972). With Reiser and many other interested researchers, the focus of psychological research in policing shifts from screening efforts to understanding the psychology of the position (Stratton, 1980; Reiser & Geiger, 1984). Kroes et al. (1974) conducted one of the earliest explorations into police stressors in about 100 Ohio patrol officers. They found that the areas of stress the officers indicated to be most harmful would be considered organizational stressors: poor administrative support, work scheduling, faulty equipment, etc. (Kroes et al., 1974). These stressors have been found to be timelessly impactful to police professional quality of life. Violanti et al. (2017) wrote that, despite the fact that operational stresses are at the forefront of research attention, it is often organizational stressors that police contend with daily and may be more significant for that reason. The research of police stressors in general took full form roughly four decades ago and has expanded ceaselessly.

Psychological stress is innately connected to physiological stress. Police work encourages the cumulative acquisition of stress. Once an officer is finished with a difficult call, the job requires immediate recovery and a capable response to another call. In policing, the research on psychological stress outcomes has found that officers have elevated (above resting) heart rates before, during, and after their shifts, even during mundane policing tasks such as completing paperwork (Anderson et al., 2002; Baldwin et al., 2019; Di Nota et al., 2024). This consistently high-stress state has been supported in qualitative research, in which officers have acknowledged the potential repercussions to job efficacy caused by cyclical call responses and consistent high stress (Jetelina et al., 2020). These studies have contributed to a more sophisticated understanding of poor-health patterns that have been observed in police officers for

decades. This includes an increased prevalence and risk of cardiovascular disease (Ramey et al., 2009; Hartley et al., 2011), poor sleep quality (especially when studying shift work; Ramey et al., 2012; Garbarino et al., 2019), and alcohol misuse (Davey et al., 2001; Ballenger et al., 2010; Ménard & Arter, 2013). There is early evidence to suggest that male police officers may have lower life expectancy than males in the general U.S. population, which has been speculated to be a stress-related health outcome (Violanti et al., 2013).

The Police Culture

Policing has a highly penetrative and influential culture. The culture is born out of socialization. The process of moving through the police academy is believed to be the mechanism by which police officers are first exposed to the rules, attitudes, and values of police subculture (Van Maanen, 1975; Bennett, 1984). Police academies have been noted to observe para-militaristic tendencies of reinforcing group solidarity, emphasis on positional authority, and an “us versus them” mentality (Herbert, 1996; Chappell & Lanza-Kaduce, 2010). Police subculture, in and of itself, is an incredibly popular topic of research interest. The positive and negative aspects of police culture are combed out in the literature. Some consider an internal culture in policing useful to temper the physical and mental toll of such a dangerous profession and others consider police culture a dangerous remnant of more volatile eras of policing that serves as a barrier to police reform. Positive aspects of police subculture include group support, honor, and personal responsibility (Paoline, 2003; Loftus, 2009; Gutschmidt & Vera, 2020). Among the negative aspects of police subculture are the proclivity toward hyper-masculinity, cynicism, social isolation, and emotional and political conservatism (Terpstra & Schaap, 2013; Silvestri, 2017).

Most pertinent to the current research questions is the discussion of police subculture as it relates to mental health. Historically, police culture has prevented the inclusion of mental health services in police departments (Waters & Ussery, 2007). Cultural influences have remained an impediment to officers who need mental health treatment. Officers may risk exacerbating mental health issues for fear of harming their careers. As this is the case, mental illness presents a threat to both officer quality of life and public safety because officers are systematically ignoring warning signs and treatment options due to stigma. Swathes of literature examine the noted intersection between police subculture and mental health stigma. Koch (2010), in a qualitative study, found impassivity or emotional hardening to be a hallmark, and partial result, of police subculture. As evidenced by the interviews in that study, police officers can find it particularly difficult to respond to completed suicides, but they often feel the need to keep this mental strain to themselves (Koch, 2010). Mental health stigma has been found to act as a barrier that may prevent help-seeking behaviors and suicidal ideation reporting (Carleton et al., 2018; Craddock & Telesco, 2021; Drew & Martin, 2021; Edwards & Kotera, 2021; Haugen et al., 2021). By acting as a barrier to treatment for police officers, police subculture can in fact be exasperating the negative effects of mental illness. Research has found that officers who meet the criteria for PTSD may hold more stigmatized views of mental illness than those who do not meet the criteria for PTSD (Soomro & Yanos, 2019).

Chapter II: Literature Review

Moral Injury Literature Review

This section of the paper evidences the view that was earlier posited; that the concepts of moral injury and compassion fatigue, and any associations that exist therein, are understudied in policing populations. The review quickly identified that the conceptual and evidentiary bases of both concepts have limitations. What evidence exists on the association between moral injury and compassion fatigue displays mixed results. The review further discusses the extant literature on compassion satisfaction and burnout in policing.

Moral Injury Research

Moral injury has undergone idiosyncratic definitional transitions, and the literature on the topic suffers from a lack of any single, consistent definition of the concept (Hodgson & Carey, 2017). Some researchers have argued that symptoms should take a prominent place in definitions of moral injury (Drescher et al., 2011; Jinkerson, 2016). Much of the controversy is derived from the array of symptoms that can occur because of moral injury, and consequent question of which symptoms to include in a definition. In addition to this, researchers generally agree that moral injury is a form of trauma that requires treatment. This has led to an ongoing rush of specific definitions and theoretical models that are meant to aid in diagnosis (Litz et al., 2009; Jinkerson, 2016). The term was first coined in Jonathan Shay's (1994) book, *Achilles in Vietnam: Combat trauma and the undoing of character*. Shay, a military psychiatrist, explored a particular psychological trauma in Vietnam veterans that was distinct from the conditions for PTSD at the time. Shay established the essentiality of moral injury to long-term psychological issues in military veterans: "Veterans can usually recover from horror, fear, grief once they return to civilian life, so long as 'what's right' has not also been violated" (1994, p. 20). Shay's

presentation of his findings was in the form of a narrative comparison of the psychological experiences reported by the Vietnam veterans to those written in Homer's Iliad. While Shay did not provide an outright description of what conditions there were for the term moral injury in Achilles in Vietnam, in a later work he would define it as a betrayal of "what's right" by a legitimate person or organization of authority in high-stakes situations (Shay, 2014, p. 183).

Shay's definition of moral injury included only situations that involve betrayal by a person of authority, specifically a commanding officer in the military. This older definition of moral injury rested on the assumption that soldiers viewed their commanders' moral codes to be in line with their own, only to come to find that this was untrue. Shay's work would prove to be incredibly influential and generative, informing the majority of the research on moral harms from the past two decades.

The concept was expanded upon in the seminal work by Litz et al. (2009). In their article titled *Moral Injury and Moral Repair in War Veterans*, they expanded the scope of moral injury to include the personal commission of moral violations, as well as those committed by others, and initiated widespread research interest in moral injury. Another recent definitional expansion comes from the work by Jinkerson (2016). Jinkerson, in the spirit of furthering the concept of moral injury as a syndrome, offered a diagnostic definition:

[A] particular trauma syndrome including psychological, existential, behavioral, and interpersonal issues that emerge following perceived violations of deep moral beliefs by oneself or trusted individuals (i.e., morally injurious experiences) (2016, p. 126). Jinkerson went on to name guilt; shame; spiritual or existential conflict including loss of meaning; and loss of trust (in self and others) as the symptoms that are most essential to the definitional development of moral injury (2016, p.126).

Contributing to the lack of clarity in presenting a single, expansive definition of moral injury, the literature has frequently equated definitions of potentially morally injurious events (PMIES) with moral injury. This critique is explored by Litz and Kerig (2019), who emphasize the importance of making a distinction between the events and the subsequent injury. This distinction is especially important when considering that there are many unknowns in the consideration of why some are able to experience PMIES without suffering from moral injury (Litz & Kerig, 2019). Litz's (2009) definitional and theoretical contributions incited myriad pieces of literature and were foundational to the development of the moral injury literature.

Aside from the varying definitions present in the literature, there are many positive features of the moral injury research. The moral injury literature spans almost thirty years, beginning with Shay's original use of the term, and is consistently drawing attention from a variety of researchers and populations. Interest in this topic has inspired studies employing quantitative, qualitative, and mixed methods designs. The research is still undergoing evolutionary processes and much of the current research concentrates on exploring the concept (Litz et al., 2019). Studies have explored the causes, symptoms, and potential interventions for moral injury. As the discourse around moral injury places its roots in military populations, the majority of the empirical examination into the topic remains in such populations. However, the COVID-19 pandemic has brought attention to other populations who may be experiencing moral injury. Griffin et al. (2023) identified 200 articles on moral injury in healthcare workers that were published since the start of the pandemic. During the pandemic, healthcare professionals experienced staffing and resource shortages which, coupled with the extreme loss of life, created extremely fertile ground for the development of moral injury (Koenig et al., 2021).

The potential outcomes of moral injury are well documented. There is a dearth of research that suggests that PMIE exposure and moral injury are associated with negative mental health outcomes such as depression, anxiety, social isolation, suicidal ideation, and PTSD (Bryan et al., 2018; Currier et al., 2019; Hall et al., 2022; Levi-Belz et al., 2022). Moral injury is purported, through intense psychological guilt and shame-related harms, to indirectly contribute to self-injurious behaviors, drug abuse, demoralization, and other collateral mental health effects (Litz et al., 2009; Frankfurt & Frazier, 2017). The connection between moral injury and negative health outcomes has tentatively been suggested to be non-variant on demographic or occupational lines (Williamson et al., 2018); however, more research is needed to determine if this is correct. Moral injury can be especially harmful when co-occurring with other psychological disorders. Bryan et al. (2018) found that the co-occurrence of moral injury and PTSD significantly predicted suicidal ideation in National Guard personnel. However, a significant limitation of the moral injury literature is a lack of longitudinal studies of moral injury. This creates issues with establishing causality between moral injury and its many purported outcomes. As this is the case, it is impossible to say with certainty which outcomes are related to moral injury, PMIE exposure, other unidentified spurious variables, or any combination of these concepts.

Griffin and colleagues, in a highly influential review of the moral injury literature, concluded that the literature has dispersed many threats to internal and external validity, namely the lack of conceptual consistency, replete measurement issues, and small sample sizes (Griffin et al., 2019, p. 355). Frankfurt and Frazier (2016) also discussed measurement limitations of the existing moral injury research. The authors stated that most of the literature and well-used measurement tools make the mistake of confounding the concepts of a morally injurious act

(PMIE), and the outcome of the act (moral injury), which may lead to confused interpretations of study outcomes. For these reasons, the complete conceptualization of moral injury may not be adequately captured in most existing measurement tools, and the prevalence of moral injury is difficult to conclude with certainty.

Moral Injury Theoretical and Conceptual Basis

There is a great amount of dissension in the literature about the theoretical and conceptual underpinnings of moral injury. Researchers disagree over whether the concept of moral injury is a syndrome, a disorder, or a natural response to difficult situations that is experienced by all of us (Farnsworth, 2019; Nash, 2019; Griffin et al., 2019). In the present, moral injury cannot be considered a theory, neither can it be considered a syndrome. Litz and Kerig (2019) caution against labeling moral injury as a clinical syndrome for a number of reasons. One reason is simply insufficient evidence. Litz and Kerig (2019) highlight the need for greater construct validity and boundary conditions prior to empirical inquiry into moral injury as a syndrome. The second reason given is considerable disagreement over whether moral injury should be labeled a syndrome. The authors specifically cite Farnsworth et al. (2017), who maintain that moral injury is not an abnormal phenomenon and is instead a natural response to moral transgressions. Moral injury also cannot be considered a theory. The primary reason to refrain from calling moral injury a theory is tension between moral injury researchers. The high level of definitional and conceptual inconsistency present in the moral injury literature severely limits the potential for valid theory construction. As Poole and Van de Ven state in their 1989 article, *Using Paradox to Build Management and Organization Theories*, “[a] good theory is, by definition, a limited and fairly precise picture. It does not attempt to cover everything and would fail to meet the parsimony criterion if it did” (p. 562). That being said, there have been several

consistent voices leading both the development of the literature and the proposition of models of moral injury. This section of the review will outline the conceptual model that serves as the guiding framework for this research.

The primary conceptual model used for this research is the first model of moral injury, proposed by (Litz et al., 2009). The model was created with the aim of inspiring focus and attention from researchers. The model, in concert with many models of moral injury to follow, posits that personal attributions are the most essential mechanism in the development of moral injury. The authors wrote that transgressive events that are incongruent with preexisting beliefs about the benevolence of the world, lead to severely negative attributions about the event, and about personal and global morality (Litz et al., 2009). Under this initial model, the consequences associated with both PTSD and moral injury (e.g., recalling negative events, mental distress, social isolation, drug abuse, etc.) occur as a result of being unable to accept the transgressive event and the perceived consequences to personal and global morality. Litz and colleagues wrote that these harmful behaviors are attempts to either resolve the event and associated attributional harms or avoid the event and harms. Importantly, Litz and colleagues explicitly state that while the diagnostic and treatment processes of other syndromes cannot appropriately capture the concept of moral injury, their conceptualization was not at that time intended to suggest that moral injury should be attached to current definitions of PTSD or an independent diagnosis (2009).

Litz and Kerig (2019) later introduced a continuum model of moral life experiences and their related outcomes. They describe moral frustrations, moral stress, and moral injury as parallel to the morally relevant events of moral challenges, moral stressors and morally injurious events. The continuum represents increasing severity of negative psychological, spiritual, and

social outcomes to these moral emotions and events. Moral frustrations and stress are considered to be normative responses to morally relevant events; however, each of these phenomena comes with the expectation of recovery. Moral injury, as the most severe moral harm, would contribute to extreme collateral harms and life-disrupting symptoms, with no immediate expectations of recovery without clinical assistance. Moral injury is associated with extreme damage to self-perceptions and appraisals of others. Individuals who experience moral frustration or moral stress do not internalize the experience and allow it to impact their own identity; however, individuals with moral injury do.

With respect to the current study, the conceptual framework of moral injury represents a notable limitation. All of the current constructs of moral injury were created for military populations. As the founding literature of moral injury is based on purely militant experiences and evidence, the construct of moral injury has perhaps not been sufficiently developed to include all populations that may suffer from it. While the existence of moral injury in policing populations has been written about, speculated about, and studied exploratively, no theoretical or conceptual construct exists that specifically addresses this population.

Moral Injury and Law Enforcement

Empirical and theoretical explorations into moral injury and PMIES have historically been limited to military populations and war-related contexts (Griffin et al., 2019; Litz & Kerig., 2019). However, many researchers have predicted police officers to be vulnerable to moral injury (Komarovskaya et al., 2011; Papazoglou & Chopko, 2017). Moral injury causes, experiences, and outcomes are extremely understudied in populations other than military, including law enforcement and other first responders (Papazoglou & Chopko, 2017; Lentz et al., 2021). As the concept is only just beginning to receive research attention, it is still unknown if

there are boundaries in the concept's scope and the populations in which it can appear (Haight et al., 2016).

There is a research gap in determining the prevalence of moral injury or event PMIE exposure in law enforcement populations. What studies have materialized generally favor qualitative data collection methods. Papazoglou et al. (2019) conducted one study to examine both moral injury and compassion fatigue in a sample of Finnish national law enforcement officers. Papazoglou et al. (2019) used the Moral Injury Events Scale (MIES; Nash, 2013) to measure exposure to PMIES. They divided the scale into self-based and others-based questions and reported findings to match this measurement technique. The majority of the sample reported some level (others-based, self-based, and overall) of moderate morally injurious events exposure; 74% reported moderate overall moral injury events exposure (Papazoglou et al., 2019). Another 10% of the sample reported high levels of self-based moral injury events exposure and 25% reported high levels of others-based moral injury events exposure (Papazoglou et al., 2019). Papazoglou et al. (2019)'s sister study, Tuttle et al. (2019) also used the same data from a variety of Finnish national law enforcement agencies to examine both moral injury and compassion fatigue. In this literature review, these were the only studies to provide quantitative prevalence rates for moral injury within law enforcement populations.

Although there is limited knowledge of the potential ways that police officers can experience and process moral injury; qualitative research has begun to provide valuable insight into some possible pathways for moral injury development in this population. McCormack and Riley (2016) conducted semi-structured interviews of seven former police officers who were discharged with PTSD to get a better understanding of the life impacts of trauma exposure in

policing. The analysis yielded the primary theme of moral betrayal and four secondary themes of eroded identity, moral betrayal, confronting the silence, and learning to depend on me (McCormack and Riley, 2016). For the former officers, being discharged from their career represented a damaging betrayal by the organization that they had integrated into their own lives and identities. One contribution of this study to the moral injury literature is in supporting the existence of organizational betrayal-based moral injury in policing agencies.

