

# Theoretical Frameworks for Understanding Moral Injury in Military Service

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## Author note

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## Abstract

Moral injury, a complex psychological phenomenon arising from moral conflicts within military contexts, is the focus of this review. Drawing upon diverse theoretical frameworks, including ethical theories such as deontology, consequentialism, and virtue ethics, as well as psychological models like cognitive-behavioral theories and trauma theories, this paper aims to deepen the understanding of moral injury among military personnel. Social and cultural perspectives, encompassing organizational dynamics, leadership styles, peer interactions, and societal norms, are examined for their influence on moral experiences and moral injury outcomes. Additionally, neurobiological approaches utilizing functional neuroimaging techniques are explored to elucidate the neural mechanisms underlying moral processing and emotional responses in the context of moral injury. The integration of these theoretical perspectives informs discussions on integrated interventions targeting cognitive, emotional, social, and neurobiological dimensions to effectively address moral injury in clinical practice. Furthermore, policy implications, research priorities, and educational initiatives are highlighted to guide efforts in prevention, management, and mitigation of moral injury within military service.

## Introduction

Moral injury, a concept that has gained increasing recognition in the context of military service, refers to the psychological distress that arises from actions or the absence of action that violates deeply held moral beliefs and values (Litz et al., 2009). This distressing phenomenon, distinct from conventional trauma, has been associated with a spectrum of adverse mental health outcomes among military personnel, including depression, anxiety, and suicidal tendencies (Bryan et al., 2016; Currier et al., 2015). As such, a nuanced understanding of moral injury is imperative for the development of effective interventions and support systems for affected individuals.

Theoretical frameworks are instrumental in unpacking the intricacies of moral injury and its ramifications. Ethical frameworks such as deontology and consequentialism offer insights into the moral decision-making processes that can culminate in moral injury. Deontology emphasizes moral duties and obligations, while consequentialism focuses on the outcomes of actions (Pattison, 2018). These ethical perspectives illuminate the complexities of moral reasoning within military contexts, where ethical dilemmas and conflicting moral imperatives are commonplace.

## Keywords:

Military contexts, Moral injury, Neurobiological approaches, Theoretical frameworks

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Moreover, virtue ethics provides a valuable lens through which to examine moral resilience and coping strategies in the face of moral challenges (Litz, 2020). This framework centers on character development and the cultivation of moral virtues, shedding light on the capacity of individuals to navigate morally fraught situations without succumbing to moral injury.

Psychological models complement ethical frameworks by elucidating the cognitive and emotional mechanisms underlying moral injury. Cognitive-behavioral theories highlight the role of cognitive dissonance and moral reasoning in shaping moral judgments and reactions to moral transgressions (Nash et al., 2013). Trauma theories, particularly those addressing moral trauma, delve into the enduring psychological impact of morally injurious events, emphasizing the need for trauma-informed interventions (Maguen&Litz, 2012).

Psychodynamic perspectives offer insights into unconscious processes and unresolved moral conflicts that may contribute to the development of moral injury symptoms (Maguen&Burkman, 2013). These frameworks underscore the interplay between conscious and unconscious psychological processes in shaping moral beliefs, attitudes, and behaviors within military contexts.

Furthermore, social and cultural factors exert a profound influence on the experience of moral injury. Organizational dynamics, leadership styles, and peer interactions within military units can either mitigate or exacerbate moral distress (Frankfurt, 2016). Societal expectations, norms, and values also play a pivotal role in shaping individual moral frameworks and responses to morally challenging situations (Cameron &Litz, 2021).

In recent years, neurobiological approaches have been increasingly integrated into the study of moral injury, providing insights into the underlying neural mechanisms. Functional neuroimaging studies have identified brain regions involved in moral processing, empathy, and moral emotions, shedding light on the neurobiological underpinnings of moral injury (Koenigs, 2012; Verger et al., 2020). This interdisciplinary perspective bridges the gap between psychological and neuroscientific understandings of moral injury, paving the way for novel therapeutic interventions targeting neural circuits implicated in moral decision-making and emotional regulation.

