Moral Injury: A Psychological Perspective

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Abstract

Moral injury refers to the enduring impacts on psychological, physiological, spiritual, behavioral, and social dimensions when an individual perpetrates, fails to prevent, witnesses, or learns about acts that transgress deeply held moral beliefs and expectations. As an interdisciplinary concept, moral injury has attracted widespread attention in fields such as psychology, ethics, psychiatry, and sociology since Litz redefined it from a psychological perspective in 2009. Currently, researchers have developed multiple multidimensional scales to assess moral injury events or symptoms, and employ interventions such as cognitive-behavioral therapy, cognitive processing therapy, and appropriately designed exposure therapy developed specifically for moral injury. Future research can continue to investigate the mechanisms underlying the development of moral injury, establish diagnostic criteria for moral injury, expand the applicable scope of moral injury, enrich the connotation of moral injury, thereby broadening the breadth and depth of moral injury research.

Full Text

Moral Injury: A Review from the Perspective of Psychology

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Abstract

Moral injury refers to the long-lasting psychological, biological, spiritual, behavioral, and social impact on an individual after exposure to morally injurious events, which entail "perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations" (Litz et al., 2009). Since Litz et al. (2009) redefined this concept from the perspective of psychology, moral injury has attracted extensive attention in the

fields of psychology, ethics, psychiatry, and sociology. At present, researchers have developed a number of multi-dimensional scales to measure the events or symptoms of moral injury and have used cognitive behavior therapy, cognitive processing therapy, mindfulness therapies, and adaptive disclosure therapy based on CBT developed specifically for moral injury to intervene. Future research can continue to explore the mechanism of moral injury further, establish the diagnostic criteria of moral injury, widen the application of moral injury, and enrich the connotation of moral injury, so as to improve the breadth and depth of research on moral injury.

Keywords: moral injury, perspective of psychology, mechanism, measurement, intervention

Introduction

Throughout history, war has been a weighty topic. Violence and killing not only cause physical wounds to soldiers but also leave lingering psychological shadows. Among these, posttraumatic stress disorder (PTSD) is the most common mental disorder among veterans (Bergman et al., 2017; Fulton et al., 2015; Steenkamp et al., 2017). However, beyond physical and psychological trauma, when military personnel face moral and ethical conflicts and challenges, they may develop a unique form of trauma—moral injury. For instance, harming innocent civilians in war or being unable to provide assistance to injured women and children can deeply violate their internalized moral beliefs, provoking intense guilt and shame that cause lasting negative effects (Litz et al., 2009).

Such trauma may also manifest in other populations who blame themselves for not providing adequate help to those in danger or feel guilty when confronted with patients' suffering. During the COVID-19 pandemic, for example, healthcare workers faced not only the physical risks of infection and death but also tremendous psychological and moral challenges when faced with numerous patients needing help. Previous research has found that after public health emergencies such as the SARS and Ebola epidemics, healthcare workers experienced increased distress and mental illness rates (Chong et al., 2004; Raven et al., 2018). Since the onset of COVID-19, moral injury among healthcare workers has attracted considerable research attention (Mantri et al., 2020; Wang et al., 2020; Hines et al., 2021).

Since Litz and colleagues redefined moral injury from a psychological perspective in 2009, relevant international research has continuously emerged and accumulated substantial findings over the past decade. In China, although scholars have conducted theoretical research from medical and ethical perspectives (Yang & Chang, 2015; Xiao et al., 2018) and empirical studies (Chen et al., 2020), moral injury remains an unexplored area in Chinese psychology. This article reviews international research, introducing the concept, mechanisms, existing measurement scales, and intervention measures for moral injury, and provides prospects

for future research directions, aiming to offer references for localized research on moral injury and promote its theoretical and practical development.

2.1 The Origins of Moral Injury

The concept of moral injury can be traced back to survivor guilt. During World War II, Nazi Germany perpetrated genocide against Jews, murdering over six million. In 1945, more than 7,000 survivors were liberated, yet these survivors exhibited unexpected symptoms: rather than feeling grateful for their survival and beginning new lives as people might imagine, they fell into deep guilt and shame, enduring persistent suffering. Niederland (1964) first coined the term "survivor guilt" to describe these symptoms.