Another deviation from the quantitative literature is Burke's (2022) autoethnographic narration of the events that led to his own moral injury while policing in Chicago. As Burke explains, his deeply held moral and religious beliefs and personal sense of identity were injured when responding to shooting incidents, particularly those that involved death. Burke's experiences were those of identifying with gunshot victims as "one of God's children," experiencing organizational betrayal in the accusatory or insensitive responses of victims' family members and fellow police officers, and omission-based moral injury from feeling as though his responses and prevention attempts were unsuccessful. Burke's experiences are in line with omission and betrayal based moral injury based moral injury. Omission and betrayal based moral injuries have not been studied in isolation. The various outcomes of these specific forms of moral injury are not well known, further contributing to the knowledge gap for the applicability of moral injury in law enforcement populations. This piece of the literature is extremely informative and unique in the literature that acknowledges moral injury in policing experiences. The article provides a glimpse into the firsthand experiences of police officers with moral injury and potential pathways that this can take. Furthermore, the bulk of moral injury research, and the most influential of moral injury research, is written by psychologists and

psychiatrists (Shay, Litz, Nash, Farnsworth). The value of those with lived experiences leading research cannot be understated.

Potentially Morally Injurious Events (PMIES) and Transgressive Events

Although moral injury is a venerable human concept, the research into the distinct scenarios that contribute to moral injury is relatively limited. The exploration into the topic is in part damaged by the extreme subjectivity of morality, and accordingly, the subjectivity of the situations which would be morally injurious. While subjective morality has created difficulties in gaining complete knowledge of the mechanisms of the development of moral injury, it is thought to result from exposure to potentially morally injurious events (PMIES). Several studies have established an associative relationship between PMIE exposure and the purported outcomes and indicators of moral injury (Jinkerson & Battles, 2019). Experiencing PMIES is a necessary, but not sufficient condition for developing moral injury.

The prevalence of exposure to PMIES appears to vary by population. In military populations, PMIES exposure seems to be moderately common. Wisco et al. (2017) used a nationally representative sample of 1,484 U.S. military veterans to evaluate the associations between exposure to PMIES and subsequent mental health issues. The researchers found 25% of the sample experienced at least one transgressive act by others, 25% experienced at least one transgressive act that constituted a betrayal, and 10% experienced transgressive acts by themselves (Wisco et al., 2017). The researchers also made conclusions that those who were exposed to PMIES presented with greater risk of mental harms than those who were not exposed to PMIES. Maguen et al. (2020) analyzed a national sample of over 7,000 9/11 veterans to determine if there were gender differences in the prevalence of reported exposure to PMIES. The study found differences in experiences with PMIES, with female veterans being more likely to

report witnessing morally injurious acts and experiences betrayal by leadership than male veterans (Maguen et al., 2020). The study also found the functional impairment resulting from PMIE exposure to vary by type of PMIE (perpetration, witnessing, and betrayal) and gender. Aside from military contexts, there is much discussion about what constitutes a PMIE in civilian life. A recent scoping review of PMIE exposure for healthcare workers provided some insight into the types of situations that could cause moral injury in these populations. Riedel et al. (2022) examined nineteen studies to understand the unique impact of moral injury in healthcare workers, particularly in the face of the COVID-19 pandemic. They found PMIES to exist on interpersonal (e.g., restricting family visits and insufficient emotional support for patients and their families) and organizational levels (e.g., the unequal allocation of scarce resources and the risk of exposing one's family to infection) (Riedel et al., 2022).

PMIES were first examined in military settings, especially in situations that involved violence and undue injury or murder to people who do not deserve it (Drescher et al., 2011; Vargas et al., 2013; Farnsworth et al., 2014). However, PMIES are not limited to military or healthcare populations. The routes to PMIE exposure in police officers may be incredibly similar to those of military members. Routine witnessing of violence and death, threat of life, leadership-based betrayal, and mental health associated stigma are all traumatic conditions that are shared by the police and military members. Policing is an inherently moral task, and one in which recruits are often expected to have a strong sense of morality. In the police profession, there are many situations in which police may be exposed to moral injury. The study of specific police stressor situations often utilizes the term "critical incidents." Many of these incidents can most certainly be considered potentially morally injurious events (Violanti & Gehrke, 2004;

Ross, 2022). Exposure to such incidents is considered routine in the profession and a normal function of their day-to-day duties.

To demonstrate, it is estimated that police officers experience between 169 and 189 critical incidents throughout their careers (Weiss et al., 2010; Chopko et al., 2015). Examples of critical incidents that can be potentially morally injurious events are mistakenly taking actions that result in the serious injury or death of another officer, having loved ones threatened, being shot at, killing or injuring civilians, and working with abused children (Weiss et al., 2010; Chopko et al., 2015). Exposure to many critical incidents has been found to be associated with PTSD and PTSD symptoms in police work (Komarovskaya, 2011). As a process, PMIES are associated with the subsequent moral injury outcomes through moral conflict or distress. For an individual officer, a critical incident may force officers to experience events that come into conflict with their deeply held moral beliefs or views about their personal morality and the morality of the world (Litz et al., 2009). If the damaged views about personal and global identity persist and cause long-lasting guilt and shame in the officer, that individual would be experiencing moral injury.

An example of a PMIE in policing that would be considered a critical incident is responding to a completed suicide. Acting as the first responder to completed suicides has been found to cause moral emotions in police officers and require the use of various coping mechanisms to deal with these emotions. As Koch (2010) explains, suicides are events that can be especially difficult to reconcile for officers. This is because suicides deviate from the traditional expected role of a police officer: to intervene, to help, to provide an action or response. Police officers can feel particularly helpless when responding to a suicide because there is nothing that they can do to provide a resolution to themselves or the victim's families

(Koch, 2010). This is an example of omission-based potentially morally injurious event because it involves a death they failed to prevent or respond to in a satisfying way.

Moral Injury vs. PTSD

Moral injury is considered a unique form of traumatic exposure that is related to, but independent from, post-traumatic stress disorder (PTSD). Understanding the differences between moral injury and PTSD is essential to the concept development of moral injury. As mentioned above, Bryan et al. (2018) conducted a study on National Guard personnel and found moral injury to be present even in populations that did not have PTSD or depression. The distinction between moral injury and PTSD is illustrated through the experiences of Marine Corps Infantry Captain, Tyler Boudreau (2011). Captain Boudreau described his experiences from during his time in the Iraq War. He says that he experienced a unique form of pain that surfaced during many benign and non-benign situations. When he returned home, he was diagnosed with PTSD. However, Boudreau believes that his most intensive pain arose not out of moments where his own life was threatened, but out of moments where he caused pain or threat-of-life for others. Boudreau says,

[P]ost-traumatic stress just didn't seem to fit. So what could I call this pain? It felt a lot like guilt, so that's what I started calling it, but in the Diagnostic and Statistical Manual of Mental Disorders (DSM) under PTSD there is no mention of guilt, except for "survivor's guilt," which is about being alive while one's comrades are dead, not about harming others. There has been no official name for this type of guilt and that has struck me since getting out of the military as a significant gap in the discourse on war casualties (2011, p. 748).

Boudreau goes on to explain the psychological complexity of moral injuries. He offers examples of needless searches and forced hugs by military members on innocent people living in Iraq. Boudreau explains the value of moral injuries as a concept that is set apart from PTSD and the commission of war crimes. He ultimately encourages and stresses the importance of spreading awareness of moral injury and improving the assessment and treatment of it. Boudreau experienced moral disequilibrium between his own required actions and his moral code.

The literature has delineated that the elements of moral injury are not covered by the DSM criteria for a PTSD diagnosis (Drescher et al., 2011; Nash & Litz, 2013). In fact, a traumatic event is defined by the Diagnostic and Statistical Manual, 5th Edition (DSM-V) as direct or indirect exposure to death or threatened death, serious injury, or sexual violence (American Psychiatric Association, 2013). While moral injury may arise out of a life-threatening situation, it may also arise out of situations not involving violence. This is the chief differentiation suggested by the literature. Apropos of this line of thought, PTSD is a fear- and victimization-based construct. Many moral injury researchers assert that moral injury is not. Although the exact contours of the connection between PTSD and moral injury are unknown, research has found strong, consistently positive associations between the constructs (Hall et al., 2021). Moral injury and PTSD undoubtedly overlap in presenting symptoms and outcomes (Shay, 2014; Drescher et al., 2011; Jinkerson, 2016; Barnes et al., 2019; Litz & Kerig, 2019). While PTSD and moral injury may be co-occurring, they may also be independently experienced. Norman et al. (2022) analyzed data from a nationally representative sample of U.S. veterans and found that moral injury was prevalent, even in populations that did not have PTSD or depression. As the authors suggested, this finding supports the notion that moral injury can be experienced alongside PTSD, but it is not always (Norman et al., 2022).

Few studies have examined the biological dissociations between moral injury and PTSD. However, what research exists seems to provide support for the theoretical distinctions between the two concepts (Barnes et al., 2019; Sun et al., 2019; Lloyd et al., 2021). Two of these studies used uncontrolled functional magnetic resonance imaging to examine if neurological presentations of moral injury were independent from those of PTSD (Sun et al., 2019; Lloyd et al., 2021). Lloyd et al. (2021) examined the strength of the differential association in different population groups (military veterans, public safety personnel, and civilians). All three studies found neurological dissociations between compassion fatigue and PTSD; however, further studies are needed to completely understand the neurological differences that exist here.

Compassion Fatigue and Compassion Satisfaction Literature Review

The compassion fatigue and satisfaction literature have several noteworthy characteristics. Firstly, and as previously mentioned, compassion fatigue is often used interchangeably with the terms vicarious trauma, secondary traumatic stress, and caregiver stress. This presents a complication in the consolidation and presentation of the literature, as it was developed in an incredibly disordered manner. The original adoption of the term compassion fatigue as a “user-friendly” synonym for secondary traumatic stress has created a notable lack of clarity in the literature because burnout, secondary traumatic stress, and compassion fatigue continue to be used similarly (Sorenson et al., 2016). To make matters worse, the use of the term “compassion fatigue” to avoid stigmatizing language has created controversy among scholars. Some believe that the inclusion of the word “compassion” requires more theoretical elaboration on the concept of compassion, as opposed to Figley’s focus on empathy. Ledoux (2015) has argued that compassion needs to be “raised from an iconic status to a real and measurable attribute” (p. 2042), in order to completely understand how compassion can potentially be

harmed in person-focused careers. A second feature of the general literature on compassion fatigue and satisfaction is that it is dominated by cross-sectional, quantitative study designs.

Regardless of the term associated with the concept, research on the phenomenon has grown exponentially during the last three decades and it is widely accepted as a legitimate psychological phenomenon in many occupational domains. The compassion fatigue and satisfaction literature is largely monopolized by the healthcare field, leading to the recent publication of multiple literature reviews for specific and general healthcare populations (Sorenson et al., 2016; Sinclair et al., 2017; Cavanaugh et al., 2020; Lluch et al., 2022; Garnett et al., 2023). As a matter of general consensus, the concept of compassion fatigue is well established in healthcare populations. It has been measured in conjunction with burnout, to study the effects of staffing shortages, overwhelmed healthcare facilities, and high workloads resulting from COVID-19. Compassion fatigue has been found to be present or prevalent in many practitioner groups, including nurses in oncology (Ortega-Campos et al., 2019), pediatrics (Forsyth et al., 2022), critical care (Alharbi et al., 2019), and many other unit specializations. Other populations who are believed to be at risk of compassion fatigue include teachers (Fute et al., 2022; Ormiston et al., 2022), journalists and reporters (Dworznic, 2018), and lawyers (Norton et al., 2016). While compassion fatigue and satisfaction studies are beginning to branch out into other occupations such as emergency and community service members, the research is still too sparse to draw any confident conclusions about prevalence and patterns.

Compassion Fatigue and Law Enforcement

Violanti and Gehrke (2004) were the first to contextualize compassion fatigue within law enforcement populations. Their seminal work pioneered the first adjustment to the Compassion Stress and Fatigue Model to specifically fit law enforcement populations. Police officers are

uniquely vulnerable to experiencing compassion fatigue due to high incidence of exposure to other's trauma. Papazoglou et al. (2020) wrote that police officers are often required to empathize with and offer compassion to crime victims, causing them to emotionally disengage from the compassionate aspects of their work and contributing to a host of behavioral and mental impacts. Conn (2016), in a chapter dedicated to police officer stress, names compassion fatigue (secondary traumatic stress) as one of the three most prominent categories of officer stress. Conn hypothesized that compassion fatigue may be more impactful to officers' psychological health than PTSD, due to the lack of knowledge about it and support for officers who have it (Conn, 2016).

Compassion fatigue/secondary traumatic stress researchers have recently scored a major win with the expansion of the criterion for PTSD in the DSM-5. Criterion A4 for the diagnosis of PTSD deliberately includes work-related secondary traumatic stress. Moreover, the criterion specifically examples first responders and police officers: "Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse)" (American Psychiatric Association, 2013, p. 271). There are many unique opportunities for police officers to experience compassion fatigue due to the frequent exposure and working with traumatized individuals. Unfortunately, the literature is devoid of qualitative studies examining compassion fatigue in officers, leaving the concept largely conjectural and creating many unknowns for the current experiences of officers.

To date, there is a lack of research exploring the prevalence or consequences of compassion fatigue in general police populations (Andersen & Papazoglou, 2015; Cocker & Joss, 2016; Grant et al., 2019). However, there has been a moderate amount of recent

exploratory research on the topic (Violanti & Gehrke, 2004; Turgoose et al., 2017; Grant et al., 2019; Papazoglou et al., 2019; Tuttle et al., 2019; Burnett et al., 2020; Hicks, 2021; Ogińska-Bulik & Bąk, 2022; Davies et al., 2023). Of these studies, the evidence of compassion fatigue in police populations is mixed. Findings of compassion fatigue are typically presented in groupings of low, moderate, and high. The majority of the extant studies on compassion fatigue support the fact that most officers report low to moderate levels of compassion fatigue. Percentages of those who report high levels of compassion fatigue are usually very small. The prevalence of high levels of compassion fatigue/compassion fatigue symptoms in various police specialties and samples ranged from 3.9-21%. Prevalence of moderate levels of compassion fatigue ranged from 47.1-59%. Low levels of compassion fatigue ranged from 20-90% (Hicks, 2021; Papazoglou et al., 2019; Ogińska-Bulik & Bąk, 2022). Within-sample prevalence rates were not provided for several of the reviewed pieces of literature. In addition to this, awareness of compassion fatigue within the policing community is low, with many officers being unaware of compassion fatigue by name but recognizing the emotions that underlie it (Davies et al., 2023). A 2019 systematic review of compassion fatigue in first responders identified consistently low to moderate levels of compassion fatigue (Greinacher et al., 2019). However, the authors wrote that there may be widespread underestimation of the prevalence of compassion fatigue due to social desirability bias and fears of job loss, which are strong byproducts of police culture (Greinacher et al., 2019). There exists a moderate amount of research in police specializations for compassion fatigue/secondary traumatic stress. Officers in specialized units (e.g., special investigations units), may be more particularly vulnerable to experiencing compassion fatigue because they experience consistent exposure to similar types of victimization (e.g., sexual assault, child abuse, drug and gun crimes). A predisposing risk factor for compassion fatigue is

high exposure to the traumatization of others, particularly work-related consistent exposure (Hensel et al., 2015).

Compassion fatigue has been found in police officers who investigate child sexual abuse (Perez et al., 2010; Hurrell et al., 2018), domestic violence, (Cronje & Vilakazi, 2020), sexual abuse (Turgoose, 2015; Turgoose et al., 2017), and child abuse (Maceachern et al., 2011). Most demographic variables have not been found to impact police officers' reports of compassion fatigue, an exception may be years of work experience (Turgoose, 2015; Turgoose et al., 2017) which has been found to positively predict compassion fatigue likely due to increased exposure.

Conn & Butterfield (2013) used the Critical Incident Technique to examine the essential question of why some officers develop compassion fatigue and others do not. Their sample of 10 general duty officers presented evidence to suggest that police officers already employ an array of coping strategies to prevent or alleviate compassion fatigue. Examples include self-care activities, talking with coworkers, and having family support systems were unequivocally helpful for officers in coping with compassion fatigue (Conn & Butterfield, 2013). However, there were a number of factors that could either prevent or predispose an officer to compassion fatigue. Examples of these include the ability to help the victim, access to mental health resources, emotional engagement, and overall work environment (Conn & Butterfield, 2013). This research provides support for Figley's theory, which maintains that the working environment has the potential to create both compassion fatigue and compassion satisfaction.

What knowledge is available about compassion fatigue in law enforcement professions has for the most part been obtained using cross-sectional studies. Craun et al. (2014) provide a departure from this fact in a longitudinal study of Deputy United States Marshals who were mostly sex investigation officers. The researchers conducted this study to understand the

prevalence and potential movement of compassion fatigue. Combining all three waves of data collection, the percentage of officers who reported moderate to severe compassion fatigue was 26.9% (Craun et al., 2014). The experience of compassion fatigue was also found to be stable from one wave to the next, with little to no movement from one severity category to another. The authors discuss the importance of this finding as an indication that compassion fatigue can be tenacious and that those experiencing it should not expect the symptoms to improve without intervention (Craun et al., 2014).