This review paper aims to synthesize these diverse theoretical frameworks and their contributions to the understanding of moral injury in military service. By examining ethical, psychological, social, and neurobiological perspectives, this paper seeks to provide a comprehensive overview that informs

clinical practice, policy development, and future research endeavors.

## **Literature Review**

### **1. Ethical Frameworks:**

Ethical theories provide a foundational understanding of moral decision-making processes and their implications for moral injury within military contexts.

- **Deontological Ethics:**Deontological ethics, proposed by Immanuel Kant, emphasizes moral duties and obligations based on universal principles (Pattison, 2018). Within the military, adherence to codes of conduct and rules of engagement reflects deontological principles, guiding soldiers' actions based on moral imperatives rather than consequences (Pattison, 2018). Violations of these moral duties can lead to moral injury, as individuals may experience cognitive dissonance between their actions and moral beliefs (Nash et al., 2013).
- **Consequentialism:**Consequentialist theories, such as utilitarianism, focus on the outcomes or consequences of actions to determine their moral worth (Pattison, 2018). In military decision-making, consequentialist reasoning may prioritize achieving strategic objectives or minimizing casualties, potentially leading to moral dilemmas and moral injury if actions conflict with individuals' deeply held values (Nash et al., 2013).
- **Virtue Ethics:**Virtue ethics, rooted in Aristotle's philosophy, centers on character development and moral virtues (Litz, 2020). Within the military, cultivating virtues such as courage, integrity, and honor is essential for ethical decision-making and moral resilience (Litz, 2020). However, challenges arise when military personnel face morally ambiguous situations or orders that contradict virtuous behavior, contributing to moral distress and potential injury (Maguen&Burkman, 2013).
- **Ethical Leadership:**Ethical leadership plays a crucial role in mitigating moral injury within military units (Frankfurt, 2016). Leaders who prioritize ethical decision-making, transparency, and accountability foster a culture of trust and moral integrity, reducing the likelihood of moral transgressions that could lead to moral injury (Frankfurt, 2016). Conversely, unethical leadership practices, such as moral disengagement or disregard for ethical norms, can contribute to moral distress and erosion of moral values among service members (Frankfurt, 2016).

## 2. Psychological Models:

Psychological theories provide insights into the cognitive, emotional, and behavioral processes underlying moral injury and its impact on military personnel.

- **Cognitive-Behavioral Theories:** Cognitive-behavioral theories emphasize the role of cognitive processes and behavioral responses in shaping moral judgments and reactions to moral transgressions (Nash et al., 2013). According to cognitive dissonance theory, individuals experience psychological discomfort when their actions conflict with their moral beliefs, contributing to moral distress and potential injury (Nash et al., 2013). Cognitive-behavioral interventions focus on addressing cognitive distortions and promoting adaptive coping strategies to mitigate the adverse effects of moral injury (Nash et al., 2013).
- **Trauma Theories:** Trauma theories, particularly those addressing moral trauma, elucidate the enduring psychological impact of morally injurious events (Maguen & Litz, 2012). Exposure to morally challenging situations, such as witnessing or participating in acts that violate one's moral code, can lead to symptoms of post-traumatic stress and moral injury (Maguen & Litz, 2012). Trauma-informed interventions, incorporating principles of safety, trust, and empowerment, are essential for addressing the complex sequelae of moral trauma and promoting healing (Maguen & Litz, 2012).
- **Psychodynamic Perspectives:** Psychodynamic perspectives delve into unconscious processes and unresolved conflicts that may underlie symptoms of moral injury (Maguen & Burkman, 2013). Internal conflicts stemming from moral dilemmas or ethical compromises can manifest as guilt, shame, and emotional distress, contributing to the development of moral injury symptoms (Maguen & Burkman, 2013). Psychodynamic therapy aims to explore these underlying dynamics, facilitate insight, and promote psychological integration to address moral injury (Maguen & Burkman, 2013).
- **Cognitive Appraisal Models:** Cognitive appraisal models highlight the role of appraisals and interpretations of morally challenging events in shaping emotional responses and coping strategies (Litz et al., 2009). Perceived moral violations or betrayals of trust can evoke intense emotional reactions, such as anger, betrayal, and existential questioning, contributing to moral injury (Litz et al., 2009). Cognitive restructuring and emotion regulation techniques are integral components of interventions targeting cognitive appraisals and emotional

