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Understanding the Impact and Treatment of Moral Injury Among Military Service Members

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Abstract

Moral injury refers to a set of reactions to acts of perpetration or commission that violate an individual's deeply held beliefs and moral values. Although there is consensus that military service increases exposure to morally injurious events, there is no clear definition on what events do and do not constitute moral injury, which makes drawing firm conclusions regarding the prevalence of moral injury among military populations difficult. Exposure to morally injurious events places individuals at a greater risk for a range of poor mental health outcomes, which may be mediated by negative posttraumatic cognitions. Therefore, treatments that emphasize restructuring such cognitions are likely to be effective in treating the effects of moral injury, though data are lacking. In this article, we provide an overview of the key scientific findings regarding moral injury and highlight areas where future research is needed. Potential challenges in treating the negative sequelae of moral injury are also discussed.

Moral injury is a relatively new term that is intended to capture reactions to extreme life experiences that violate individuals' deeply held beliefs or moral values. For military personnel, the term is intended to capture the inner turmoil that service members may experience following war-zone events that involve acts of perpetration or omission or the witnessing of acts that are perceived as moral violations. Moral injury encompasses many concepts, including guilt, shame, betrayal, and spiritual concerns, among others, that have independently received significant attention from researchers and clinicians alike. In this article, we review the construct of moral injury as it pertains to military service members, highlight existing limitations in the literature, and provide directions for future study. We also provide treatment information based on available research and highlight potential challenges that providers may face when working with service members or veterans who have experienced moral injury.

Morally Injurious War-Zone Experiences

While deployed, military service members encounter various extreme and unprecedented events. Commonly reported deployment-related experiences include firefights, explosions, exposure to serious injury or death, exposure to toxic substances, or witnessing human suffering (1). Investigators have historically focused on how these events can produce extreme fear and can lead to persistent anxiety. Notably, in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (2), the subjective experience of fear, helplessness, or horror was required for the diagnosis of a traumatic event, and posttraumatic stress disorder (PTSD) was included among the anxiety disorders. However, researchers have increasingly recognized that there are various deeply distressing combat and deployment experiences that may not elicit fear but may cause other significant emotional reactions, such as trauma-related guilt and shame, feelings of betrayal, and existential or spiritual dilemmas (3–5). This led to a change in the diagnostic requirements for PTSD in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; 6), eliminating the criterion that required subjective feelings of fear, helplessness, or horror to qualify as a traumatic event.

Given greater recognition of the wide range of traumatic situations that individuals can possibly experience, researchers have recently begun to categorize events based on common emotional posttrauma reactions (5). Three broad categories have been suggested for the classification of traumatic events: fear-based, loss-based, and moral-injury-based events (5). As the name suggests, fear-based events involve situations in which an individual experiences intense anxiety. A common example of a fear-based traumatic event is an explosion of an improvised explosive device, or IED, or being shot at by the enemy. Loss-based traumatic events involve the actual or perceived loss of life, such as in situations when a fellow service member is severely wounded or killed in action. Moral-injury-based events refer to situations that have the potential to violate service members' deeply held moral beliefs or values. Moral-injury-based events may entail acts of perpetration (e.g., prescribed killing) or omission (e.g., choosing not to help an individual in need), being the victim of another's transgression (e.g., physical and sexual assaults), bearing witness to intense human suffering (e.g., starvation or mistreatment), or mistakes and accidents that cause harm (e.g., friendly-fire incidents).