In 1980, when the American Psychiatric Association (APA) introduced PTSD diagnostic criteria in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III), survivor guilt was included in the symptom criteria list. However, in the 1987 DSM-III-R, survivor guilt was downgraded to merely an associated feature (Leys, 2006). By the 1994 DSM-IV, survivor guilt had been removed entirely. In the current DSM-5, persistent negative emotional states (including guilt, shame, etc.) constitute one of the diagnostic criteria for PTSD.

In 1994, Shay, working at the U.S. Department of Veterans Affairs, elaborated from a cultural perspective on how traumatic war experiences (such as those involving moral dimensions) could lead to negative individual changes. In his research with Vietnam veterans, he found that when commanding officers betrayed the moral principles soldiers believed in, some soldiers experienced anger, withdrawal, and loss of trust. Shay subsequently provided the first definition of moral injury as "the betrayal of what' s right in a high-stakes situation by a legitimate authority figure (e.g., a leader on the battlefield)" (Shay, 2002).

Although Shay was the first to define moral injury, he viewed betrayal by "legitimate authority figures" as its cause, emphasizing the fault of powerful leaders on the battlefield. The widely recognized seminal work is Litz et al. (2009), who first conducted formal scientific research on moral injury. They argued that clinicians and researchers had focused primarily on life-threatening psychological trauma while inadequately addressing the impact of moral and ethical events that provoke guilt and shame, and that existing concepts (such as PTSD) could not adequately identify the long-term moral and ethical harm experienced by active-duty or veteran military personnel. Based on research with soldiers from the Afghanistan and Iraq wars, Litz provided a psychological definition of moral injury as the lasting psychological, biological, spiritual, behavioral, and social impact on an individual after exposure to events that transgress deeply held moral beliefs and expectations through perpetrating, failing to prevent, bearing witness to, or learning about such acts.

Jinkerson (2016), building on Litz' s definition, emphasized empirically and theoretically recognized symptoms from a syndrome perspective: guilt, shame,

spiritual-existential conflict (including subjective loss of meaning in life), and loss of trust were identified as core symptoms; depression, anxiety, anger, intrusive re-experiencing, self-harm, and social problems were identified as secondary symptoms. It is important to note that experiencing a potentially morally injurious event does not necessarily mean suffering moral injury; the key lies in how individuals interpret the event. Unlike Shay, Litz and colleagues conceptualized the individual themselves as the agent of moral injury, emphasizing personal fault. Subsequent researchers have based their definitions on Shay' s (Beard, 2015), Litz' s (Haight et al., 2016; McCarthy, 2016), or integrated both (Carey et al., 2016; Farnsworth et al., 2017). Overall, Litz et al. conducted pioneering work, and the concept of moral injury began to attract widespread research attention from this point onward (Hodgson & Carey, 2017).

2.3 Distinctions Between Moral Injury and PTSD

PTSD represents a typical trauma experienced by military populations after war. Although its diagnostic criteria overlap with moral injury symptoms, PTSD cannot fully explain moral injury (Litz et al., 2009). In clinical practice, physicians have also observed that some post-war military personnel suffer spiritually and exhibit partial PTSD symptoms that cannot be simply diagnosed using PTSD theory (Gray et al., 2012). Drescher et al. (2011) conducted a literature review and found that some symptoms not included in PTSD diagnostic criteria (although some were listed as associated features) might be related to moral injury among veterans with PTSD. These include negative changes in moral attitudes and behaviors, changes or loss of spiritual beliefs (including negative attributions toward God), guilt and shame and forgiveness issues, disgust and personality disorders, decreased trust in others and social or cultural contracts, aggressive behavior, poor self-care, or self-harm.

Shay (2014) detailed comparisons between moral injury and PTSD, identifying several distinctions: First, regarding precipitating factors, moral injury is caused by acts that profoundly violate an individual' s moral values, whereas PTSD is caused by death, threat of death, or serious injury. Second, concerning the individual' s role during the event, in moral injury the individual may act as perpetrator, victim, or witness; in PTSD, the individual is only a victim or witness. Third, regarding distressing emotions, moral injury brings guilt, shame, and anger; PTSD brings fear, terror, and helplessness. Fourth, concerning physiological arousal, moral injury involves no significant change in physiological arousal levels, whereas PTSD involves markedly increased arousal. Fifth, regarding the sense of loss, moral injury involves loss of trust, while PTSD involves loss of safety.