responses related to moral injury (Litz et al., 2009).

## 3. Social and Cultural Perspectives:

Social and cultural factors play a significant role in shaping the experience of moral injury among military personnel, influencing moral decision-making processes and responses to morally challenging situations.

- **Organizational Dynamics:** Organizational dynamics within military units can either mitigate or exacerbate moral distress and moral injury (Frankfurt, 2016). Supportive leadership, clear communication of values, and ethical decision-making frameworks contribute to a positive organizational climate that promotes ethical conduct and reduces the likelihood of moral transgressions (Frankfurt, 2016). Conversely, organizational factors such as ambiguous policies, moral disengagement, and toxic leadership can contribute to moral distress and undermine moral integrity (Frankfurt, 2016).
- **Leadership Styles:** Different leadership styles impact moral decision-making and moral injury outcomes within military units (Frankfurt, 2016). Ethical leadership characterized by integrity, accountability, and transparency fosters a culture of moral responsibility and ethical behavior, reducing the risk of moral injury (Frankfurt, 2016). Authoritarian or laissez-faire leadership styles, on the other hand, may contribute to moral dilemmas and moral disengagement, increasing the likelihood of moral injury (Frankfurt, 2016).
- **Peer Interactions:** Peer dynamics and social support networks play a crucial role in mitigating the effects of moral injury (Cameron & Litz, 2021). Positive peer interactions, camaraderie, and mutual trust within military units provide emotional support and validation, buffering against the psychological impact of moral challenges (Cameron & Litz, 2021). Peer support programs and group interventions can enhance resilience and coping strategies among service members affected by moral injury (Cameron & Litz, 2021).
- **Societal Norms and Values:** Societal expectations, norms, and values influence individual moral frameworks and responses to morally challenging situations (Cameron & Litz, 2021). Cultural attitudes towards violence, honor, and duty shape perceptions of moral conduct and the justification of moral decisions within military contexts (Cameron & Litz, 2021). Awareness of cultural diversity and

sensitivity to moral differences are essential for promoting ethical decision-making and addressing moral injury across diverse cultural backgrounds (Cameron & Litz, 2021).

#### **4. Neurobiological Approaches:**

Neurobiological research provides valuable insights into the underlying neural mechanisms associated with moral injury and its impact on military personnel.

- **Functional Neuroimaging Studies:** Functional neuroimaging techniques, such as fMRI (functional magnetic resonance imaging), have identified specific brain regions involved in moral processing, empathy, and moral emotions (Koenigs, 2012; Verger et al., 2020). The ventromedial prefrontal cortex (vmPFC), anterior cingulate cortex (ACC), and insula are among the key brain areas implicated in moral decision-making and emotional responses to moral dilemmas (Koenigs, 2012; Verger et al., 2020). Dysregulation or hyperactivity in these neural circuits may contribute to altered moral judgments and increased susceptibility to moral injury (Koenigs, 2012; Verger et al., 2020).
- **Neural Correlates of Moral Emotions:** Research on neural responses to moral emotions, such as guilt, shame, and empathy, has highlighted the role of the amygdala, prefrontal cortex, and temporoparietal junction (TPJ) (Verger et al., 2020). These brain regions play a crucial role in processing social and emotional information, influencing moral decision-making and interpersonal interactions (Verger et al., 2020). Disruptions in these neural networks may contribute to the emotional distress and interpersonal difficulties characteristic of moral injury (Verger et al., 2020).
- **Neuroplasticity and Resilience:** Neurobiological studies also explore the mechanisms of neuroplasticity and resilience in response to moral injury (Koenigs, 2012). Adaptive changes in neural connectivity and synaptic plasticity may facilitate emotional regulation, cognitive reappraisal, and coping strategies, promoting resilience in individuals exposed to morally challenging experiences (Koenigs, 2012). Understanding the neurobiological underpinnings of resilience can inform interventions aimed at enhancing psychological well-being and recovery from moral injury (Koenigs, 2012).
- **Neuroethical Considerations:** Neuroethical considerations, such as privacy, autonomy, and informed consent, are integral to neurobiological research on moral injury (Koenigs, 2012). Ethical guidelines and