Whereas fear- and loss-based events have long been recognized as traumatogenic, and have been the focus of many theories and evidence-based trauma treatments, the scientific community has only recently begun to examine the effects that moral-injury-based events have on service members' mental health and functioning (4, 5, 7–10). Thus, the construct of moral injury is currently in its infancy, despite the frequent occurrence of morally injurious war-zone experiences and their association with significant psychopathology (10, 11). Given its nascence, there is currently no agreed-upon definition of what is considered a morally injurious war-zone event. Most of the research on morally injurious experiences has focused on the act of causing harm to or killing other human beings in the context of armed conflicts or war (1, 12–15), or war

atrocities such as mutilating dead bodies or using excessive violence on combatants and noncombatants (12). Regardless of whether causing harm or killing occurred intentionally or accidentally, or whether the target of these actions were combatants or noncombatants, these situations can violate service members' deeply held beliefs and moral values. Despite explicitly training for situations that may involve the killing of enemy combatants or being aware that human lives are taken during war, some service members experience a moral conflict after severely injuring or taking another human's life (1, 16). Specifically, some service members may begin to question whether the actions taken were generally justified; whether the extent of these actions was appropriate, given the circumstances; or who they are as a result of harming or killing another person (11, 17). However, it is important to note that killing or causing harm does not necessarily result in moral injury, as may be the case when service members perceive their actions as justified. Other examples of potentially morally injurious events include failing to prevent immoral acts of others, giving or receiving orders that violate one's moral code, and unintentional errors.

Although many morally injurious events may qualify as traumatic events based on the DSM-5, the two are not synonymous, and some events may be considered morally injurious even if they do not qualify as a criterion A traumatic event. Common examples of non-Criterion A morally injurious events may involve the refusal of resources, such as water or emergency health care, to locals or the disregard for local customs or values, to name just a few. Even though these experiences are not considered "traumatic" from a diagnostic perspective, they nonetheless have the ability to provoke a moral conflict and result in clinical distress that may not be captured by PTSD. For example, if a service member perceives himself or herself as a cruel human being for refusing to provide a local individual with water, he or she may experience feelings of worthlessness, which are commonly associated with symptoms of major depressive disorder (6).

Prevalence and Psychopathology

Given the challenges in defining morally injurious experiences, it is difficult to establish how common these events are on deployment. A recent study using a large sample of combat veterans suggested that 10.8% of veterans reported committing transgressions themselves, whereas 25.5% reported transgressions by others (10). A quarter of the combat veterans reported betrayal by fellow service members or superiors (10). Aside from the aforementioned study, which examined rates of moral injury, most research has focused on examining the prevalence of specific transgressions, such as causing harm or killing. In samples of service members returning from Operation Enduring Freedom and Operation Iraqi Freedom (OIF) deployments, between 40%–50% reported either killing or believing that they have killed another person (13–15). Being involved in these perpetration-based traumatic events has been shown to be the strongest predictor of PTSD, even when other combat experiences and war atrocities were taken into account (13, 18). Similar findings emerged from a related study, suggesting that witnessing injury or death to fellow service members no longer significantly predicted PTSD symptoms

after controlling for killing an enemy combatant (19). In addition to predicting PTSD symptoms, causing harm and killing during deployment are associated with increased postdeployment depressive symptoms, substance use disorders, anger, and suicidal ideation (1, 7, 14, 19). Similar to the experience of causing harm to or killing enemy combatants, the broader experience of morally injurious war-zone events has also been associated with increased PTSD and depressive symptomatology, as well as substance use disorders, suicidal ideation, and suicide attempts (7, 10, 20). Aside from perpetration-based moral injuries (e.g., causing harm or killing), no epidemiological data exist about other specific forms of morally injurious events (e.g., refusing help to locals). Further, no research to date has examined how many individuals exposed to morally injurious events experience moral injury. Thus, additional work is needed to understand the scope of potentially morally injurious events in military populations.

Core Features and Proposed Causal Model of Moral Injury

Aside from its association with diagnosable psychopathology, hallmark features of moral injury have been hypothesized to include the experience of several transdiagnostic emotions, such as guilt and shame following the event (21, 22). These emotional responses are commonly preceded by negative cognitions that result from the appraisal of the potentially morally injurious war-zone events (4, 23). As noted earlier, service members who have committed morally injurious acts of perpetration or omission may question their actions or inactions during an event as well as question what their event-related behaviors mean about them. Those who experience guilt after an event are focused on their behaviors and tend to believe that they should have acted differently (e.g., “I shouldn’t have shot the civilian”; 23, 24). Service members who experience shame tend to evaluate themselves negatively based on their actions or inactions during or following the event (e.g., “I am a monster for laughing after I shot that person”; 23, 24). As a result of their acts of perpetration or omission, many service members who are negatively affected by morally injurious experiences lose trust in themselves (e.g., “Others should not trust me—I am capable of doing horrible things”), others (e.g., “Humans are ruthless; they will always betray you”), or an ultimate/transcendental being or beings (e.g., “God is evil—otherwise He would not have let this happen”).