Compassion Satisfaction and Law Enforcement

There have been many studies exploring the determinants of general job satisfaction in police officers. Compassion and emotional engagement with others (i.e., helping people) has been identified as one of many intrinsic factors that significantly contribute to the level of satisfaction police officers feel with their career choice (Paoline & Gao, 2020). When departments adopt themes of community policing, police officers tend to display higher reported job satisfaction (Pelfrey, 2007). This is especially true when officers support the basic tenets of community policing and “buy in” to community policing’s ideological basis (Crowl, 2017). This may indicate that opportunities to emotionally connect with and help the community that police officers interact with play a key role in improving officer job satisfaction. However, compassion satisfaction as a concept is rarely studied independently from other sources of job satisfaction. Compassion satisfaction is also rarely studied apart from compassion fatigue. Along with compassion fatigue, compassion satisfaction is relatively under-examined (Andersen & Papazoglou, 2015). There have been a few quantitative studies to examine compassion satisfaction as a conceptual antithesis to compassion fatigue. One of these studies noted

concerningly low levels of compassion satisfaction (Grant et al., 2019). Others have found moderate to high levels of compassion satisfaction (Brady, 2017; Davies et al., 2023). Further, Brady (2017) identified strong familial support, religious coping mechanisms, and organizational support to be significant predictors of compassion satisfaction in a sample of U.S.-based Internet Crimes Against Children (ICAC) Task Force personnel (p. 307).

Compassion Fatigue and Satisfaction Theoretical and Conceptual Basis

Explorations of the extant theoretical models of compassion fatigue have revealed a moderate amount of conflict among researchers on the nature, antecedents, and mechanisms of compassion fatigue (Sinclair et al., 2017). Despite several decades of exploratory research examining the prevalence and origins of compassion fatigue, the conceptualization of it is still incredibly nascent (Sprang et al., 2018). Even with the absence of theoretical and conceptual stability, empirical studies on the topic continue to expand to new professions and contexts. The conceptual model driving this research is the Compassion Stress and Fatigue Model, derived from the seminal works of Figley (1995; 2002). Figley developed his definition of compassion fatigue directly from secondary traumatic stress disorder. The author outlined secondary traumatic stress as a concept that produces parallel symptoms to PTSD, including but not limited to reexperiencing or recalling the traumatic event; avoidance or numbing of thoughts or situations; isolation from others; and persistent arousal in the form of difficulty sleeping, hypervigilance, and exaggerated startle reflexes (Figley, 1995, p. 8). Figley suggested the concept of compassion fatigue to be especially displayed in the therapist-patient and the nurse-patient relationships. Figley's model of compassion fatigue placed empathetic engagement with traumatized clients as the core of the phenomenon. The supposition of this model of compassion fatigue is that the phenomenon is derived not from a particularly traumatic incident, as with

PTSD, but from exposure to those who have been traumatized from the position of a caregiver or helper. This empathetic engagement comes as an absorption of the experiences and trauma reactions of the primarily traumatized individual by the caregiver (Figley, 1995; 2002). Figley's works were the driving force behind the vast interest in and development of compassion fatigue literature. However, several pieces of literature have presented criticisms of Figley's conceptualization of compassion fatigue. As has been noted by researchers since the publication of Figley's works, the articulation of empathy, compassion, and the various interactions of fatigue-inducing events was lacking (Sabo, 2011; Sinclair et al., 2017). These are issues that have permeated the literature, as most recent conceptualizations of compassion fatigue preserve and agree with the positive and negative outcomes and antecedents of compassion fatigue proposed by Figley (Coetzee & Laschinger, 2018).

Another conceptualization that is of paramount importance to this study is Dr. Beth Hudnall Stamm (2010)'s Model of Compassion Satisfaction and Compassion Fatigue. Stamm's model of compassion fatigue draws significantly from Figley's model and maintains that compassion fatigue arrives out of working and empathizing with traumatized individuals. Stamm proposes two outcomes of any trauma worker's professional quality of life: compassion fatigue and compassion satisfaction. Compassion fatigue, according to Stamm, comes about as a result of (1) exposure to secondary trauma, and (2) burnout.

As with the theoretical models for moral injury, a limitation of both Figley and Stamm's conceptualizations of compassion fatigue for the current study is that they were not explicitly developed to capture the specificities of the relationships between police officers and trauma victims. They also did not present any suppositions for how compassion fatigue might be developed in policing contexts.

Burnout Literature Review

Burnout, coined in the 1970s (Freudenberger, 1974), is a concept that has reached global recognition and has earned its place in the vernacular of many languages. Research indicates that burnout can be quite serious in people who have been diagnosed. In most people, symptoms of burnout subside with time and the removal of certain stressors; however, one longitudinal study of 232 burnout patients found that one-third of the sample still had symptoms of burnout after 18 months (Glise et al., 2012). Compared with a healthy control population, people with clinical and nonclinical burnout have been found to have significantly higher levels of exhaustion, higher cynicism, less personal efficacy, and more self-reported cognitive problems (Oosterholt et al., 2016). The concept of burnout is multidimensional. The core components of burnout are emotional exhaustion, cynicism, and job detachment (Maslach & Jackson, 1981), which have been observed and studied both individually and in combination in many occupational groups (Stufano et al., 2022). Burnout is generally believed to be derived from various job conditions, with personality-related secondary causal factors (Bianchi, 2018; Bianchi & Brisson, 2019). The major organizational antecedents of burnout, as proposed by Maslach et al., 2001 (p. 413) include: excessive workload; control over how you do your job; lack of a sufficient reward for doing your job; loss of a sense of community; unfairness or inequity in workload or pay; and job-related conflict in personal values.

Organizational stressors have been documented in police officers from the inception of the literature base (Kroes et al., 1974; Sandy & Devine, 1978; Cooper et al., 1982). In a law enforcement environment, organizational stressors may be seen as precursors or contributors to the development of burnout (Finney et al., 2013; Russell, 2014; Violanti et al., 2017). Regarding potential demographic differences within law enforcement, there is some evidence that suggests

that female officers (He et al., 2002; McCarty, 2013; Elliot, 2015) and officers with more years of experience (Burke, 1989; Hawkins, 2001) may experience more burnout. Potential protective factors that have been found in police populations include positional transition (Borritz et al., 2010), job satisfaction, organizational justice, and organizational identification (Correia et al., 2023). In terms of job-related outcomes, police officers experiencing burnout have been found to have more aggressivity (Queirós et al., 2013) and intention to leave the organization (Gomes et al., 2022). Some researchers have suggested that burnout may contribute to an array of counterproductive work behaviors in policing, including arriving to work late, leaving early, and deliberately performing poorly (Smoktunowicz et al., 2015).

Moral Injury and Compassion Fatigue Literature Review

Researchers of both concepts have identified the associations between compassion fatigue and moral injury. While some researchers have believed the two concepts to be equivalent, these researchers typically believe this to be so because of overlap in symptomology. This is not the case; however, as moral injury is not always directly derived from helping traumatized individuals (Sorenson et al., 2017). The exact contours of the interaction between these two concepts have not been presented in the literature. There is no conceptual or theoretical model that would hope to explain the potential connection between these two concepts. Both constructs are newly emerging, and their conceptual bases reflect expected growing pains. The present study does not venture to pose a direction or prediction for the potential association and there is not nearly enough empirical or theoretical evidence to do so.

Compassion fatigue is a trauma-related phenomenon. Moral injury is decidedly independent from PTSD as a concept; however, there can be no denying that moral injury is likely to occur in situations involving trauma. A review of healthcare literature on moral injury

and various trauma concepts (PTSD and secondary traumatic stress) found trauma exposure and secondary traumatic stress to be predictors of moral injury (Thibodeau et al., 2023). The scant evidence on the association between these moral injury and compassion fatigue suggests that there may be an association between the concepts. Moral injury exists now as an independent concept from PTSD and compassion fatigue. It does not strain the mind to imagine that morally injurious events could be primarily traumatic, secondarily traumatic, or both. Future researchers may hone the conceptualization of moral injury to describe it as a sub-form of PTSD or compassion fatigue. However, at the present, determining whether or not a correlation exists between the two concepts is a valuable first step in developing the extant empirical and conceptual bases for both concepts.

Mason et al. (2014) employed a non-experimental, mixed-methods study design on these concepts, as well as work engagement and burnout, in a sample of surgical intensive care unit trauma nurses. Despite no significant correlations established between the specific concepts of moral injury and compassion fatigue, the authors concluded that there was support for a theoretical relational association (Mason et al., 2014). Litam and Balkin (2021) also explored this relationship in a sample of 109 medical professionals (largely physicians and nurses). A multiple regression analysis found significant associations between the two concepts, with compassion fatigue accounting for the largest amount of variance in the model with a negative relationship to moral injury. Higher reports of compassion fatigue were associated with a strong likelihood of higher reports of moral injury (Litam and Balkin, 2021).

Christodoulou-Fella et al. (2017) also examined associations between secondary traumatic stress and moral distress using the Moral Distress Scale for Mental Health Services (M-MDS-MHS) and the Secondary Traumatic Stress Scale (STSS). From their analysis, they

found both secondary traumatic stress and moral distress to be associated with general mental distress symptoms measured using the General Health Questionnaire-28 (GHQ-28). The researchers controlled for job satisfaction, satisfaction from therapeutic relations, and emotional exhaustion and found that there was a significant positive correlation between the reported scores of secondary traumatic stress and moral distress. However, an essential finding of this study is that this correlation was found to be partially mediated by general symptoms of mental distress. Morris et al. (2022) also explored this relationship in mental healthcare populations in an attempt to determine if PMIE exposure had an impact on the overall wellbeing of healthcare providers. In a sample of 237 employees of a large mental health charity in the UK, the researchers found moral injury to be not only prevalent, but predictive of burnout, compassion fatigue, and compassion satisfaction. With moral injury accounting for 21.1% of the variance in the compassion fatigue subscale scores (Morris et al., 2022).

Few studies have made this connection in the context of policing, recognizing that the activities of the police and their unique societal position place this population at particular risk for each of these phenomenon (Papazoglou & Chopko, 2017; Papazoglou; 2018; Papazoglou et al., 2019; Tuttle et al., 2019). Papazoglou & Chopko (2017) was a conceptual work, dedicated to framing the topic within a policing population. Papazoglou et al. (2019) surveyed a sample of 390 members of the National Police of Finland, National Bureau of Investigation, Security Intelligence Service, and a policing college to answer two research questions that involved the variables of moral injury, compassion fatigue and satisfaction, the dark triad personality traits, and PTSD. There was no presentation of the employment demographics for the sample. This article had lofty aims and included a number of variables absent from the current study. The authors used structural equation modeling to analyze the predictive relationships of each of the

study variables. As mentioned above, the authors separated the variable of moral injury events exposure into “self-focused moral injury” and “others-focused moral injury.” The researchers found “self-focused moral injury” to significantly predict compassion fatigue; however, “others-focused moral injury” did not (Papazoglou et al., 2019).

Tuttle et al. (2019) also used a sample of 454 members of the National Police of Finland who had experienced critical incidents on the job. The aim of this study was to examine the impact of both moral injury and compassion fatigue on compassion satisfaction. The researchers used the Compassion Satisfaction and Fatigue Test (Figley & Stamm, 1996) and the Moral Injury Events Scale (MIES; Nash, 2013) to measure the three variables. They used multiple linear regression to perform a data analysis and found exposure to morally injurious events to predict (10% of variance) compassion satisfaction (Tuttle et al., 2019).

The current study deviates from this research question in the proposition that moral injury and compassion fatigue will be directly associated with each other, placing these concepts at the forefront of this research rather than compassion satisfaction. To the extent of present knowledge, this study is the first to consider the potential association between moral injury and compassion fatigue in police populations. The study is also among the first to explore the prevalence of both moral injury and compassion fatigue in police officers. That being said, the current study rests upon the theoretical and empirical contributions of these studies.

Chapter III: Data and Methods

Participants

The data used in this study were collected through surveys of patrol officers in a large city police department. The inclusion criteria for this study were as follows: active police officers of the Atlanta Police Department, who were assigned to the evening watch shift of the Field Operations Division (FOD). The Atlanta Police Department is the largest law enforcement agency in the State of Georgia and is authorized to employ 2,000 sworn officers. The Field Operations Division is organized by geographic area. The department divides its area of geographic coverage into six official zones or precincts, as well as the airport precinct and a special enforcement APEX unit. The department is the main policing agency for the city of Atlanta, which is home to almost 500,000 people. The Field Operations Division is the major patrolling force for the city of Atlanta and makes up the bulk of the department. At the time of the study, the FOD had daily deployments spread across three 8-hour shifts or “watches”: day watch, evening watch, and morning watch.

To provide some background on the area in which the department is situated, according to Georgia's Uniform Crime Report for 2021, the Fulton County index crime rate is 30.12 per 1000 people. In 2021, the county led the State in number of murders and aggravated assaults. According to 2013 data from the U.S. Department of Labor, the demographic makeup of the department's sworn officers is predominantly male (82%) and black/African American (58%) (Miller et al., 2016). In addition, while police agencies across the nation are experiencing a surge in negative public reception, the APD is independently facing strong criticism from both its own community and the national media. The construction of the city's new public safety training center, termed “cop city” by opponents, has exacerbated negative public relations between APD

and the communities it polices. Perceived media criticism and lack of public support are predictors of officer stress (Scott, 2004; El Sayed et al., 2019; Newiss et al., 2022; Eikenberry, et al., 2023). From a holistic perspective, the officers of APD are facing a number of potential job stressors that could make them vulnerable to moral injury, compassion fatigue, and burnout.

Recruitment focused on evening watch officers to allow for convenient and shift data collection. Participants were 75 active-duty law enforcement agents in the Field Operations Division at the Atlanta Police Department. The participants were selected in person at evening watch (2-3pm) roll calls by the study team. 94 surveys were distributed, and 75 officers agreed to participate, with a response rate of approximately 78%. Missing data put the final sample size at 74 sample subjects. The participants completed the study survey at the evening roll call sessions and immediately returned the completed survey to the study team. The participants were not offered any compensation and their participation in the study is presumably out of personal desire to contribute to the research. The sample was a convenience sample. Obtaining a sampling frame and drawing a random sample was beyond the scope of the current study.

Data Collection

The method of data collection was paper-based surveys, containing four demographic questions and two existing measurement tools from the literature (Moral Injury Events Scale and Professional Quality of Life Scale). The survey totaled 43 items. The Atlanta Police Department served as the sample for this study. Participants read and agreed to an informed consent statement and proceeded to complete the full survey in-person at the end of the roll call sessions. The completed surveys were immediately returned to the research team. The surveys were administered to the sample at eight different department locations of the APD. They were administered at evening roll call sessions. Roll call administration was chosen due to its frequent

yielding of high response rates (Nix et al., 2017). The research team was allowed to distribute and collect surveys at sporadic dates during December 2023 and February 2024. The surveys were voluntary and confidential, informed consent was provided on paper separate from the surveys. There was no time limit enforced for the surveys and confidentiality was described verbally and in writing. The surveys were completed independently; however, the officers were in the groups typical of a roll call. Prior to data collection, permission was obtained from the APD's Chief of Police, and the data collection dates were discussed with each precinct's commander and assistant commander. Support from the Chief and command staff of the APD was obtained with pre-established relationships between Georgia State University's Department of Criminal Justice and Criminology and the APD. The study was approved by the Georgia State University Institutional Review Board.

Measures

Moral Injury

The dependent variable, moral injury, was measured using a modified version of the Moral Injury Events Scale (MIES; Nash et al., 2013). The MIES (in Appendix D) was developed by Nash and colleagues (2013) to fill what was then a gap in the literature for a measure of exposure to morally injurious events. It is a self-report scale that consists of nine survey items. The scale contains three factors: transgressions by the self, transgressions by others, and betrayal (Nash et al., 2013; Bryan et al., 2016). It is intended to capture varying aspects of moral injury, including witnessing acts, perpetrating acts, feeling distress from acts, and perceived betrayals. The scale asks respondents to provide their agreement level for nine statements meant to capture experiencing of the three forms of moral injury. Response options are in Likert-form (ranging from 1= strongly disagree to 6= strongly agree), making it a ratio variable. The Moral Injury

Events Scale has been used extensively in the literature to measure exposure to morally injurious events in diverse populations. Select words were modified without changing the meanings of the statements, to better fit a law enforcement population. The scale was selected due to its ubiquity in the literature for varying populations. The Cronbach's alpha for the 9 survey items was .82.