frameworks ensure the responsible use of neuroimaging technologies and the ethical conduct of research involving human participants, safeguarding their rights and well-being (Koenigs, 2012).

#### **Scope and Method**

This paper undertakes a comprehensive theoretical review to synthesize and analyze various frameworks pertinent to understanding moral injury in military service. The scope of this review encompasses ethical theories, psychological models, social and cultural perspectives, and neurobiological approaches that collectively contribute to a multifaceted understanding of moral injury. The primary focus is on military personnel who have encountered morally injurious experiences during their service, with the goal of integrating diverse perspectives to inform clinical practice, policy development, and future research.

**Literature Selection Process:** To ensure a broad and representative coverage of relevant theoretical frameworks, a systematic approach was employed to identify and select academic sources. The literature was sourced from peer-reviewed journals, books, and authoritative publications in the fields of psychology, ethics, neuroscience, and military studies. Databases such as PsycINFO, PubMed, and JSTOR were extensively searched using key terms like “moral injury,” “military ethics,” “neurobiology of moral injury,” “psychological models,” and “cultural factors in moral injury.”

**Inclusion and Exclusion Criteria:** Inclusion criteria focused on literature that explicitly addressed moral injury within military contexts, provided theoretical or empirical insights into the ethical, psychological, social, or neurobiological dimensions of moral injury, and was published in English. Excluded from this review were studies that did not specifically address moral injury or were not relevant to the military context.

**Analytical Framework:** The selected literature was analyzed using a thematic approach, identifying key themes and concepts across the four primary domains: ethical theories, psychological models, social and cultural perspectives, and neurobiological approaches. Each theoretical framework was examined for its contribution to understanding the etiology, manifestations, and potential interventions for moral injury. The integration of these frameworks aimed to provide a comprehensive and coherent understanding of moral injury, which could be translated into practical applications in clinical settings and policy-making.

#### **Findings**

The integration of multiple theoretical frameworks reveals several critical insights into the nature and impact of moral injury among military personnel:

### **1. Moral Decision-Making and Ethical Theories:**

The exploration of ethical frameworks, such as deontology, consequentialism, and virtue ethics, illustrates how moral injury arises when there is a conflict between duty, consequences, and virtues. Deontological theories focus on the distress caused when actions violate moral duties, leading to cognitive dissonance and moral injury (Pattison, 2018). Consequentialist perspectives reveal the tension between achieving strategic military objectives and maintaining personal moral values, which exacerbates moral injury (Nash et al., 2013). Virtue ethics highlights how the erosion of virtues like integrity and honor contributes to the psychological distress experienced during morally injurious events (Litz, 2020; Maguen&Burkman, 2013).

### **2. Psychological Models and Cognitive-Emotional Processes:**

Cognitive-behavioral theories emphasize the role of cognitive dissonance and moral reasoning in moral injury, particularly how conflicting actions and beliefs create significant emotional distress (Nash et al., 2013). Trauma theories, including those focusing on moral trauma, stress the lasting impact of morally injurious events and underscore the need for trauma-informed care that addresses these unique challenges (Maguen&Litz, 2012). Additionally, psychodynamic theories provide insight into how unconscious conflicts and unresolved moral dilemmas manifest in symptoms like guilt, shame, and psychological distress (Maguen&Burkman, 2013).