3 Mechanisms of Moral Injury

Litz et al. (2009) attempted to explain moral injury using PTSD-related theories. For example, applying social-cognitive theory for PTSD would suggest that

morally injurious experiences violate individuals' beliefs about the world and self, leading to cognitive dissonance and internal conflict. Therefore, reconciling this contradiction becomes a key determinant of moral injury. If individuals cannot integrate relevant events into their existing cognitive schemas, they experience guilt, shame, anxiety, and intrusive re-experiencing, resulting in persistent psychological distress. Although avoidance strategies may temporarily alleviate this distress, they also hinder integration of relevant events and recovery from traumatic experiences. While PTSD theories can partially explain moral injury development, unlike PTSD, morally injurious experiences are not all related to death or serious injury, and the changes moral injury causes to beliefs about the world and self may be more profound and comprehensive. Individuals with moral injury may view themselves as immoral, irredeemable, or believe they live in an immoral world.

Given the limitations of existing theories, Litz et al. (2009) proposed a more comprehensive working conceptual model of moral injury. This model suggests that when an event (which could be a personal transgression, failure to prevent, or hearing about serious moral violations) severely violates an individual' s moral code, it leads to cognitive dissonance and internal conflict. Attributions about the event greatly influence outcomes; if the individual' s attribution is stable, internal (personal fault), and global (not situation-dependent), it results in persistent shame, guilt, and anxiety. These negative experiences ultimately lead to withdrawal, preventing the individual from correcting or repairing through interaction with others. Over time, individuals increasingly believe that not only their actions but also they themselves are unforgivable, engaging in self-condemnation. These symptoms resemble PTSD' s re-experiencing, avoidance, and emotional numbing, eventually evolving into persistent depression, self-harm, and self-impairment. The above process may cycle repeatedly. Additionally, individual difference factors such as neuroticism and shame proneness may be risk factors that increase moral injury likelihood, whereas belief in a just world (i.e., believing wrong actions bring negative consequences but can be remedied), receiving supportive forgiveness, and having high self-esteem can increase the likelihood of seeking to correct transgressions, serving as protective factors.

Koenig et al. (2017) proposed a dynamic model of moral injury that distinguishes religious and psychological symptoms. This model suggests that although individuals may exhibit similar clinical outcomes after experiencing potentially morally injurious events that violate their moral code, the underlying mechanisms may differ. If individuals have religious beliefs, their moral injury may primarily manifest as religious struggle, loss of religious faith or hope; if individuals lack religious beliefs, their moral injury may primarily manifest as psychological symptoms, including guilt, shame, loss of trust, etc. Although Koenig et al. distinguished religious and psychological symptoms, they also noted that overlap may exist between the two. Religious and psychological moral injury may interact and influence each other in complex ways, ultimately leading to clinical PTSD, depression, or anxiety.

Furthermore, because the range of potentially morally injurious events is broad, many researchers have categorized them to more finely examine moral injury mechanisms under different types (Currier, 2018; Frankfurt et al., 2017). Self-directed events (e.g., committing crimes, failing to prevent crimes) are more likely to lead to negative internal emotions and cognitions (e.g., guilt, shame, inability to self-forgive), whereas other-directed events (e.g., witnessing violence, being betrayed by trusted individuals) are more likely to lead to negative external emotions and cognitions (e.g., anger, loss of trust, inability to forgive).

From relevant empirical research, some studies have examined relationships between transgressive acts, guilt and shame, and moral injury outcomes. Jordan et al. (2017) found in a study of active-duty Marines that crime-based transgressive acts were directly related to guilt and shame, which were directly related to PTSD, but the indirect path from crime-based transgressive acts through guilt and shame to PTSD was not significant. However, Frankfurt et al. (2017) found in a study of post-9/11 veterans that multiple pathways existed for moral injury development after experiencing different military traumas or transgressive acts. Among these, transgressive acts were indirectly related to moral injury outcomes (PTSD symptoms, suicide) through guilt (a key moral injury mechanism).