In line with existing cognitive models of posttraumatic distress (25), appraisals of the morally injurious events and negative beliefs about themselves; others; the world; and, in some cases, deities contribute to the development of negative emotions such as guilt, shame, and anger and, ultimately, diagnosable mental health disorders (4, 22, 26). Though empirical research in this area is currently lacking, the objective severity of morally injurious events appears to be less critical when compared with the subjective appraisal of the situation. For example, even though refusing to provide a local child with water as he or she is approaching a vehicle may appear to be objectively less severe than shooting a civilian, the former scenario may elicit similar or even more severe reactions, depending on how service members appraise their actions or inactions. In their preliminary model of moral injury, Litz and colleagues (4) suggested that the commission

of transgressions has the potential to lead to negative outcomes if individuals' actions or inactions conflict with deeply held beliefs or moral values. Similar to cognitive models of psychopathology, stable, internal, and global attributions have been hypothesized to fuel different negative emotions, including guilt and shame, which, in turn, increase the likelihood for individuals to withdraw from others (4). Because of the increased isolation, individuals limit the number of corrective experiences they can have, which can prevent a positive shift in cognitions and self-forgiveness and may intensify self-condemnation (4, 20). As a result, individuals are believed to experience an increase in intrusive symptoms about the event as well as numbing and avoiding, which further reinforce the cycle of isolation (4). Others may punish themselves for acting in a morally incongruent way by engaging in self-harm and self-handicapping, both of which can serve to reinforce negative perceptions of themselves (3, 20). Although the hypothesized causal model of moral injury has yet to be empirically tested in its entirety (see 26 for review), it resembles existing cognitive models of psychopathology (e.g., 25) and emphasizes the role that negative cognitions play in the development and maintenance of distress (23).

Assessment of Moral Injury

Unlike PTSD or depression, moral injury is not a diagnosable disorder or clinical condition. Instead, moral injury is an internal experience that results from being directly involved or witnessing situations that violate deeply held beliefs or moral values. Although a syndromal definition of moral injury has recently been proposed (22), too little is currently known about its prevalence, etiology, and symptoms to accurately define moral injury. Proponents of the moral injury syndrome perspective have proposed three features, which include (a) the experience of events that cause significant moral dissonance; (b) the presence of core symptoms, such as guilt, shame, spiritual or existential conflicts, and a loss of trust in self, other, or ultimate/transcendental beings; and (c) the presence of secondary symptoms, such as depression, anxiety, anger, re-experiencing of the moral conflict, or social problems (22). Although developing a syndromal definition for moral injury can be helpful for understanding its different components, the existing research does not allow clinicians to determine the levels of severity at which moral injury leads to clinically significant psychological distress. Furthermore, given that moral injury is a subjective appraisal of a potentially morally injurious event, it is difficult to measure the construct accurately. Prominent researchers in the emerging field of moral injury have developed two separate self-report assessments: the 11-item Moral Injury Events Scale (MIES; 9) and the 20-item Moral Injury Questionnaire—Military Version (MIQ-M; 7). Both scales assess the degree to which service members either were directly involved or witnessed potentially morally injurious war-zone events, and both scales have sound psychometric properties (7, 27). The MIES and MIQ-M are both highly correlated with psychopathology, including PTSD and depression, as well as other psychological factors, such as adjustment and suicide risk, and measures of trauma and combat experiences (7, 9, 10, 27). However, in line with the limitations of the moral injury syndrome perspective, neither scale has concrete cutoff points, which would suggest specific scores that are associated with a greater risk for developing mental health problems. Consequently, assessing for specific symptoms that can result from

morally injurious war-zone experiences (e.g., negative posttrauma cognitions, guilt, shame, anger, suicidal ideation, and betrayal), as well as symptoms of PTSD and depression, may yield a more accurate picture of individuals' distress compared with solely assessing the morally injurious experiences themselves (cf. 26).