Compassion Fatigue

The independent variable, compassion fatigue, was measured using the Professional Quality of Life Scale, version 5 (ProQOL 5; Stamm, 2010). The PROQOL 5 (in Appendix C) consists of three subscales designed to capture compassion fatigue, compassion satisfaction, and burnout. Each of the subscales includes ten items. The items are statements, for which there are Likert scale responses. It is designed to measure the frequency with which individuals have experienced symptoms of compassion fatigue, compassion satisfaction, and burnout in a 30-day period (ranging from 1 = never to 5 = very often). Compassion fatigue is also a ratio variable in the study. The exact wordings of several of the statements were changed, as designed by the creators, to fit the population of interest. For example, item three reads "I feel trapped by my job as a [helper]", where the word "helper" was replaced with "police officer." Cronbach's alphas for the 10 compassion fatigue items, 10 compassion satisfaction items, and 10 burnout items, were .82, .62, and .83, respectively. The creators also delineate summation scores that are considered to represent low, moderate, and high levels of compassion fatigue, compassion satisfaction, and burnout. The scale was chosen for its multidimensional measurement of the concept of compassion fatigue. Although many have critiqued the use of the scale for flaws in capturing the concept of compassion (Bride et al., 2007; Ledoux, 2015), like the MIES, the ProQOL scale was chosen due to its ubiquity in the literature (Sinclair et al., 2017). Thus, the scale offers a valuable, albeit imperfect insight into compassion fatigue for this study.

Compassion satisfaction and burnout are not primary focuses of examination for this study; however, due to the creators' assertion that these two concepts contribute to the dimensionality of compassion fatigue as a concept, they are included in the analysis.

Control Variables

The control variables of the study were sex, age, years of experience, and education level. Sex was measured nominally, with three categories for male, female, and other. Age was measured ordinally, with groupings of ages (20-29, 30-39, 40-49, 50+). Years of experience was also an ordinal variable and was also measured in groupings of years (less than one year, 1-5 years, 6-10 years, 11-20 years, and 20+ years). Education level was an ordinal variable, and it was measured with response options of: High school diploma/GED, Some college but no degree, Associate's degree, Bachelor's degree, and Graduate school. Ordinal and nominal variable operationalizations were chosen to ease the data analysis process and to decrease the amount of time required to complete the survey. Research indicates that moral development is impacted by a college-level education (Bročić & Miles, 2021), and that this interaction may impact psychological wellbeing (Hardy et al., 2012). Moral identity can also be impacted by an individual's age (Krettenauer et al., 2016), and sex (Winterich et al., 2009). Further, stress experience and response may be impacted by age, sex, education level, and years of experience in a job position. As this is the case, years of employment, education level, age, and sex were all included in the analysis. The study employed a limited number of control variables due to sample size and statistical power concerns.

Data Preparation and Analysis

The primary researcher used Microsoft Excel to manually enter and clean the raw data. The data was then transferred to RStudio for analyses and scoring. Data analysis was conducted

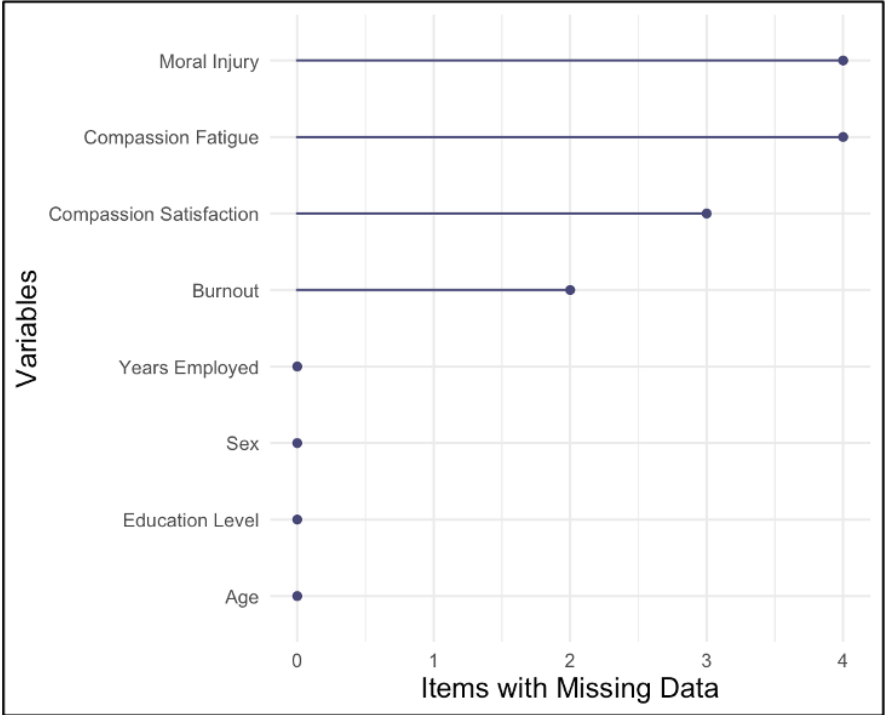
using RStudio (version 2023.12.0+369) and exploratory analyses were conducted to examine the association between moral injury event exposure and scores of compassion fatigue, and demographic variables. Mean scores and standard deviations for each scale were calculated. Data were missing from 11 of the 75 participants due to improper or incomplete filing of the surveys. A total of 12 surveys contained missing data. One survey was missing a substantial amount of data (17.5%) and was removed from analysis. The others were missing one to four responses.

With the removal of the single survey, there were only 13 items of missing data, representing roughly 2% of all survey items. Figure 1 presents a visualization of the number of items with missing data by variable. Total missing data for the study was less than 5%, which is believed to be largely inconsequential (Shafer, 1999). All of the study variables had at least one item with missing data. To further investigate the nature of the missing data, a Little's MCAR test was conducted. Rubin (1976) described patterns of missingness to be Missing Completely at Random

(MCAR), Missing at Random (MAR), or Not Missing at Random (NMAR). The data missingness pattern for the current study was determined to be MCAR, with Little's MCAR test producing an insignificant p-value of 0.54. In order to deal with missing data while maintaining essential statistical power, multiple imputation was chosen as the strategy to impute the missing data. MI deals with missing data by filling the missing items with multiple potential responses and pooling the results to produce a single estimate of the parameter (Dong & Peng, 2013). MI is believed to be superior to single imputation and listwise deletion because it uses repeated estimations and thus incorporates random error (Patrician, 2004).

Descriptive statistics for the total summated scores of the MIES are provided. Percentages for each scale of the PROQOL (compassion satisfaction, compassion fatigue, and burnout) are also provided. Investigation of the assumptions for Independent T-tests and ANOVA tests, using a Shapiro-Wilk test, revealed that moral injury ($W = 0.95$, $p\text{-value} = 0.01$) compassion fatigue ($W = 0.95$, $p\text{-value} = 0.009$), compassion satisfaction, ($W = 0.93$, $p\text{-value} =$ and burnout ($W = 0.96$, $p\text{-value} = 0.04$) departed from normality. Due to this, nonparametric tests (Mann-Whitney U test and Kruskal-Wallis tests) were used to conduct the bivariate analyses. Mann-Whitney U tests will be used to determine if there are significant differences in the sample means of compassion fatigue, compassion satisfaction, burnout, and moral injury by the sex variable. Due to the multi-level nature of the remaining demographic variables (age, education level, and years employed as an officer), Kruskal-Wallis tests will be conducted to determine if there are differences in the variable means for compassion fatigue, compassion satisfaction, burnout, and moral injury. Spearman's rho (ρ) correlation will be used to measure the linear correlation between each of the variables. Finally, to further investigate the potential relationship between the study variables, exploratory linear regression analyses will be conducted.

Figure 1: Missing Data by Variable



Chapter IV: Results

The purpose of this quantitative correlational study was to examine if and to what extent there was the presence of moral injury, compassion fatigue, compassion satisfaction, and burnout, and to what extent there was a statistically significant relationship between moral injury and compassion fatigue among police officers in the United States of America. The three central research questions are restated below:

1. How prevalent are compassion satisfaction and burnout in the sample of police officers?
2. Do age, sex, years of experience, and educational background relate to moral injury, compassion fatigue, compassion satisfaction, and burnout in the sample of police officers?
3. Is there an association between reported compassion fatigue and moral injury in the sample of police officers?

To answer RQ1, descriptive statistics were produced to determine the prevalence of each psychological phenomenon. To answer RQ2, Mann–Whitney U tests and Kruskal–Wallis tests were conducted to compare groups. A Spearman’s correlation matrix was generated to determine correlational associations between all variables and to check for multicollinearity. To answer RQ3, simple and multiple linear regression models were generated to assess the relationships of moral injury and compassion fatigue, and to determine the strongest predictors from the control and study variables.

Descriptive Statistics

Features of the sample participants are presented in Table 1. Of the 74 included sample participants, it was revealed that the majority were male (84%), had a bachelor’s degree (43%),

were 31 to 41 years of age (36%), and had been employed as an officer for 1 to 5 years (47%). Within the sample, it was found that the mean amount of experienced moral injury in the sample was 21.41 (range was 9 to 48). Explorations of the specific study questions revealed that the three most highly agreed with statements were from all three factors of the MIES (self-perpetrated, others-perpetrated, and betrayal-based moral injury). 61% of respondents strongly or moderately agreed with the statement: “I see things that are morally wrong.” 23.5% of respondents strongly or moderately agreed with the statement: “I have acted in ways that violated my own moral code or values.” Finally, 14.9% of respondents strongly or moderately agreed with the statement: “I feel betrayed by others outside the police force who I once trusted.” The mean amount of compassion fatigue was 20.74 (range was 10 to 44), the mean amount of compassion satisfaction was 38.82 (range was 16 to 50), and the mean amount of burnout was 20.91 (range was 10 to 42). Summary statistics for moral injury, compassion fatigue, compassion satisfaction, and burnout are presented in Table 2. As intended by the creator of the ProQol 5, low, moderate, and high levels of compassion fatigue, compassion satisfaction, and burnout were reported in Table 3. It was found that the majority of the sample reported low compassion fatigue and burnout (76.0%) and moderate compassion satisfaction (55%).

Bivariate Analyses

As previously stated, initial examinations of the assumptions for bivariate analysis tests revealed significant non-normality in the data. To offer visualizations of the data, histograms of moral injury, compassion fatigue, compassion satisfaction, and burnout are provided in Figures 2-5. Pearson correlations, T-test analyses, and ANOVA tests assume normally distributed data and would not be appropriate for this analysis. For this reason, non-parametric tests were chosen

Table 1: Descriptive Statistics for Sample of Police Officers

Variable	n	%
Age (Years)		
20-30	26	35.0
31-40	27	36.0
41-50	16	22.0
51-60	5	6.8
Sex		
Female	12	16.0
Male	62	84.0
Highest Level of Completed School		
High school	5	6.8
Some College, No Degree	16	22.0
Associate's Degree	14	19.0
Bachelor's Degree	32	43.0
Graduate School	7	9.5
Years Employed as a Police Officer		
Less than 1 year	6	8.0
1-5 years	35	47.0
6-10 years	10	14.0
11-20 years	17	23.0
20+ years	6	8.0

Table 2: Summary Statistics for Study Variables

	Mean	Median	Min	Max	sd
Moral Injury	21.40541	20.5	9	48	8.040853
Compassion Fatigue	20.74324	20.5	10	44	6.324687
Burnout	20.90541	21.0	10	42	6.569270
Compassion Satisfaction	38.82432	40.0	16	50	7.150741

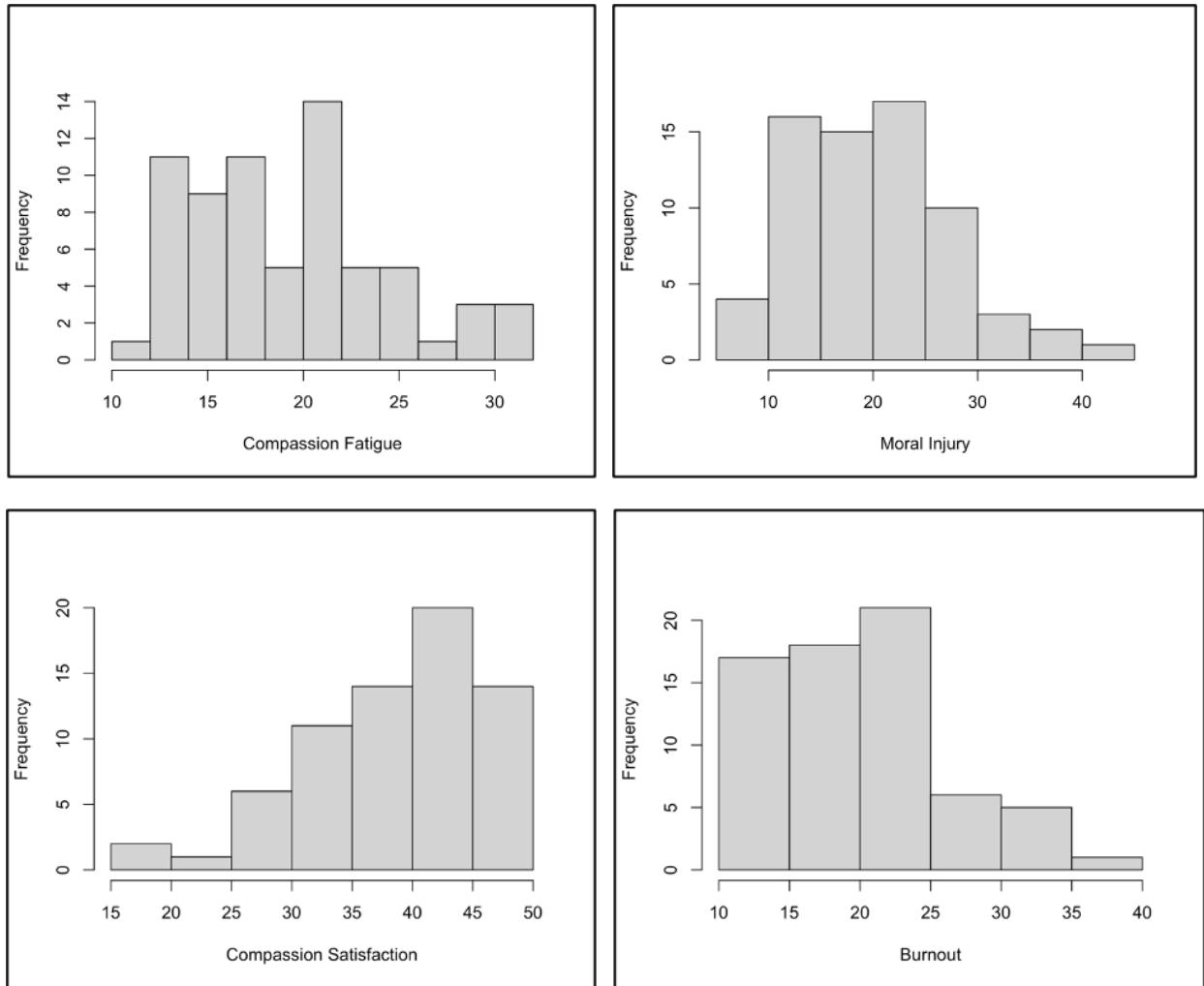
Table 3: Percentages of Compassion Fatigue, Compassion Satisfaction, and Burnout in Sample

Variable	n	%
Compassion Fatigue		
Low	56	76.0
Moderate	17	23.0
High	1	1.4
Compassion Satisfaction		
Low	2	2.7
Moderate	41	55.0
High	31	42.0
Moral Injury		
Low	51	69.0
Moderate	23	31.0
High	0	0.0

to investigate RQ2 (Do age, sex, years of experience, and educational background relate to moral injury, compassion fatigue, compassion satisfaction, and burnout in the sample of police officers?) and RQ3 (Is there an association between reported compassion fatigue and moral injury in the sample of police officers?). Spearman's correlation is appropriate for this analysis because it can test ordinal, non-normal data (Schober et al., 2018). Similarly, Mann-Whitney U tests and Kruskal-Wallis H tests are robust to ordinal, non-normal data (McKnight & Najab, 2010; Ostertagova et al., 2014). Because the variable of sex was measured binarily, Mann Whitney U tests were used to determine if there were significant differences in the variable medians by sex.

No statistical significance was found for the differences in moral injury ($W = 338.5$, $p = 0.628$), compassion fatigue ($W = 288.5$, $p = 0.222$), compassion satisfaction ($W = 463.5$, $p = 0.181$), or burnout ($W = 266$, $p = 0.121$) by sex. The remaining demographic variables were measured with multiple levels and Kruskal-Wallis tests were used to determine if there were significant differences in the study variables by age, education level, or years of employment. For each variable, there were no significant differences by any demographic group. The results of the Kruskal-Wallis tests for age were insignificant for: moral injury ($H[3] = 2.19$, $p = 0.53$), compassion fatigue ($H[3] = 0.42$, $p = 0.94$), compassion satisfaction ($H[3] = 0.58$, $p = 0.90$), and burnout ($H[3] = 2.07$, $p = 0.56$). The results of the Kruskal-Wallis tests for education level were insignificant for: moral injury ($H[4] = 1.04$, $p = 0.90$), compassion fatigue ($H[4] = 0.18$, $p = 0.99$), compassion satisfaction ($H[4] = 2.34$, $p = 0.67$), and burnout ($H[4] = 1.08$, $p = 0.90$). Finally, the results of the Kruskal-Wallis tests for years of employment were also insignificant for: moral injury ($H[4] = 3.63$, $p = 0.46$), compassion fatigue ($H[4] = 6.20$, $p = 0.18$), compassion satisfaction ($H[4] = 3.92$, $p = 0.42$), and burnout ($H[4] = 5.58$, $p = 0.23$).