Overall, current research on moral injury mechanisms remains scarce, and existing findings show discrepancies, which hinders in-depth theoretical construction and intervention development (Neria & Pickover, 2019). Additionally, although studying moral injury' s neural mechanisms under laboratory conditions is extremely difficult (including the need to induce strong, predictable, and replicable emotional states while incorporating personal factors such as religious background, culture, community, and injury nature), mounting evidence suggests that although moral injury and PTSD often co-occur, their neural mechanisms differ (Barnes et al., 2019).

4 Measurement of Moral Injury

As research on moral injury among active-duty and veteran military personnel has increased, researchers have attempted to develop psychometrically reliable methods to operationalize and measure this concept. Although existing scales could assess some aspects of moral injury (e.g., guilt, shame) (Stein et al., 2012; Bryan et al., 2013), they could not comprehensively evaluate this unique construct. Specialized multi-dimensional scales for measuring moral injury have now been developed, which can be divided into two categories based on assessment content: those that assess moral injury symptoms alone, and those that assess both morally injurious events and symptoms.

Nash et al. (2013) developed the first specialized multi-dimensional scale for assessing moral injury: the Moral Injury Event Scale (MIES). This study used 1,039 U.S. Marine Corps members as participants. The scale contains two dimensions—perceived transgressions and perceived betrayals—with nine items using a 6-point scoring method, achieving an internal consistency coefficient of 0.90.

Three months after deployment, 533 participants were retested, demonstrating good test-retest reliability. Bryan et al. (2016) further evaluated MIES' s psychometric properties, supporting its structural validity. Bryan et al. also proposed improving MIES to three dimensions: perceived others' transgressions, perceived self transgressions, and perceived betrayals, with the modified model showing better overall fit. As the first specialized multi-dimensional scale assessing both morally injurious events and symptoms, MIES has few items for convenient administration and good reliability and validity. This tool enables clinicians and researchers to evaluate the prevalence and perceived intensity of events that may conflict with individuals' deeply held moral beliefs in military contexts, which is a necessary prerequisite for assessing the biopsychosocial impact of moral injury.

Currier et al. (2015) developed the second specialized multi-dimensional scale: the Moral Injury Questionnaire-Military Version (MIQ-M). This scale did not report internal consistency or test-retest reliability, but research found that higher moral injury scores were more associated with general combat exposure, work and social maladjustment, depression, and PTSD. After controlling for demographic variables, deployment-related factors, and combat-related life threat stressors, MIQ-M scores also showed unique associations with suicide risk and other mental health indicators, providing preliminary evidence for MIQ-M' s validity. However, this scale has limitations regarding sample breadth and representativeness.

Overall, MIES and MIQ-M are currently the only two scales assessing both morally injurious events and symptoms. Koenig et al. (2019) reviewed literature from 1980 to 2018 and found MIES was used more frequently by researchers, likely due to its simplicity, ease of use, and good psychometric properties. Additionally, MIQ-M specifically requires morally injurious events to occur during wartime deployment, which somewhat limits its applicability.

Although MIES and MIQ-M can simultaneously assess events and symptoms, morally injurious events are objective facts that have occurred and cannot be changed, whereas moral injury symptoms can be alleviated and improved through intervention. Therefore, in clinical practice, if clinicians need to reassess individuals' moral injury symptoms after therapeutic intervention, using MIES or MIQ-M would complicate evaluation of intervention effectiveness.

Consequently, Koenig et al. (2018b) developed a scale specifically for assessing moral injury symptoms alone: the Moral Injury Symptom Scale-Military Version (MISS-M). MISS-M comprises 45 items across ten subscales assessing betrayal, guilt, shame, moral concerns, religious struggle, loss of religious faith/hope, loss of meaning and purpose, difficulty forgiving, loss of trust, and self-condemnation, using a 10-point scoring system where higher scores indicate more severe moral injury symptoms. The total scale' s internal consistency coefficient is 0.92, with test-retest reliability of 0.91. Due to its length, Koenig et al. (2018a) developed a brief version: the Moral Injury Symptom Scale-Military Version Short Form (MISS-M-SF). MISS-M-SF retains ten subscales with one item each, achieving an acceptable internal consistency coefficient of 0.73 and high correlation

with MISS-M (r = 0.92). As the first multi-dimensional scale assessing moral injury symptoms alone, MISS-M comprehensively measures moral injury symptoms with high internal consistency and test-retest reliability, useful for both researching treatments targeting moral injury symptoms and tracking symptom severity in clinical practice. Its brief version also addresses the original' s length and administration inconvenience, allowing selection based on actual needs.