Role of Negative Cognitions in Moral Injury

Even though moral injury is commonly associated with the aforementioned symptoms and psychological disorders and is often present for service members and veterans who meet the diagnostic criteria for PTSD, it is important to note that moral injury is a distinct transdiagnostic construct that may function as a risk pathway for psychological distress (23). As highlighted earlier, the presence of moral injury does not necessarily suggest the presence of psychological distress, as service members may have experienced morally injurious war-zone events but appraised these situations in balanced and adaptive ways, which can function as a protective factor (e.g., "I did horrible things while deployed that I am not proud of; however, I understand that service members sometimes act in unexplainable ways during war and that this does not necessarily reflect who they are as people outside of their role in the military at that point in time"). The possible mechanistic role that moral injury plays in the development of posttrauma psychopathology has important implications for the treatment of service members and veterans who have experienced morally injurious war-zone events. Specifically, the subjective appraisal of events, and the resulting meaning that is made from these experiences, can function as an effective target for treatment of various mental health problems that have developed as secondary to moral injury. Negative posttrauma cognitions, such as self-blame and negative beliefs about oneself, have been shown to mediate the relationship between the experience of morally injurious war-zone events and self-reported PTSD and depressive symptom severity (23). Although this research used cross-sectional data and thus does not provide conclusive information about whether targeting negative posttrauma cognitions in treatment can effectively reduce psychopathology among service members who have experienced potentially morally injurious events, the findings align closely with research from the PTSD literature, which has identified negative posttrauma cognitions as a key contributor to trauma-related symptomatology (28). Furthermore, a case report of veterans with PTSD secondary to moral injury suggests that existing evidence-based treatments for PTSD can effectively reduce trauma-related symptoms in these individuals (17). In their report, the authors detailed how changes in negative posttrauma cognitions to more balanced and adaptive beliefs about the morally injurious war-zone events preceded symptom improvements (17).

Review of Treatments for Moral Injury

Controversy exists as to how clinicians should best treat the range of mental health sequelae that result from moral injury. Some have argued that symptoms stemming from moral injury may be addressed best by using psychotherapy protocols that were specifically developed to treat moral injury (29, 30). Others have argued that existing disorder-specific protocols, such as cognitive

processing therapy (CPT; 31) and prolonged exposure (PE; 32) for moral-injury-based PTSD are sufficient (17, 33). Although it has not yet been specifically argued that established treatments of major depressive disorder (e.g., cognitive–behavioral therapy) are sufficient when depression results from experiencing a morally injurious event, the logic is consistent with what has been suggested for moral-injury-based PTSD (17, 33). Those who advocate for the use of treatments developed specifically for moral injury do so because: "existing CBT may not sufficiently address the needs of war veterans because the fear conditioning and learning model does not sufficiently explain, predict, or address the diverse psychic injuries of war" (29, p. 408). It has been argued that moral injury–based mental health symptoms (e.g., guilt and shame) may not respond to the process of habituation that underlies exposure-based therapies as they do in fear-based or loss-based traumas (29, 34). Further, it has been suggested that the guilt- and shame-producing cognitions that are purported to underlie moral injury–based symptoms (e.g., "I am a monster") may not be amenable to traditional cognitive therapy techniques (34). Others have argued that recovery from the negative sequelae of moral injury needs a guided process of self-forgiveness or making amends, which is absent from established cognitive–behavioral treatments intended to treat posttraumatic stress (30).