Figure 2: Histograms of Moral Injury, Compassion Fatigue, Compassion Satisfaction, and Burnout



Correlational Analysis

Spearman’s correlation analyses were used to offer a first look into the relationships between moral injury, compassion fatigue, compassion fatigue and compassion satisfaction, and they helped answer the third research question (Is there an association between reported compassion fatigue and moral injury in the sample of police officers?). A correlation matrix was produced to understand the correlations between each study variable and to check for multicollinearity. Strong, significant correlations were found in several of the study variables.

The correlation matrix is presented in Table 4. Regarding moral injury and compassion fatigue, the spearman’s correlation identified a strong, positive correlation ($\rho = .50$). The multicollinearity assumption for the multiple linear regression was satisfied, as none of the correlations exceeded $\rho = .70$ (compassion satisfaction is not included in the models).

Table 4: Spearman’s Rank Correlation Matrix

	Years Employed as Police Officer	Education Level	Sex	Age	Burnout	Compassion Satisfaction	Compassion Fatigue
Moral Injury	.08	.01	.06	.06	.49***	-.36*	.50***
Compassion Fatigue	-.08	-5.90e-03	.14	.02	.53***	-.43**	
Compassion Satisfaction	.02	-.15	-.16	-.06	-.73***		
Burnout	.12	.08	.18	-.07			
Age	.30	-.08	.15				
Sex	.12	.07					
Education Level	-.14						

Linear Regression Analyses

Multiple linear regression was conducted to determine the predictive significance of the correlation of compassion fatigue and moral injury in the current study, controlling for the demographic variables. This modeling technique was appropriate because the research expands on previous research with the intention of understanding which of the variables were significant predictors of compassion fatigue (Marill, 2004). Three models are presented in the current study. Model 1 includes a simple linear regression between moral injury and compassion fatigue. The

fitted regression model was: compassion fatigue = 11.64 + 0.43*moral injury. The results of Model 1 indicated that the one predictor (moral injury) explained 29% of the variation in compassion fatigue. The overall model was significant ($R^2 = 0.28$, $[F(1,72) = 29.76, p < .01]$) and moral injury ($\beta = 0.43, p < 0.01$) was a significant predictor of compassion fatigue. The Akaike information criterion (AIC) method was used to determine a model that would best fit the data. A model with compassion fatigue predicted by both moral injury and burnout produced the lowest AIC number, representing the model of best fit. Model 2 includes a multiple linear regression model representing the results from the AIC method. The fitted regression model was: compassion fatigue = 6.01 + 0.24 *moral injury + 0.46*burnout. The overall model was significant ($R^2 = 0.46$, $[F(2,71) = 30.57, p < 0.01]$). Model 2 indicated that moral injury ($\beta = 0.24, p = 0.003$) and burnout ($\beta = 0.46, p < 0.01$) explained 46% of the variation in reported moral injury. Due to the displayed impact of burnout in predicting compassion fatigue, burnout was included in Model 3. Model 3 is the complete multiple linear regression model, including burnout and the study's demographic variables. While initially all demographic variables were included in the model, that model's residuals did not pass a Shapiro–Wilk normality test. Further examination of the variables' collinearity using the variance inflation factor (VIF) metric revealed a moderate correlation between age and years of experience. For this reason, age was excluded from the final model. Model 3 included compassion fatigue as predicted by moral injury, burnout, sex (reference was male), years of experience (reference was 1-5 years), and education level (reference was bachelor's degree). The model was significant; however, it was a worse fit than Model 2. Model 3 indicated that the predictors explained 43% of the variation in compassion fatigue. The only significant predictors in the model were moral injury ($\beta = 0.23, p < 0.01$) and burnout ($\beta = 0.49, p < 0.01$). The results of the regression models are presented in

Table 4. All model residuals produced Durbin-Watson test results of 1.7 to 1.8. While these are not perfect test results and they indicate positive autocorrelation within the models, they are not extreme variables and likely not of concern (Bartels & Goodhew, 1981; Jeong, 1985). The models all passed Shapiro–Wilk normality tests ($P > 0.05$).

Table 5: Models 1-3: Effect of Moral Injury, Burnout, and Demographic Variables on Compassion Fatigue (N=74 in all models)

	<i>Dependent variable:</i>		
	Compassion_Fatigue		
	(1)	(2)	(3)
Moral Injury	0.425*** (0.078)	0.244*** (0.078)	0.226*** (0.082)
Burnout		0.455*** (0.096)	0.489*** (0.102)
Sex (Female)			0.656 (1.583)
Education (High School)			-0.007 (1.600)
Education (Some College, No Degree)			-0.469 (2.329)
Education (Associate's Degree)			-1.289 (2.574)
Education (Graduate School)			-1.277 (1.804)
Experience (Less than 1 year)			0.570 (1.849)
Experience (6-10 years)			-1.914 (2.193)
Experience (11-20 years)			-1.121 (1.494)
Experience (20+ years)			-4.233* (2.178)
Constant	11.638*** (1.781)	6.010*** (1.963)	6.211** (2.681)
R ²	0.292	0.463	0.512
Adjusted R ²	0.283	0.448	0.425
Residual Std. Error	5.357 (df = 72)	4.701 (df = 71)	4.796 (df = 62)
F Statistic	29.761*** (df = 1; 72)	30.569*** (df = 2; 71)	5.907*** (df = 11; 62)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01		

Chapter V: Discussion

The purpose of this thesis was to examine how prevalent four aspects of mental wellness were in a city police department and to further the literature by answering calls to examine the role of morally injurious event exposure in developing compassion fatigue (Papazoglou & Chopko, 2017; Papazoglou et al., 2019), particularly in U.S. based departments (Tuttle et al., 2019). Using linear regression, I was able to identify three independently predictive models of compassion fatigue and two variables (moral injury and burnout) that were consistent predictors. The descriptive statistics revealed that 24.4% reported moderate or high compassion fatigue, 97% reported moderate or high compassion satisfaction, none reported high burnout and 31% reported moderate burnout. The presentation of the study variables seems to suggest that a net positive effect exists within the police department. Many reported high positive psychological outcomes of policing and low negative psychological outcomes. Although the compassion fatigue literature presents inconsistent findings on this front, several studies have found results consistent with the current study (Turgoose et al., 2017; Grant et al., 2019; Papazoglou et al., 2019). The low levels of compassion fatigue present in this study could be an underestimation, affected by the pressures to conform to the rigid social and employment standards of policing. It is also possible that these officers are simply receiving adequate care to be able to avoid developing compassion fatigue. Contrary to previous research (Grant et al., 2019), compassion satisfaction in this sample was higher than expected, with only 2.7% of the sample reporting low compassion satisfaction and 42% reporting high compassion satisfaction. Davies et al. (2023) found relatively similar means for compassion fatigue, compassion satisfaction, and burnout in a sample of 100 full-time English police officers. However, even compared to this study, the means of the negative study concepts were lower, and compassion satisfaction was higher. This

could indicate that most officers are able to find the support to be able to successfully manage compassion stress before it becomes compassion fatigue. Although there were no statistical tests to examine potential differences between the general population and the current study sample, compared with general population means presented in Stamm (2010), the means for compassion fatigue, compassion satisfaction, burnout, and compassion satisfaction were all low. This may suggest that while compassion satisfaction rates were higher in the current study than those of other police populations, compared with the general population it may not be significantly higher. The mean of moral injury was 21.41 and it had a range of 9 to 48. It is not known how this finding relates to the prevalence of moral injury in other law enforcement populations. Compared to general population sample means presented in Thomas et al. (2021), the means for moral injury were similar. The mean for the self-based moral injury responses in this study was 3.66, the mean for others-based moral injury was 1.75, and the mean for betrayal-based moral injury was 2.36. Compared to general population responses in Thomas et al. (2021), all categories of moral injury were less than in the general population, with the exception of others-based moral injury which more or less matched that of the general population. This seems to suggest that police officers experience no more moral injury than average individuals.

An unexpected finding of the study was that most officers reported low levels of burnout. This could again be a falsely positive finding, with officers reporting no burnout to avoid social and employment repercussions. This finding may also be indicative of a working environment that enables its employees to avoid burnout. Future research should examine the factors that may contribute to resilience to burnout in city police departments post Covid-19, and while in the midst of heightened media and public scrutiny. The officers reported overall low levels of moral injury on all scales; however, the most highly agreed with item related to others-based moral

injury. The two most agreed with moral injury items to follow were from the two other factors of the MIES (self-perpetrated and betrayal-based moral injury). This is a significant finding that indicates that police officers are exposed to all three forms of morally injurious events and have the potential to develop moral injury in multiple ways.

The moderate incidence of the negative study variables and the high incidence of the positive variable can perhaps be attributed to the age and career position of the participants. The participants were mostly in their 20s and 30s, and most had only 1 to 5 years of work experience as police officers. Trauma, within the frame of a policing career, can be examined through frequency, severity, and length of exposure (Paton, 2009). Violanti and Marshall (1983) viewed the career of a police officer as split into four stages. The primary stage, marked by the first 5 years of an officer's career, is described as the period in which officers realize the discrepancy between their academy training and their actual policework. Officers are then exposed to the stress of policing without yet having developed the coping mechanisms and resiliency of more seasoned officers (Violanti & Marshall, 1983). However, stress is believed to increase into the 6to-10-year period of a policing career (Violanti & Marshall, 1983). In the case of the current study results, it is possible that the novice officers of the study sample are exposed to traumatic stressors but have yet to fully develop the psychological stress outcomes measured in this study. Patrol officers respond to calls and come into frequent contact with members of the public. Research shows that officers who interact more with crime suspects experience more burnout, general depression, and negative feelings toward work.

In the current study, control variables including an officer's age, gender, years of service, and education level, were examined to preliminarily explore whether demographic variables, years of experience, or educational background impacted the presentation of the trauma

responses measured. The bivariate analyses identified no significant group differences in the prevalence of moral injury, compassion fatigue, compassion satisfaction, and burnout. An explanation for this is perhaps found in the topics of the research. Moral injury, compassion fatigue, compassion satisfaction, and burnout are all stress outcomes. The literature makes evident the fact that not all exposure to stress leads to measurable outcomes, in this case not all trauma exposure leads directly to the study variables. The literature shows that officers experience stress and trauma differently by years of job experience (Craddock and Telesco, 2022), sex, (Lilly et al, 2009), and age (Gershon et al., 2002; Berg et al., 2005). However, it is possible that *outcomes* of traumatic events may not be significantly different by demographic group. The sample distribution for years of work experience was skewed, with the majority of participants in their 20s and 30s. The results of the current study suggest that future research should examine more diverse samples in terms of rank, job assignments, and years of experience on the job.

The correlational analysis presented expected findings of modest, positive correlations between moral injury and compassion fatigue ($\rho = 0.50$). This is a finding that has been supported in a few studies that have measured moral injury and compassion fatigue in healthcare populations (Litam & Balkin, 2021; Morris et al., 2022). The correlations between compassion fatigue and compassion satisfaction ($\rho = -0.43$), and compassion fatigue and burnout ($\rho = 0.53$) are fairly aligned with the literature in healthcare populations (Zhang et al., 2018) and support Stamm's (2010) theoretical propositions for the relationship between the concepts.

Finally, the study used both simple and multiple linear regression models to investigate the role of moral injury in predicting compassion fatigue, while controlling for demographic variables. The regression models of the study support the notion that moral injury exposure may

play a role in the development of indirect traumatization. The study regression models showed that both moral injury and burnout consistently and significantly predicted compassion fatigue even when controlling for all demographic variables. Following Stamm's (2010) conceptualization of burnout, it is expected that burnout would predict compassion fatigue. However, there are no conceptual explanations for why moral injury would predict compassion fatigue. It is possible that there is overlap in the experiences of moral injury and compassion fatigue, making it difficult to understand the direction of the association presented in this study. It is also possible that, as some have suggested, developing moral injury may make police officers more susceptible to developing compassion fatigue (Papazoglou & Chopko, 2017). This preliminary finding furthers the literature and suggests that future research should not neglect moral injury exposure when examining compassion fatigue.

Limitations

The current study is in no way devoid of limitations. Associated with the study design, the data was collected using cross-sectional, self-report surveys. Self-report questionnaires raise concerns for potential social desirability bias. The study design precludes causal analysis and creates limitations as to the conclusions about the nature of any associations. The study is also limited by its cross-sectional design, meaning there can be no evaluations about how the study variables may change over time.

Additionally, there have been a number of contentions regarding both of the variable instruments in the literature. Neither of these instruments are designed to measure every conceivable aspect (symptoms, causes, impacts) of either moral injury or compassion fatigue. As this is the case, these findings are not designed to replace a clinical assessment or diagnosis and the research team was not trained to do so (Bride et al., 2007). The instruments were not

developed for a law enforcement population. Due to this, it is unclear how the instruments may be unfit to measure the study variables in law enforcement officers, though wording changes were made to better fit this population where applicable.

The present study indicates the presence of all study variables; future studies should focus on the development of measures for these variables in law enforcement populations. The development of population-specific study measures should aid in the examinations of determinants of moral injury and compassion fatigue in law enforcement. Another measurement-related limitation of this study is the potential presence of spurious, unmeasured variables. For example, the exclusion of PTSD as a measured variable. The current study aimed to determine the impact of moral injury in the development of indirect traumatization; however, it is entirely possible that PTSD may be among the variety of potential spurious factors at play in this analysis. Other potential spurious factors to be noted for future studies include previous psychological treatment, prior military experience, and level of social supports. As noted above, there was a limited number of control variables included in this study. The inclusion of more control variables would increase confidence in the true nature of any group differences in the experiences of the psychological variables in this study. For example, race may be a factor impacting the prevalence and manifestations of the psychological variables. The current study did not measure race as a control variable due to the small sample size. More than half of the officers of the APD are black (Miller et al., 2016), in the present study, this would have presented limited variability for the study results.

The sample size is also a significant limitation for the current study. Another limitation of this study is generalizability. The sample is of just one police department and the findings can be applied only to this population. The sample is a nonrandom, convenience sample, further

complicating the generalizability of the study findings. Future research should seek to expand the reach of the sample and include multiple agencies with different departmental characteristics (e.g., rural, city, state) and sample characteristics (e.g., different shifts, assignments, demographics). There is also a specific limitation present in this study due to the sample population and data collection method: the presence of police supervisors. The surveys were administered during “roll calls” with the officers’ colleagues and supervisors present. This inevitably raises the possibility of cultural influence over the answers provided. The policing population provides a number of unique challenges for accurate data collection. It also offers the potentiality that, despite assurances against it in the research design, officers would be fearful of retribution within their agency due to their answers. The current sample represents a highly specific selection of police officers. The surveys were administered only to officers who attended evening watch roll calls. This raises the potential for variability in the findings by shift.

Conclusion

The findings of this study bear crucial implications for policy, police practice, academics, and mental health professionals. As a preliminary study, the research succeeded in establishing the presence of moral injury exposure, compassion fatigue, compassion satisfaction, and burnout in police officers. The research suggests that moral injury event exposure does significantly predict compassion fatigue in police officers. Future studies should drive further into the existence of these phenomena and consider how and why they exist, and what can be done to prevent their development. It is premature to make policy recommendations on the preliminary findings of this exploratory study.

Appendix A: Informed Consent Statement

Informed Consent Statement

Title: Moral Injury in Policing and its Connection to Compassion Fatigue, Compassion Satisfaction, and Burnout.

Principal Investigator: Catherine Floyd

Co-Investigators: Dr. Joshua Hinkle, Dr. Dean Dabney

Student Principal Investigator: Catherine Floyd

Introduction and Key Information

We invite you to take part in a research study. You will decide if you would like to take part in the study.

The purpose of this study is to assess the prevalence of moral injury in police officers of the Atlanta Police Department and its possible association with compassion fatigue, compassion satisfaction, and burnout. Your role in the study will last roughly 15 minutes. We will ask you to do the following: Complete a 43-question survey consisting of four demographic questions (age, gender, amount of education, and number of years on the force), and two scales (Moral Injury Events Scale and Professional Quality of Life Scale). You will not have any more risks than you would have in a typical day. However, you may experience some distress when recalling unpleasant experiences. This study is not designed to benefit you. We hope to gain insight into an understudied psychological phenomenon within police officers. If you do not wish to take part in this study, you can select the “no” option in the first question of the survey and cease participation.

Purpose

The purpose of the study is to examine moral injury in policing, and its effect on associated outcomes. We invite you to take part in this research study because you are a police officer in the Atlanta Police Department. We will invite a total of roughly 180 people to be in this study.

Procedures

If you decide to take part in this study, you will answer survey questions that are intended to assess your experiences of moral injury, compassion fatigue, compassion satisfaction, and burnout. The survey will take about 15 minutes. Most of the questions are in scale format. You

will be given a statement and asked to rate the frequency with which you experience certain events/feelings or the amount you agree with the statements.