### **3. Social and Cultural Influences:**

Social and cultural factors, including military organizational dynamics and societal norms, play a critical role in the experience of moral injury. The presence of ethical leadership and a supportive military culture can protect against moral injury, while toxic leadership and ambiguous ethical standards can increase the risk (Frankfurt, 2016). Cultural values and societal expectations also shape how individuals perceive and respond to morally challenging situations (Cameron &Litz, 2021).

### **4. Neurobiological Mechanisms:**

Neurobiological research identifies key brain regions, such as the ventromedial prefrontal cortex (vmPFC) and anterior cingulate cortex (ACC), that are involved in moral decision-making and emotional regulation. Disruptions in these neural circuits are associated with altered moral judgments and emotional responses, contributing to moral injury (Koenigs, 2012). Studies on neuroplasticity suggest that changes in neural connectivity may enhance resilience and recovery in those exposed to morally injurious experiences (Verger et al., 2020).

## **Discussion**

### **1. Integration of Theoretical Frameworks:**

The synthesis of ethical, psychological, social, and neurobiological frameworks offers a comprehensive understanding of moral injury in military service. Ethical theories such as deontology, consequentialism, and virtue ethics provide insights into the moral decision-making processes that underpin moral injury (Pattison, 2018; Litz, 2020). Cognitive-behavioral and trauma theories elucidate the cognitive and emotional responses, as well as the enduring impact of morally injurious events (Nash et al., 2013; Maguen&Litz, 2012). Social and cultural perspectives highlight the influence of contextual factors, including military organizational dynamics, leadership styles, and broader societal norms, on the development and experience of moral injury (Frankfurt, 2016; Cameron &Litz, 2021). Neurobiological approaches contribute a deeper understanding of the neural mechanisms and neuroplasticity associated with moral decision-making and emotional regulation, further enriching the conceptualization of moral injury (Koenigs, 2012; Verger et al., 2020).

### **2. Implications for Clinical Practice:**

The complexity of moral injury necessitates comprehensive and tailored interventions that address its cognitive, emotional, social, and neurobiological dimensions. Cognitive-behavioral therapies that focus on cognitive restructuring, emotion regulation, and moral reasoning can help individuals resolve moral conflicts and alleviate distress (Nash et al., 2013). Trauma-informed approaches, which incorporate exposure therapy and narrative techniques, are effective in processing and integrating morally injurious experiences (Maguen&Litz, 2012). Social interventions, including peer support programs and ethical leadership training, can enhance resilience and mitigate the negative effects of moral injury within military units (Frankfurt, 2016; Cameron &Litz, 2021). Neurobiologically informed treatments targeting specific neural circuits implicated in moral decision-making and emotional regulation hold promise for improving therapeutic outcomes and promoting recovery (Koenigs, 2012; Verger et al., 2020).

### **3. Policy and Research Implications:**

Addressing moral injury requires a holistic approach that encompasses policy reforms, research advancements, and educational initiatives. Policies that emphasize ethical leadership, organizational ethics, and mental health support are essential for creating environments that minimize the incidence of moral injury (Frankfurt, 2016). Future research should prioritize longitudinal studies, neuroimaging research, and clinical trials to deepen our understanding of the mechanisms underlying moral injury and to develop evidence-based interventions

(Koenigs, 2012; Verger et al., 2020). Educational programs designed to raise awareness, enhance ethical decision-making, and foster moral resilience are critical for the prevention and mitigation of moral injury in military service (Pattison, 2018; Litz, 2020).

### Conclusion

In conclusion, this review paper provides a nuanced exploration of theoretical frameworks for understanding moral injury in military service. It highlights the interconnectedness of ethical, psychological, social, and neurobiological factors in shaping the experience of moral injury and underscores the necessity of comprehensive approaches to support the well-being of military personnel affected by moral injury.

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