Currently, there are two interventions that were specifically designed for moral injury with empirical data supporting their efficacy: adaptive disclosure (AD) and impact of killing in war (IOK). AD is an eight-session treatment in which the therapist provides psychoeducation, guides the service member or veteran in a process of making amends for the moral violation, and prompts him or her to engage in a discussion about the moral injury with an imagined benevolent and forgiving moral authority of his or her choosing (29, 30). Initial results have been encouraging; in an open trial of AD among 44 active-duty Marines with PTSD, significant reductions of PTSD symptoms, depression, and maladaptive posttraumatic cognitions were observed, as was a significant increase in a measure of posttraumatic growth (29). The IOK treatment was designed to help reduce mental disorder symptoms and improve adjustment among those veterans and service members who had taken life in war (35). Over the course of six to eight sessions, veterans receive instruction on the physiology of combat stress and taking life, cognitive restructuring, making amends, and self-forgiveness. In a randomized controlled trial, the 33 veterans with PTSD who received IOK treatment reported significantly reduced PTSD symptoms and generalized distress and improved quality of life relative to a wait-list control (35).

A number of other moral-injury-specific interventions have been tested in small pilot studies or are currently under development. Building Spiritual Strength (BSS; 36) is an eight-session group-based intervention that encourages participants to actively cope with moral-injury-related distress with their pre-existing spiritual resources. Interventions in BSS include the reframing of spiritual stress and discussions about the role of evil and personal setbacks, as well as encouragement of frequent use of prayer as an active way to cope with distress. Veterans with PTSD who participated in BSS reported a significant reduction in their PTSD symptoms relative

to a wait-list control at the conclusion of the intervention. Among a sample of 10combat veterans with PTSD, a four-session protocol that is specifically focused on trauma-related guilt, trauma-informed guilt reduction therapy, or TrIGR (37), was found to significantly reduce guilt as a primary outcome as well as PTSD and depression as secondary outcomes. A protocol based in acceptance and commitment therapy (ACT) is currently in development by the Department of Veterans Affairs (38), but results have not yet been published. Others have suggested that pastoral care and mindfulness may also help achieve significant symptom reduction, but the authors acknowledge the need for a better understanding of the underlying mechanisms and more scientific evidence before these approaches become routine (e.g., 39).

Among the established therapy protocols with relevance for mental health sequelae of moral injury, perhaps the two best known are CPT (31) and PE (32). Both treatments were initially developed for the treatment of PTSD but have since been shown to produce significant reductions in core features of moral injury, such as depression, guilt, and shame (40–42). It has been argued that cognitive–behavioral techniques utilized in CPT and PE protocols, as well as the underlying conceptualization of PTSD in each protocol, can be effectively applied to the conceptualization and treatment of moral injury–based PTSD without modifying the protocols (17, 33, 43).

Earlier, we briefly reviewed six treatment protocols for moral injury, each with a varying degree of empirical support. The current controversy about how best to treat moral injury notwithstanding, CPT and PE have amassed strong evidence as frontline treatments for PTSD symptoms (cf. 44), and they have beneficial effects for other core features of moral injury, such as depression, guilt, and shame. Other protocols, such as AD and IOK, that have been specifically developed for moral injury are promising but will need more empirical support before routine clinical use is justified. Currently, there are no empirical head-to-head comparisons of protocols specifically developed for moral injury and more established PTSD treatments. Furthermore, no research has yet examined how moral injury in the absence of PTSD differs from moral-injury-based PTSD.

Provider Challenges

Although many promising treatments for moral injury and its sequalae exist, providers should be aware that difficulties frequently arise in the clinical care of individuals who have been affected by morally injurious experiences. First, in the absence of empirical data, anecdotal experience tells us that many veterans and service members often do not disclose morally injurious events at the outset of treatment (17). For example, Held, Klassen, and colleagues (17) provide the example of an OIF veteran who had been through multiple trauma-focused intensive treatment programs, as well as a year of psychotherapy in our clinic before he disclosed that he had killed a young Iraqi girl who was walking toward his checkpoint while holding an explosive device. He

had plateaued in his treatment before his therapist had suggested that they consider focusing on traumatic experiences that had not previously been discussed in therapy, which was when the veteran disclosed the event. We do not believe that the veteran could have been effectively treated if he did not perceive empathy and nonjudgmental acceptance from his therapist, which allowed him to develop sufficient trust to share his morally injurious war-zone experience.