Future Research

We will not use or share your data for future research studies.

Risks

You will not have any more risks than you would in a normal day of life. We do not expect injury from being in this study. If you have been harmed, contact the research team as soon as possible. Georgia State University and the research team have not set aside funds to pay for any injury.

Benefits

This study is not designed to benefit you personally. We hope to gain information about an understudied psychological phenomenon within police officers.

Alternatives

The alternative to taking part in this study is to not take part in the study.

Voluntary Participation and Withdrawal

You do not have to be in this study. If you decide to be in the study and change your mind, you can drop out at any time. You can skip questions that you do not wish to answer. The study will not affect how you are treated in the workplace. If you do not take part or if you leave the study early, you will not lose any benefits that you are otherwise entitled to.

Confidentiality

We will keep your records private to the extent required by law. The following people and groups will have access to the information you provide:

- Catherine Floyd, Dr. Joshua Hinkle, and Dr. Dean Dabney.
- GSU Institutional Review Board
- Office for Human Research Protection (OHRP)

We will use a study number rather than your name on study records. We will store the information you provide on a password- and firewall- protected computer. When we present or publish the results of this study, we will not use information that may identify you.

Contact Information

You can contact Catherine Floyd at cfloyd17@student.gsu.edu

- If you have questions about the study or your part in it
- If you have questions, concerns, or complaints about the study.

The IRB at Georgia State University reviews all research that involves human participants. You can contact the IRB if you would like to speak to someone who is not involved directly with the study. You can contact the IRB for questions, concerns, problems, information, input, or questions about your rights as a research participant. Contact the IRB at 404-413-3500 or irb@gsu.edu.

Consent

We will give you a copy of the consent form for you to keep.

If you are willing to volunteer for this research, please sign below.

Printed name of Participant

Signature of Participant

Date

Principal Investigator

Date

Appendix B: Survey Instrument: Demographic Items

Q1. What is your age?

- a) 20- 30
- b) 31- 40
- c) 41- 50
- d) 51- 60
- e) 61 +

Q2. What is your sex?

- a) Male
- b) Female
- c) Other

Q3. What is the highest school level you have completed?

- a) High school graduate or equivalent (e.g., GED)
- b) Some college credit, but no degree
- c) Associate degree
- d) Bachelor's degree
- e) Graduate school

Q4. How many years have you been employed as a police officer?

- a) Less than one year
- b) 1-5 years
- c) 6-10 years
- d) 11-20 years
- e) 20+ years

Appendix C: Survey Instrument: Compassion Satisfaction, Fatigue, and Burnout

Q5-35. *Compassion Satisfaction and Compassion Fatigue Via the Center for Victims of Torture (www.ProQOL.org)*

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

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

	1	2	3	4	5
I am happy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am preoccupied with more than one person I serve.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get satisfaction from being able to police people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel connected to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I jump or am startled by unexpected sounds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I feel invigorated after working with those I serve.

I find it difficult to separate my personal life from my life as a police officer.

I am not as productive at work because I am losing sleep over traumatic experiences of a person I policed.

I think that I might have been affected by the traumatic stress of those I policed.

I feel trapped by my job as a police officer.

Because of my policing, I have felt "on edge" about

various things.

I like my work as a police officer.

I feel depressed because of the traumatic experiences of the people I serve.

I feel as though I am experiencing the trauma of someone I have served.

I have beliefs that sustain me.

I am pleased with how I am able to keep up with policing techniques and protocols.

I am the person I always wanted to be.

My work makes me feel satisfied.

I feel worn out because of my work as a police officer.

I have happy thoughts and feelings about those I serve and how I could help them.

I feel overwhelmed because my workload seems endless.

I believe I can make a difference through my work.

I avoid certain activities or situations because they remind me of frightening experiences of the people I policed.

I am proud of what I can do to serve.

As a result of my policework, I have intrusive, frightening thoughts.

I feel "bogged down" by the system.

I have thoughts that I am a "success" as a police officer.

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

I am a very caring person.

I am happy that I chose to do this work.

Appendix D: Potentially Morally Injurious Events Scale Items

Q36-44.

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

Instructions: Please select the appropriate category to indicate how much you agree or disagree with each of the following statements regarding your experiences at any time since becoming a police officer.

	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
(1) I see things that are morally wrong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(2) I am troubled by having witnessed others' immoral acts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(3) I have acted in ways that violated my own moral code or values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(4) I am troubled by having acted in ways that violated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

my own
morals or
values.

(5) I
violated
my own
morals by
failing to
do
something
that I felt I
should
have done.

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

(7) I feel
betrayed
by leaders
who I once
trusted.

(8) I feel
betrayed
by fellow
police
officers
who I once
trusted.

(9) I feel
betrayed

by others
outside the
police
force who I
once
trusted.

References

- Adams, I. T., Mourtgos, S., & Nix, J. (2023). Turnover in Large US Police Agencies Following the George Floyd Protests. <https://doi.org/10.31219/osf.io/r9mjf>
- Alharbi, J., Jackson, D., & Usher, K. (2019). Compassion fatigue in critical care nurses. An integrative review of the literature. *Saudi medical journal*, 40(11), 1087–1097. <https://doi.org/10.15537/smj.2019.11.24569>
- Andersen, J., Papazoglou, K., & Collins, P. (2019). Association of Authoritarianism, Compassion Fatigue, and Compassion Satisfaction among Police Officers in North America: An Exploration. 13. 405-419. <https://doi.org/10.5281/zenodo.2657663>.
- Andersen, J.P. & Papazoglou, K. (2015). Compassion fatigue and compassion satisfaction among police officers: An understudied topic. *International Journal of Emergency Mental Health and Human Resilience*, 17(3), 661-663. <https://doi.org/10.4172/1522-4821.1000259>
- Anderson, Gregory & Litzenberger, Robin & Plecas, Darryl. (2002). Physical Evidence of Police Officer Stress. *Policing: An International Journal of Police Strategies & Management*. 25. 399-420. <https://doi.org/10.1108/13639510210429437>.
- Asmundson, G. J., & Stapleton, J. A. (2008). Associations between dimensions of anxiety sensitivity and PTSD symptom clusters in active-duty police officers. *Cognitive behaviour therapy*, 37(2), 66–75. <https://doi.org/10.1080/16506070801969005>
- Baldwin, S., Bennell, C., Andersen, J. P., Semple, T., & Jenkins, B. (2019). Stress-Activity Mapping: Physiological Responses During General Duty Police Encounters. *Frontiers in psychology*, 10, 2216. <https://doi.org/10.3389/fpsyg.2019.02216>
- Ballenger, J. F., Best, S. R., Metzler, T. J., Wasserman, D. A., Mohr, D. C., Liberman, A., Delucchi, K., Weiss, D. S., Fagan, J. A., Waldrop, A. E., & Marmar, C. R. (2011). Patterns and predictors of alcohol use in male and female urban police officers. *The American journal on addictions*, 20(1), 21–29. <https://doi.org/10.1111/j.1521-0391.2010.00092.x>
- Barnes, H. A., Hurley, R. A., & Taber, K. H. (2019). Moral injury and PTSD: Often co-occurring yet mechanistically different. *The Journal of neuropsychiatry and clinical neurosciences*, 31(2), A4-103. <https://doi.org/10.1176/appi.neuropsych.19020036>
- Bartels, R., & Goodhew, J. (1981). The Robustness of the Durbin-Watson Test. *The Review of Economics and Statistics*, 63(1), 136–139. <https://doi.org/10.2307/1924228>
- Bennett, R. R. (1984). Becoming blue: A longitudinal study of police recruit occupational socialization. *Journal of Police Science & Administration*, 12(1), 47–58.

- Berg, A. M., Hem, E., Lau, B., Håseth, K., & Ekeberg, O. (2005). Stress in the Norwegian police service. *Occupational medicine (Oxford, England)*, 55(2), 113–120.
<https://doi.org/10.1093/occmed/kqi023>
- Bianchi R. (2018). Burnout is more strongly linked to neuroticism than to work-contextualized factors. *Psychiatry research*, 270, 901–905.
<https://doi.org/10.1016/j.psychres.2018.11.015>
- Bianchi, R., & Brisson, R. (2019). Burnout and depression: Causal attributions and construct overlap. *Journal of health psychology*, 24(11), 1574–1580.
<https://doi.org/10.1177/1359105317740415>
- Blumberg, D., Papazoglou, K., & Creighton, S. (2018). Bruised Badges: The Moral Risks of Police Work and a Call for Officer Wellness. *International journal of emergency mental health*, 20. <https://doi.org/10.4172/1522-4821.1000394>
- Bonson, A., Murphy, D., Aldridge, V., Greenberg, N., & Williamson, V. (2023). Conceptualization of moral injury: A socio-cognitive perspective. *Journal of Military, Veteran and Family Health*, 9(2), 75-81. <https://doi.org/10.3138/jmvfh-2022-0034>
- Boudreau, T. (2011). The Morally Injured. *The Massachusetts Review*, 52(3/4), 746–754.
<http://www.jstor.org/stable/23210143>
- Brady, P.Q. (2017). Crimes Against Caring: Exploring the Risk of Secondary Traumatic Stress, Burnout, and Compassion Satisfaction Among Child Exploitation Investigators. *J Police Crim Psych* 32, 305–318. <https://doi.org/10.1007/s11896-016-9223-8>
- Bročić, M., & Miles, A. (2021). College and the “Culture War”: Assessing Higher Education’s Influence on Moral Attitudes. *American Sociological Review*, 86(5), 856-895.
<https://doi.org/10.1177/00031224211041094>
- Bryan, C. J., Bryan, A. O., Anestis, M. D., Anestis, J. C., Green, B. A., Etienne, N., Morrow, C. E., & Ray-Sannerud, B. (2016). Measuring Moral Injury: Psychometric Properties of the Moral Injury Events Scale in Two Military Samples. *Assessment*, 23(5), 557-570.
<https://doi.org/10.1177/1073191115590855>
- Bryan, C. J., Bryan, A. O., Roberge, E., Leifker, F. R., & Rozek, D. C. (2018). Moral injury, posttraumatic stress disorder, and suicidal behavior among National Guard personnel. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(1), 36–45.
<https://doi.org/10.1037/tra0000290>
- Burke, P. J. (2023). “He’s Agonal”: An Insider’s Look into the Impact of Moral Injury Suffered While Policing on the Westside of Chicago. *Journal of Contemporary Ethnography*, 52(1), 3-29. <https://doi.org/10.1177/08912416221087362>
- Burke, R. J. (1989). Career Stages, Satisfaction, and Well-Being among Police Officers. *Psychological Reports*, 65(1), 3-12. <https://doi.org/10.2466/pr0.1989.65.1.3>

- Carleton, R. N., Afifi, T. O., Turner, S., Taillieu, T., Duranceau, S., LeBouthillier, D. M., Sareen, J., Ricciardelli, R., MacPhee, R. S., Groll, D., Hozempa, K., Brunet, A., Weekes, J. R., Griffiths, C. T., Abrams, K. J., Jones, N. A., Beshai, S., Cramm, H. A., Dobson, K. S., Hatcher, S., Asmundson, G. J. G. (2018). Mental Disorder Symptoms among Public Safety Personnel in Canada. *Canadian journal of psychiatry. Revue canadienne de psychiatrie*, 63(1), 54–64. <https://doi.org/10.1177/0706743717723825>
- Carroll, J. J., Mital, S., Wolff, J., Noonan, R. K., Martinez, P., Podolsky, M. C., Killorin, J. C., & Green, T. C. (2020). Knowledge, preparedness, and compassion fatigue among law enforcement officers who respond to opioid overdose. *Drug and alcohol dependence*, 217, 108257. <https://doi.org/10.1016/j.drugalcdep.2020.108257>
- Cavanagh, N., Cockett, G., Heinrich, C., Doig, L., Fiest, K., Guichon, J. R., Page, S., Mitchell, I., & Doig, C. J. (2020). Compassion fatigue in healthcare providers: A systematic review and meta-analysis. *Nursing ethics*, 27(3), 639–665. <https://doi.org/10.1177/0969733019889400>
- Chappell, A. T., & Lanza-Kaduce, L. (2010). Police Academy Socialization: Understanding the Lessons Learned in a Paramilitary-Bureaucratic Organization. *Journal of Contemporary Ethnography*, 39(2), 187-214. <https://doi.org/10.1177/0891241609342230>
- Christodoulou-Fella, M., Middleton, N., Papathanassoglou, E.D.E., Karanikola, M.N.K., 2017. Exploration of the Association between Nurses' Moral Distress and Secondary Traumatic Stress Syndrome: Implications for Patient Safety in Mental Health Services. *BioMed Research International* 2017, 1–19. <https://doi.org/10.1155/2017/1908712>
- Cocker, F., Joss, N., 2016. Compassion Fatigue among Healthcare, Emergency and Community Service Workers: A Systematic Review. *International Journal of Environmental Research and Public Health* 13, 618. <https://doi.org/10.3390/ijerph13060618>
- Coetzee, S. K., & Laschinger, H. K. (2018). Toward a comprehensive, theoretical model of compassion fatigue: A n integrative literature review. *Nursing & Health Sciences.*, 20(1), 4–15. <https://doi.org/10.1111/nhs.12387>
- Coghlan, T. E. (2011). *Role interference and moral distress in the subjective experience of deep undercover law enforcement operatives*. Universal-Publishers.
- Conn, S. M., & Butterfield, L. D. (2013). Coping with secondary traumatic stress by general duty police officers: Practical Implications/La gestion du stress post-traumatique secondaire par les agents de services de police généraux : Enjeux pratiques. *Canadian Journal of Counselling and Psychotherapy (Online)*, 47(2), 272-298. <https://www.proquest.com/scholarly-journals/coping-with-secondary-traumatic-stress-general/docview/1381950983/se-2>

- Corley, M. C., Elswick, R. K., Gorman, M., & Clor, T. (2001). Development and evaluation of a moral distress scale. *Journal of advanced nursing*, 33(2), 250–256.
<https://doi.org/10.1046/j.1365-2648.2001.01658.x>
- Correia, I., Romão, Â., Almeida, A.E. *et al.* Protecting Police Officers Against Burnout: Overcoming a Fragmented Research Field. *J Police Crim Psych* **38**, 622–638 (2023).
<https://doi.org/10.1007/s11896-023-09584-4>
- Craddock, T. B., & Telesco, G. (2022). Police Stress and Deleterious Outcomes: Efforts Towards Improving Police Mental Health. *Journal of police and criminal psychology*, 37(1), 173–182. <https://doi.org/10.1007/s11896-021-09488-1>
- Cross, C. L., & Ashley, Larry. (2004). Police trauma and addiction: coping with the dangers of the job. *FBI Law Enforcement Bulletin*, 73(10), 24-32.
<https://heinonline.org/HOL/P?h=hein.journals/fbileb73&i=340>
- Crowl, J. N. (2017) The effect of community policing on fear and crime reduction, police legitimacy and job satisfaction: an empirical review of the evidence, *Police Practice and Research*, 18:5, 449-462. <https://doi.org/10.1080/15614263.2017.1303771>
- Currier, J. M., McCormick, W., & Drescher, K. D. (2015). How do morally injurious events occur? A qualitative analysis of perspectives of veterans with PTSD. *Traumatology*, 21(2), 106–116. <https://doi.org/10.1037/trm0000027>
- Currier, J. M., McDermott, R. C., Farnsworth, J. K., & Borges, L. M. (2019). Temporal Associations Between Moral Injury and Posttraumatic Stress Disorder Symptom Clusters in Military Veterans. *Journal of traumatic stress*, 32(3), 382–392.
<https://doi.org/10.1002/jts.22367>
- Davey, J., Obst, P., & Sheehan, M. (2001). It Goes with the Job: officers' insights into the impact of stress and culture on alcohol consumption within the policing occupation. *Drugs: Education Prevention and Policy*. 8. 141-149.
<https://doi.org/10.1080/096876301300101889>.
- Davies, L. E., Brooks, M., & Braithwaite, E. C. (2023). Compassion fatigue, compassion satisfaction, and burnout, and their associations with anxiety and depression in UK police officers: A mixed method analysis. *The Police Journal*, 96(3), 509-529.
<https://doi.org/10.1177/0032258X221106107>
- Deschenes, S., Gagnon, M., Park, T., & Kunyk, D. (2020). Moral distress: A concept clarification. *Nursing ethics*, 27(4), 1127–1146.
<https://doi.org/10.1177/0969733020909523>
- Di Nota, P.M., Scott, S.C., Huhta, JM. *et al.* Physiological Responses to Organizational Stressors Among Police Managers. *Appl Psychophysiol Biofeedback* **49**, 85–102 (2024).
<https://doi.org/10.1007/s10484-023-09613-2>

- Dong, Y., & Peng, C. Y. (2013). Principled missing data methods for researchers. *SpringerPlus*, 2(1), 222. <https://doi.org/10.1186/2193-1801-2-222>
- Dorahy, M.J. (2010), The impact of dissociation, shame, and guilt on interpersonal relationships in chronically traumatized individuals: A pilot study. *J. Traum. Stress*, 23: 653-656. <https://doi.org/10.1002/jts.20564>
- Drew, J.M., Martin, S. A National Study of Police Mental Health in the USA: Stigma, Mental Health and Help-Seeking Behaviors. *J Police Crim Psych* 36, 295–306 (2021). <https://doi.org/10.1007/s11896-020-09424-9>
- Edwards, A.M., & Kotera, Y. (2021). Mental health in the UK police force: A qualitative investigation into the stigma with mental illness. *International Journal of Mental Health and Addiction*, 19(4), 1116–1134. <https://doi.org/10.1007/s11469-019-00214-x>
- Eikenberry, J., Mancini, M., Linhorst, D. M., Schafer, J. A., & Brown, J. (2023). Stress and trauma among police officers: Implications for social work research and practice. *Qualitative Social Work*, 0(0). <https://doi.org/10.1177/14733250231214512>
- El Sayed, S. A., Sanford, S. M., & Kerley, K. R. (2019). Understanding workplace stress among federal law enforcement officers. *American journal of criminal justice*, 44, 409-429. <https://doi.org/10.1007/s12103-019-09474-8>
- Elliot, D., Garg, B., Kuehl, K., DeFrancesco, C., & Sleigh, A. (2015). Why Are Women Law Enforcement Officers More Burned-Out and What Might Help Them?. *Occupational medicine & health affairs*, 3(3), 204. <https://doi.org/10.4172/2329-6879.1000204>
- Farnsworth, J.K. (2019), Is and Ought: Descriptive and Prescriptive Cognitions in Military-Related Moral Injury. *JOURNAL OF TRAUMATIC STRESS*, 32: 373-381. <https://doi.org/10.1002/jts.22356>
- Figley, C.R. (1995). *Compassion Fatigue: Coping With Secondary Traumatic Stress Disorder In Those Who Treat The Traumatized* (1st ed.). Routledge. <https://doi.org/10.4324/9780203777381>
- Figley, C.R., & McCubbin, H.I. (Eds.). (1983). *Stress And The Family: Coping With Catastrophe* (1st ed.). Routledge. <https://doi.org/10.4324/9781315791814>
- Finney, C., Stergiopoulos, E., Hensel, J. *et al.* Organizational stressors associated with job stress and burnout in correctional officers: a systematic review. *BMC Public Health* 13, 82 (2013). <https://doi.org/10.1186/1471-2458-13-82>
- Fiske, Z.R., Songer, D.M. & Schriver, J.L. A National Survey of Police Mental Health Training. *J Police Crim Psych* 36, 236–242 (2021). <https://doi.org/10.1007/s11896-020-09402-1>
- Forsyth, L. A., Lopez, S., & Lewis, K. A. (2022). Caring for sick kids: An integrative review of the evidence about the prevalence of compassion fatigue and effects on pediatric nurse

- retention. *Journal of pediatric nursing*, 63, 9–19.
<https://doi.org/10.1016/j.pedn.2021.12.010>
- Frankfurt, S., & Frazier, P. (2016). A Review of Research on Moral Injury in Combat Veterans. *Military Psychology*, 28. <https://doi.org/10.1037/mil0000132>
- Freudenberger, H.J. (1974). Staff burn-out. *Journal of Social Issues*, 30, 159-165.
<https://doi.org/10.1111/j.1540-4560.1974.tb00706.x>
- Fute, A., Sun, B., & Oubibi, M. (2022). Assessing Teaching Compassion, Work Engagement and Compassion Fatigue Among Teachers During the Pandemic. *Psychology Research and Behavior Management*, ume 15, 2561-2571. <https://doaj.org/article/3e0bee4fd6ed400e82cab8c38de07d75>
- Garbarino, S., Guglielmi, O., Puntoni, M., Bragazzi, N. L., & Magnavita, N. (2019). Sleep Quality among Police Officers: Implications and Insights from a Systematic Review and Meta-Analysis of the Literature. *International journal of environmental research and public health*, 16(5), 885. <https://doi.org/10.3390/ijerph16050885>
- Garnett, A., Hui, L., Oleynikov, C., Boamah, S., 2023. Compassion fatigue in healthcare providers: a scoping review. *BMC Health Services Research* 23.
<https://doi.org/10.1186/s12913-023-10356-3>
- Gilbert, P (2015), The Evolution and Social Dynamics of Compassion. *Social and Personality Psychology Compass*, 9, 239–254. <https://doi.org/10.1111/spc3.12176>.
- Glise, K., Ahlborg, G. & Jonsdottir, I.H. Course of mental symptoms in patients with stress-related exhaustion: does sex or age make a difference?. *BMC Psychiatry* 12, 18 (2012).
<https://doi.org/10.1186/1471-244X-12-18>
- Gomes, G. P., Ribeiro, N., & Gomes, D. R. (2022). *The Impact of Burnout on Police Officers' Performance and Turnover Intention: The Moderating Role of Compassion Satisfaction*. 12(3). <https://doi.org/10.3390/admsci12030092>
- Grant, H.B., Lavery, C.F., Decarlo, J., 2019. An Exploratory Study of Police Officers: Low Compassion Satisfaction and Compassion Fatigue. *Frontiers in Psychology* 9.
<https://doi.org/10.3389/fpsyg.2018.02793>
- Greinacher, A., Derezza-Greeven, C., Herzog, W., & Nikendei, C. (2019). Secondary traumatization in first responders: a systematic review. *European journal of psychotraumatology*, 10(1), 1562840. <https://doi.org/10.1080/20008198.2018.1562840>
- Griffin, B.J., Weber, M.C., Hinkson, K.D., Jendro, A.M., Pyne, J.M., Smith, A.J., Usset, T., Cucciare, M.A., Norman, S.B., Khan, A., Purcell, N., Maguen, S., 2023. Toward a Dimensional Contextual Model of Moral Injury: A Scoping Review on Healthcare Workers. *Current Treatment Options in Psychiatry* 10, 199–216.
<https://doi.org/10.1007/s40501-023-00296-4>

- Gustafsson, T., & Hemberg, J. (2022). Compassion fatigue as bruises in the soul: A qualitative study on nurses. *Nursing ethics*, 29(1), 157–170.
<https://doi.org/10.1177/09697330211003215>
- Gutschmidt, D., & Vera, A. (2020). Dimensions of police culture – a quantitative analysis. [Dimensions of police culture] *Policing*, 43(6), 963-977. <https://doi.org/10.1108/PIJPSM-06-2020-0089>
- Webster, J. H. (2014). Perceived stress among police officers: an integrative model of stress and coping. *Policing.*, 37(4), 839–857. <https://doi.org/10.1108/PIJPSM-06-2014-0064>
- Haidt, J. (2003). The Moral Emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Series in Affective Science. Handbook of Affective Sciences* (pp. 852-870). Oxford: Oxford University Press.
- Haidt, J. (2008). Morality. *Perspectives on Psychological Science*, 3(1), 65-72.
<https://doi.org/10.1111/j.1745-6916.2008.00063.x>
- Hall, N.A., Everson, A.T., Billingsley, M.R., Miller, M.B., 2022. Moral injury, mental health and behavioural health outcomes: A systematic review of the literature. *Clinical Psychology & Psychotherapy* 29, 92–110. <https://doi.org/10.1002/cpp.2607>
- Hardy, S. A., Francis, S. W., Zamboanga, B. L., Kim, S. Y., Anderson, S. G., & Forthun, L. F. (2013). The roles of identity formation and moral identity in college student mental health, health-risk behaviors, and psychological well-being. *Journal of clinical psychology*, 69(4), 364–382. <https://doi.org/10.1002/jclp.21913>
- Hartley, T. A., Burchfiel, C. M., Fekedulegn, D., Andrew, M. E., & Violanti, J. M. (2011). Health disparities in police officers: comparisons to the U.S. general population. *International journal of emergency mental health*, 13(4), 211–220.
- Haugen, P. T., McCrillis, A. M., Smid, G. E., & Nijdam, M. J. (2017). Mental health stigma and barriers to mental health care for first responders: A systematic review and meta-analysis. *Journal of psychiatric research*, 94, 218–229.
<https://doi.org/10.1016/j.jpsychires.2017.08.001>
- Hawkins, H. C. (2001). Police Officer Burnout: A Partial Replication of Maslach’s Burnout Inventory. *Police Quarterly*, 4(3), 343-360. <https://doi.org/10.1177/109861101129197888>
- Hayes, S.C., Hayes, L.J. and Reese, H.W. (1988), FINDING THE PHILOSOPHICAL CORE: A REVIEW OF STEPHEN C. PEPPER'S WORLD HYPOTHESES: A STUDY IN EVIDENCE. *Journal of the Experimental Analysis of Behavior*, 50: 97-111.
<https://doi.org/10.1901/jeab.1988.50-97>
- He, N. & Zhao, J.H., & Archbold, C. (2002). Gender and police stress: The convergent and divergent impact of work environment, work-family conflict, and stress coping

- mechanisms of female and male police officers. *Policing: An International Journal of Police Strategies & Management*. 25. 687-708. [10.1108/13639510210450631](https://doi.org/10.1108/13639510210450631).
- Hensel, J. M., Ruiz, C., Finney, C., & Dewa, C. S. (2015). Meta-analysis of risk factors for secondary traumatic stress in therapeutic work with trauma victims. *Journal of traumatic stress*, 28(2), 83–91. <https://doi.org/10.1002/jts.21998>
- Herbert, S. (1996). Morality in Law Enforcement: Chasing “Bad Guys” with the Los Angeles Police Department. *Law & Society Review*, 30(4), 799–818. <https://doi.org/10.2307/3054118>
- Hoffman, J., Liddell, B., Bryant, R.A., Nickerson, A., 2018. The relationship between moral injury appraisals, trauma exposure, and mental health in refugees. *Depression and Anxiety* 35, 1030–1039.. <https://doi.org/10.1002/da.22787>
- Hurrell, Amy-Kate & Draycott, Simon & Andrews, Leanne. (2018). Secondary traumatic stress in police officers investigating childhood sexual abuse. *Policing*. 41. <https://doi.org/10.1108/PIJPSM-08-2016-0131>.
- Jetelina, K.K., Beauchamp, A.M., Reingle Gonzalez, J.M. *et al.* Cumulative, high-stress calls impacting adverse events among law enforcement and the public. *BMC Public Health* 20, 1137 (2020). <https://doi.org/10.1186/s12889-020-09219-x>
- Jeong, K.-J. (1985). A New Approximation of the Critical Point of the Durbin-Watson Test for Serial Correlation. *Econometrica*, 53(2), 477–482. <https://doi.org/10.2307/1911249>
- Jinkerson, J. D. (2016). Defining and assessing moral injury: A syndrome perspective. *Traumatology*, 22(2), 122–130. <https://doi.org/10.1037/trm0000069>
- Jinkerson, J. D., & Battles, A. R. (2019). Relationships between moral injury syndrome model variables in combat veterans. *Traumatology*, 25(1), 33–40. <https://doi.org/10.1037/trm0000163>
- Kamkar, K., Russo, C., Chopko, B. A., Tuttle, B. M., Blumberg, D. M., & Papazoglou, K. (2020). Moral injury in law enforcement. In *POWER : police officer wellness, ethics, and resilience* / (pp. 117–128). Academic Press, an imprint of Elsevier. <https://doi.org/10.1016/B978-0-12-817872-0.00008-2>
- Koch, B.J., 2010. The Psychological Impact on Police Officers of Being First Responders to Completed Suicides. *Journal of Police and Criminal Psychology* 25, 90–98.. <https://doi.org/10.1007/s11896-010-9070-y>
- Kochanska, G., & Aksan, N. (2006). Children's conscience and self-regulation. *Journal of personality*, 74(6), 1587–1617. <https://doi.org/10.1111/j.1467-6494.2006.00421.x>

- Koenig, H. G., & Al Zaben, F. (2021). Moral Injury: An Increasingly Recognized and Widespread Syndrome. *Journal of religion and health*, 60(5), 2989–3011. <https://doi.org/10.1007/s10943-021-01328-0>
- Krettenauer, T., Murua, L. A., & Jia, F. (2016). Age-related differences in moral identity across adulthood. *Developmental Psychology*, 52(6), 972–984. <https://doi.org/10.1037/dev0000127>
- Kroes, W. H., Margolis, B. L., & Hurrell, J. J. (1974). Job stress in policemen. *Journal of Police Science & Administration*, 2(2), 145–155.
- Law Enforcement Mental Health and Wellness Act, Public Law 115–113 (2017).
- Lentz, L.M., Smith-Macdonald, L., Malloy, D., Carleton, R.N., Brémault-Phillips, S., 2021. Compromised Conscience: A Scoping Review of Moral Injury Among Firefighters, Paramedics, and Police Officers. *Frontiers in Psychology* 12.. <https://doi.org/10.3389/fpsyg.2021.639781>
- Lilly, M. M., Pole, N., Best, S. R., Metzler, T., & Marmar, C. R. (2009). Gender and PTSD: What can we learn from female police officers?. *Journal of anxiety disorders*, 23(6), 767–774. <https://doi.org/10.1016/j.janxdis.2009.02.015>
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198–1202.
- Litz, B.T., Kerig, P.K., 2019. Introduction to the Special Issue on Moral Injury: Conceptual Challenges, Methodological Issues, and Clinical Applications. *Journal of Traumatic Stress* 32, 341–349. <https://doi.org/10.1002/jts.22405>
- Lloyd, C. S., Nicholson, A. A., Densmore, M., Théberge, J., Neufeld, R. W. J., Jetly, R., McKinnon, M. C., & Lanius, R. A. (2021). Shame on the brain: Neural correlates of moral injury event recall in posttraumatic stress disorder. *Depression and anxiety*, 38(6), 596–605. <https://doi.org/10.1002/da.23128>
- Loftus, B. (2009), *Police Culture in a Changing World*, Oxford University Press, Oxford.
- Lourens, R. (2021). Burnout, Compassion Fatigue and Vicarious Trauma. *Clinical investigation*, 11, 37-40.
- M Russell, L. (2014). An empirical investigation of high-risk occupations. *Management Research Review*, 37(4), 367–384. <https://doi.org/10.1108/MRR-10-2012-0227>
- Maguen, S., Griffin, B. J., Copeland, L. A., Perkins, D. F., Finley, E. P., & Vogt, D. (2020). Gender differences in prevalence and outcomes of exposure to potentially morally injurious events among post-9/11 veterans. *Journal of Psychiatric Research*, 130, 97–103. <https://doi.org/10.1016/j.jpsychires.2020.06.020>

- Marill, K.A. (2004), Advanced Statistics: Linear Regression, Part II: Multiple Linear Regression. Academic Emergency Medicine, 11: 94-102. <https://doi.org/10.1197/j.aem.2003.09.006>
- Marques, Paulo & Paulino, Mauro. (2021). Introduction: Police Psychology and the Impact of Psychological Science on Policing. <https://doi.org/10.1016/B978-0-12-816544-7.02001-5>.
- Maslach C, Jackson SE. The measurement of experienced burnout. Journal of Occupational Behavior 1981; 2:99–113. <https://doi.org/10.1002/job.4030020205>
- Maslach, C. and Leiter, M.P. (2016), Understanding the burnout experience: recent research and its implications for psychiatry. World Psychiatry, 15: 103-111. <https://doi.org/10.1002/wps.20311>
- Maslach, C., Jackson, S.E., 1981. The measurement of experienced burnout. Journal of Organizational Behavior 2, 99–113. <https://doi.org/10.1002/job.4030020205>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. Annual review of psychology, 52, 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology*, 52, 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Maslach, Christina & Schaufeli, Wilmar & Leiter, Michael. (2001). Job Burnout. Annual Review of Psychology. 52. 397-422. <https://doi.org/10.1146/annurev.psych.52.1.397>.
- Maytum, J. C., Heiman, M. B., & Garwick, A. W. (2004). Compassion fatigue and burnout in nurses who work with children with chronic conditions and their families. *Journal of pediatric health care: official publication of National Association of Pediatric Nurse Associates & Practitioners*, 18(4), 171–179. <https://doi.org/10.1016/j.pedhc.2003.12.005>
- McCann, I.L., Pearlman, L.A. Vicarious traumatization: A framework for understanding the psychological effects of working with victims. J Trauma Stress 3, 131–149 (1990). <https://doi.org/10.1007/BF00975140>
- McDonald, J. (2017). Exploring moral injury in sacred texts. Jessica Kingsley Publishers.
- McKnight, P.E. and Najab, J. (2010). Mann-Whitney U Test. In The Corsini Encyclopedia of Psychology (eds I.B. Weiner and W.E. Craighead). <https://doi.org/10.1002/9780470479216.corpsy0524>
- Ménard, K. S., & Arter, M. L. (2013). Police officer alcohol use and trauma symptoms: Associations with critical incidents, coping, and social stressors. *International Journal of Stress Management*, 20(1), 37–56. <https://doi.org/10.1037/a0031434>