Awareness of countertransference reactions and personal biases regarding the patient's disclosure of morally injurious events is paramount. Veterans and service members who have experienced morally injurious events may garner negative reactions from others when attempting to share their experiences. Anecdotally, many of the veterans treated in our clinic have told us about experiences that demonstrate how civilians lack of awareness about war-zone experiences that many service members and veterans experience. This disconnect between civilians and service members can contribute to a sense of alienation and isolation. It is critical that health and mental health providers assess for the presence of morally injurious war-zone experience and adopt an empathic and nonjudgmental attitude in working with populations at high risk for moral injury.

A number of treatment approaches for moral injury have been developed, and selecting the best one for patients can be a challenge. Because moral injury is best conceptualized as a risk pathway for generalized psychological distress that may or may not result in a DSM-5 diagnosis, we believe that patients should be offered frontline treatments for their diagnoses or presenting problems. For example, a service member with moral injury–related PTSD should be offered CPT or PE and, perhaps, pharmacotherapy (44), whereas a service member with depression should be offered cognitive therapy, behavioral activation, or antidepressant medication (45). To date, there are no studies examining the effects of pharmacotherapeutic interventions on the treatment of moral injury. Similar to the situation with cognitive–behavioral interventions, it is possible, though it remains uncertain, that the salutary effect of antidepressants and other agents on core features of moral injury, such as depression and guilt, may translate into a reduction in the overall distress associated with the moral injury. Although treatments designed specifically for moral injury appear promising, there is currently no evidence comparing these treatments to established disorder-specific protocols. Interestingly, consistent with other efficacious cognitive–behavioral therapy protocols, beneficial treatments for moral injury all seem to emphasize the role of reappraising negative cognitions about oneself (e.g., "I can never be a good person because of what I've done"), others ("People would reject me if I tell them about what happened"), and the world ("The world is evil") through psychoeducation, explicit cognitive restructuring, or emotional exposure (cf. 28). Consequently, addressing negative posttrauma cognitions should be a key focus of the clinical care of service members and veterans who are struggling with symptoms resulting from morally injurious experiences. While it seems that repeated discussion of morally injurious experiences facilitates emotional exposure and corrective cognitive reappraisal, it is also true that many providers may shy away from directly addressing morally injurious experiences with their patients because of their own beliefs or

biases. Aside from provoking negative therapeutic reactions, many providers may believe that their patients are too fragile to take on such demanding work in therapy, which is somewhat analogous to many providers' stance on trauma-focused psychotherapy (46).

Conclusions

In this article, we have reviewed the construct of moral injury and highlighted important scientific advances in the field, as well as described several treatment approaches and possible provider challenges. Despite the growing interest in and awareness of moral injury, it is evident that the large number of unanswered questions are about what moral injury is, at what point moral injury becomes clinically significant, how the experience of moral injury is related to other mental health problems, and how to best treat individuals who are affected by moral injury. Given the current status of research related to the treatment of mental health problems resulting from moral injury, it is advisable to treat the symptoms of moral injury (PTSD, depression, anxiety, guilt, shame, etc.) using existing evidence-based treatments. Targeting specific negative cognitions that have developed following morally injurious experiences should likely be a key treatment focus. Future research should gather epidemiological data on the prevalence of moral injury of service members, as well as its effect on mental health. Assessments with empirically established cutoffs for moral injury are needed to facilitate the identification of clinically significant cases that warrant intervention. Furthermore, research on moral injury should broaden its focus to include non-perpetration-based morally injurious events and examine how moral injury in the absence of PTSD differs from moral-injury-based PTSD with regard to its effect on mental health and responsiveness to treatment. Last, head-to-head comparisons between protocols specifically developed for moral injury (e.g., AD and IOK) and more established treatments (e.g., PE and CPT), as well as the potential efficacy of pharmacotherapy, are needed.

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