- Ménard, K. S., & Arter, M. L. (2013). Police officer alcohol use and trauma symptoms: Associations with critical incidents, coping, and social stressors. *International Journal of Stress Management*, 20(1), 37–56. <https://doi.org/10.1037/a0031434>
- Miller, A., Clery, S., Richardson, S., Topper, A., Cronen, S., Lilly, S., Hinkens, E., & Yin, M. (2016). Promising practices for increasing diversity among first responders. U.S. Department of Labor, Chief Evaluation Office.
- Molendijk, T. (2018). Toward an interdisciplinary conceptualization of moral injury: From unequivocal guilt and anger to moral conflict and disorientation. *New Ideas in Psychology*, 51, 1–8. <https://doi.org/10.1016/j.newideapsych.2018.04.006>
- Mooren, N., Boelen, P.A., De La Rie, S.M., 2022. The impact of morally injurious events in a refugee sample: A quantitative and qualitative study. *Frontiers in Psychiatry* 13. <https://doi.org/10.3389/fpsy.2022.904808>
- Morris, D. J., Webb, E. L., & Devlin, P. (2022). Moral injury in secure mental healthcare part II: experiences of potentially morally injurious events and their relationship to wellbeing in health professionals in secure services. *Journal of Forensic Psychiatry & Psychology*, 33(5), 726–744. <https://doi.org/10.1080/14789949.2022.2111319>
- Nash, W. P., Marino Carper, T. L., Mills, M. A., Au, T., Goldsmith, A., & Litz, B. T. (2013). Psychometric evaluation of the Moral Injury Events Scale. *Military medicine*, 178(6), 646–652. <https://doi.org/10.7205/MILMED-D-13-00017>
- Newburn, T. (2008). *Handbook of Policing*. Willan. <https://doi.org/10.4324/9780203118238>
- Newiss, G., Charman, S., Ilett, C., Bennett, S., Ghaemmaghami, A., Smith, P., & Inkpen, R. (2022). Taking the strain? Police well-being in the COVID-19 era. *The Police Journal*, 95(1), 88-108. <https://doi.org/10.1177/0032258X211044702>
- Nix, J., Pickett, J.T., Baek, H., Alpert, G.P., 2019. Police research, officer surveys, and response rates. *Policing and Society* 29, 530–550. <https://doi.org/10.1080/10439463.2017.1394300>
- Norton, L., Johnson, J., & Woods, G. (2016). Burnout and Compassion Fatigue: What Lawyers Need to Know. *UMKC Law Review*, 84(4), 987–1002. <https://heinonline.org/HOL/Page?handle=hein.journals/umkc84&div=50>
- Oosterholt, B. G., Maes, J. H. R., Van der Linden, D., Verbraak, M. J. P. M., & Kompier, M. A. J. (2016). Getting better, but not well: A 1.5 year follow-up of cognitive performance and cortisol levels in clinical and non-Clinical burnout. *Biological psychology*, 117, 89–99. <https://doi.org/10.1016/j.biopsycho.2016.02.009>
- Ormiston H.E., Nygaard M.A., Apgar S. A. (2022). Systematic Review of Secondary Traumatic Stress and Compassion Fatigue in Teachers. *School Mental Health*. 14(4):802-817. <https://doi.org/10.1007/s12310-022-09525-2>

- Ortega-Campos, E., Vargas-Román, K., Velando-Soriano, A., Suleiman-Martos, N., Cañadas-De la Fuente, G.A., Albendín-García, L., & Gómez-Urquiza, J.L. (2019). Compassion Fatigue, Compassion Satisfaction, and Burnout in Oncology Nurses: A Systematic Review and Meta-Analysis. *Sustainability*. <https://doi.org/10.3390/su12010072>
- Ostertagová, E., Ostertag, O., & Kováč, J. (2014). Methodology and Application of the Kruskal-Wallis Test. *Applied Mechanics and Materials*, 611, 115–120. <https://doi.org/10.4028/www.scientific.net/amm.611.115>
- Mccarty, William. (2013). Gender differences in burnout among municipal police sergeants. *Policing: An International Journal of Police Strategies and Management*. 36. <https://doi.org/10.1108/PIJPSM-03-2013-0026>.
- Paoline, E. A. III. (2003). Taking stock: Toward a richer understanding of police culture. *Journal of Criminal Justice*, 31(3), 199–214. [https://doi.org/10.1016/S0047-2352\(03\)00002-3](https://doi.org/10.1016/S0047-2352(03)00002-3)
- Paoline, E. A. III., & Gau, J. M. (2020). An Empirical Assessment of the Sources of Police Job Satisfaction. *Police Quarterly*, 23(1), 55-81. <https://doi.org/10.1177/1098611119875117>
- Papazoglou, K., & Chopko, B. (2017). The Role of Moral Suffering (Moral Distress and Moral Injury) in Police Compassion Fatigue and PTSD: An Unexplored Topic. *Frontiers in psychology*, 8, 1999. <https://doi.org/10.3389/fpsyg.2017.01999>
- Papazoglou, K., Koskelainen, M., & Stuewe, N. (2019). Examining the Relationship Between Personality Traits, Compassion Satisfaction, and Compassion Fatigue Among Police Officers. *SAGE Open*, 9(1). <https://doi.org/10.1177/2158244018825190>
- Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). The Role of Moral Injury in PTSD Among Law Enforcement Officers: A Brief Report. *Frontiers in psychology*, 11, 310. <https://doi.org/10.3389/fpsyg.2020.00310>
- Patrician, P.A. (2002), Multiple imputation for missing data†‡. *Res. Nurs. Health*, 25: 76-84. <https://doi.org/10.1002/nur.10015>
- Pelfrey, W. V., Jr. (2007). Style of policing adopted by rural police and deputies: An analysis of job satisfaction and community policing. *Policing*, 30(4), 620-636. <https://doi.org/10.1108/13639510710833901>
- Perez, L.M., Jones, J., Englert, D.R., Sachau, D., 2010. Secondary Traumatic Stress and Burnout among Law Enforcement Investigators Exposed to Disturbing Media Images. *Journal of Police and Criminal Psychology* 25, 113–124. <https://doi.org/10.1007/s11896-010-9066-7>
- Peterson, S. A., Wolkow, A. P., Lockley, S. W., O'Brien, C.S., Qadri, S., Sullivan, J. P., Czeisler, C. A., Rajaratnam, S. M. W., & Barger, L. K. (2019). Associations between shift work characteristics, shift work schedules, sleep and burnout in North American police

- officers: a cross-sectional study. *BMJ Open*, 9(11) <https://doi.org/10.1136/bmjopen-2019-030302>
- Poole, M. S., & van de Ven, A. H. (1989). Using Paradox to Build Management and Organization Theories. *The Academy of Management Review*, 14(4), 562–578. <https://doi.org/10.2307/258559>
- Queirós, Cristina & Kaiseler, Mariana & Silva, António. (2013). Burnout as predictor of aggressivity among police officers. *European Journal of Policing Studies*. 1. 110-134. <https://doi.org/10.5553/EJPS/2034760X2013001002003>.
- Raganella, A. J., & White, M. D. (2004). Race, gender, and motivation for becoming a police officer: Implications for building a representative police department. *Journal of Criminal Justice*, 32(6), 501-513. <https://doi.org/10.1016/j.jcrimjus.2004.08.009>
- Ramey S.L., Downing N.R., Franke W.D. (2009). Milwaukee Police Department Retirees: Cardiovascular Disease Risk and Morbidity among Aging Law Enforcement Officers. *AAOHN Journal*. 57. 448-453. <https://doi.org/10.1177/216507990905701103>
- Ramey, S. L., Perkhounkova, Y., Moon, M., Budde, L., Tseng, H. C., & Clark, M. K. (2012). The effect of work shift and sleep duration on various aspects of police officers' health. *Workplace health & safety*, 60(5), 215–222. <https://doi.org/10.1177/216507991206000505>
- Reiser, M. (1972). *The police department psychologist*. Springfield, IL: Charles C. Thomas.
- Riedel, P., Kreh, A., Kulcar, V., Lieber, A., & Juen, B. (2022). A Scoping Review of Moral Stressors, Moral Distress and Moral Injury in Healthcare Workers during COVID-19. *International Journal of Environmental Research and Public Health*, 19(3), 1666. <https://doi.org/10.3390/ijerph19031666>
- Sabo, B. (2011). Reflecting on the Concept of Compassion Fatigue. *Online Journal of Issues in Nursing*, 16(1), 1. <https://doi.org/10.3912/OJIN.Vol16No01Man01>
- Schafer JL. Multiple imputation: a primer. *Statistical Methods in Medical Research*. 1999;8(1):3-15. doi:10.1177/096228029900800102
- Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International*, 14(3), 204-220. <https://doi.org/10.1108/13620430910966406>
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation Coefficients: Appropriate Use and Interpretation. *Anesthesia and analgesia*, 126(5), 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>

- Scott, Y. M. (2004). Stress among Rural and Small-Town Patrol Officers: A Survey of Pennsylvani Municipal Agencies. *Police Quarterly*, 7(2), 237-261. <https://doi.org/10.1177/1098611103258958>
- Sherwood, L., Hegarty, S., Vallières, F., Hyland, P., Murphy, J., Fitzgerald, G. and Reid, T. (2019), Identifying the Key Risk Factors for Adverse Psychological Outcomes Among Police Officers: A Systematic Literature Review. *JOURNAL OF TRAUMATIC STRESS*, 32: 688-700. <https://doi.org/10.1002/jts.22431>
- Silvestri, M. (2017). Police culture and gender: Revisiting the ‘cult of masculinity’. *Policing: A Journal of Policy and Practice*, 11(3), 289-300. <https://doi.org/10.1093/police/paw052>
- Sinclair, S., Raffin-Bouchal, S., Venturato, L., Mijovic-Kondejewski, J., & Smith-MacDonald, L. (2017). Compassion fatigue: A meta-narrative review of the healthcare literature. *International journal of nursing studies*, 69, 9–24. <https://doi.org/10.1016/j.ijnurstu.2017.01.003>
- Soomro, S., Yanos, P.T. Predictors of Mental Health Stigma among Police Officers: the Role of Trauma and PTSD. *J Police Crim Psych* 34, 175–183 (2019). <https://doi.org/10.1007/s11896-018-9285-x>
- Sorenson, C., Bolick, B., Wright, K. and Hamilton, R. (2017), An Evolutionary Concept Analysis of Compassion Fatigue. *Journal of Nursing Scholarship*, 49: 557-563. <https://doi.org/10.1111/jnu.12312>
- Sorenson, C., Bolick, B., Wright, K., & Hamilton, R. (2016). Understanding Compassion Fatigue in Healthcare Providers: A Review of Current Literature. *Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing*, 48(5), 456–465. <https://doi.org/10.1111/jnu.12229>
- Sprang, G., Ford, J., Kerig, P., & Bride, B. (2018, November 15). Defining Secondary Traumatic.
- Stamm, B. (2010). *The Concise ProQOL Manual: The concise manual for the Professional Quality of Life Scale*, 2nd Edition.
- Stratton, J. G. (1980). Psychological services for police. *Journal of Police Science and Administration*, 3,31-39
- Stress and Developing Targeted Assessments and Interventions: Lessons Learned From Research and Leading Experts. *Traumatology*. Advance online publication. <http://dx.doi.org/10.1037/trm0000180>
- Stufano, A., Awoonor-Williams, J. K., & Vimercati, L. (2022). Editorial: Factors and health outcomes of job burnout. *Frontiers in public health*, 10, 1023462. <https://doi.org/10.3389/fpubh.2022.1023462>

- Sun D, Phillips RD, Mulready HL, et al. Resting-state brain fluctuation and functional connectivity dissociate moral injury from posttraumatic stress disorder. *Depress Anxiety*. 2019; 36: 442–452. <https://doi.org/10.1002/da.22883>
- Teplin, L. A., & Pruett, N. S. (1992). Police as streetcorner psychiatrist: managing the mentally ill. *International journal of law and psychiatry*, 15(2), 139–156. [https://doi.org/10.1016/0160-2527\(92\)90010-x](https://doi.org/10.1016/0160-2527(92)90010-x)
- Terman, L. M., Otis, A. S., Dickson, V., Hubbard, O. S., Norton, J. K., Howard, L., & Cassingham, C. C. (1917). A trial of mental and pedagogical tests in a civil service examination for policemen and firemen. *Journal of Applied Psychology*, 1(1), 17e29. <https://doi.org/10.1037/h0073841>.
- Terpstra, J., & Schaap, D. (2013). Police culture, stress conditions and working styles. *European Journal of Criminology*, 10(1), 59-73. <https://doi.org/10.1177/1477370812456343>
- The Associated Press (2023, September 6). The U.S. is experiencing a police hiring crisis. *NBC News*. <https://www.nbcnews.com/news/us-news/us-experiencing-police-hiring-crisis-rcna103600>
- Thibodeau, P. S., Nash, A., Greenfield, J. C., & Bellamy, J. L. (2023). The Association of Moral Injury and Healthcare Clinicians' Wellbeing: A Systematic Review. *International journal of environmental research and public health*, 20(13), 6300. <https://doi.org/10.3390/ijerph20136300>
- Thomas, V., Bizumic, B., Cruwys, T., & Walsh, E. (2024). Measuring civilian moral injury: Adaptation and validation of the Moral Injury Events Scale (Civilian) and Expressions of Moral Injury Scale (Civilian). *Psychological Trauma: Theory, Research, Practice, and Policy*, 16(2), 270–279. <https://doi.org/10.1037/tra0001490>
- Turgoose, D., Glover, N., Barker, C., & Maddox, L. (2017). Empathy, compassion fatigue, and burnout in police officers working with rape victims. *Traumatology*, 23(2), 205–213. <https://doi.org/10.1037/trm0000118>
- Turgoose, D., Glover, N., Barker, C., & Maddox, L. (2017). Empathy, compassion fatigue, and burnout in police officers working with rape victims. *Traumatology*, 23(2), 205–213. <https://doi.org/10.1037/trm0000118>
- Tuttle, B. & Stancel, K., Russo, C., Koskelainen, M. & Papazoglou, K. (2019). Police Moral Injury, Compassion Fatigue, and Compassion Satisfaction: A Brief Report. *Salus Journal*, 7(1), 42–57. <https://search.informit.org/doi/10.3316/informit.301282217090422>
- Van Maanen, J. (1975). Police Socialization: A Longitudinal Examination of Job Attitudes in an Urban Police Department. *Administrative Science Quarterly*, 20(2), 207–228. <https://doi.org/10.2307/2391695>

- Violanti, J. M., Fekedulegn, D., Hartley, T. A., Andrew, M. E., Gu, J. K., & Burchfiel, C. M. (2013). Life expectancy in police officers: a comparison with the U.S. general population. *International journal of emergency mental health*, 15(4), 217–228.
- Violanti, J. M., & Marshall, J. R., “The police stress process” in *Journal of Police Science and Administration*, 11, 389–394.
- Violanti, J. M., Mnatsakanova, A., Andrew, M. E., Allison, P., Gu, J. K., & Fekedulegn, D. (2018). Effort–Reward Imbalance and Overcommitment at Work: Associations With Police Burnout. *Police Quarterly*, 21(4), 440-460.
<https://doi.org/10.1177/1098611118774764>
- Violanti, John & Gehrke, Anne. (2004). Police trauma encounters: Precursors of compassion fatigue. *International journal of emergency mental health*. 6. 75-80.
- Waters, J. A., & Ussery, W. (2007). Police stress: history, contributing factors, symptoms, and interventions. *Policing.*, 30(2), 169–188. <https://doi.org/10.1108/13639510710753199>
- Webster's. (1989). *Webster's Encyclopedic Unabridged Dictionary of the English Language*. Portland House.
- Winterich, K. P., Mittal, V., & Ross, W. T. (2009). Donation behavior toward in-groups and out-groups: The role of gender and moral identity. *Journal of Consumer Research*, 36(2), 199-214. <https://doi.org/10.1086/596720>
- Wyatt-Nichol, H., & Franks, G. (2009). Ethics Training in Law Enforcement Agencies. *Public Integrity*, 12, 39 - 50. <https://doi.org/10.2753/PIN1099-9922120103>
- Zhang, Y. Y., Zhang, C., Han, X. R., Li, W., & Wang, Y. L. (2018). Determinants of compassion satisfaction, compassion fatigue and burn out in nursing: A correlative meta-analysis. *Medicine*, 97(26), e11086. <https://doi.org/10.1097/MD.0000000000011086>

Vita

Catherine Floyd was born on October 2nd, 2001, in Hinsdale, Illinois. They graduated from Mill Creek High School in 2020. They received a bachelor's degree in criminal justice from Georgia State University in 2022. They entered Georgia State University's Master's degree program for criminal justice in August of 2022. Throughout their time in the Georgia State University Master's degree program, they worked as a graduate teaching assistant at the University from 2022-2024. They also worked for the University as a as a Writing Across the Curriculum (WAC) consultant, serving as a writing assistant for undergraduate students. They will graduate with a master's degree in criminal justice in August of 2024.