Less than a month after MISS-M' s publication, Currier et al. (2018) also published a specialized scale for assessing moral injury symptoms: the Expressions of Moral Injury Scale-Military Version (EMIS-M). This 17-item scale uses a 5-point scoring system, evaluating moral injury symptoms from two dimensions: self-directed (assessing guilt, shame, moral concerns, self-condemnation, social withdrawal, and inability to forgive oneself) and other-directed (assessing anger and betrayal, revenge, and disgust at what others have done). EMIS-M demonstrates high internal consistency and test-retest reliability, as well as good convergent and discriminant validity, serving as another reliable and valid measurement tool for assessing moral injury symptoms that can guide clinical treatment.

The above five scales all target military populations. Against the backdrop of the global COVID-19 pandemic, moral injury among healthcare workers has increasingly drawn attention. Particularly during the outbreak' s peak, healthcare workers fought like frontline soldiers. Due to limited personal energy and medical resources, they could not carefully care for every patient while facing risks of infection or transmitting the virus to family members. These potentially morally injurious events could ultimately lead to moral injury among healthcare workers. Scholars have also speculated that unrecognized moral injury among healthcare workers may be an important factor contributing to their burnout and other negative emotions (Kopacz et al., 2019). To assess moral injury symptoms among healthcare workers, Mantri et al. (2020) modified MISS-M-SF item wording to apply to healthcare professionals caring for patients in medical contexts, creating the Moral Injury Symptom Scale-Healthcare Professionals Version (MISS-HP). As the first scale measuring moral injury in non-military populations, MISS-HP demonstrates good reliability and validity. More importantly, in the context of the global COVID-19 pandemic, it provides a timely, effective, and objective method for identifying and diagnosing moral injury among healthcare workers and expands moral injury research from military populations to broader groups. Chinese scholar Wang et al. (2020) translated MISS-HP into Chinese and conducted an online survey of 583 nurses and 2,423 doctors during March-April 2020, showing that MISS-HP also has acceptable reliability and validity among Chinese healthcare worker samples.

Existing moral injury scales each have distinct characteristics, allowing researchers or clinicians to select based on actual needs. These scales can all be used for moral injury screening, but specific diagnosis should combine clinical interviews. MISS-M, MISS-M-SF, and EMIS-M can also track changes in moral injury symptoms throughout treatment, providing targets for intervention.

Additionally, MISS-HP and its Chinese version represent important steps forward for moral injury research, but due to their recent development and sample selection issues, future research needs to examine their psychometric properties across different environments and populations.

5 Interventions for Moral Injury

The continuous development and refinement of moral injury measurement scales provide clinical staff with tools for screening affected individuals and evaluating symptom changes, enabling evidence-based development of targeted intervention protocols. Research has found moral injury is very common among veterans (particularly those with PTSD) (Hodgson & Carey, 2017; Shay, 2014) and is closely associated with increased suicide risk among active-duty and veteran military personnel (Ames et al., 2019), making effective intervention urgently needed. Current mainstream interventions include Cognitive Behavior Therapy (CBT), Adaptive Disclosure Therapy (ADT) based on CBT, Cognitive Processing Therapy (CPT), Spiritually Integrated Cognitive Processing Therapy (SICPT) based on CPT, and others. Although some therapies are commonly used for PTSD treatment, they also show good effects in treating core moral injury symptoms. Additionally, since moral injury involves spiritual issues, some methods from Complementary and Alternative Medicine (CAM) are believed to help individuals address inherent spiritual and existential problems in their lives, potentially giving CAM unique status in treating moral injury among active-duty and veteran military personnel (Kopacz et al., 2016). The following sections primarily introduce ADT, CPT, SICPT, and spiritual care from CAM.

5.1 Adaptive Disclosure Therapy

When proposing the concept of moral injury, Litz et al. (2009) also proposed a clinical care model for moral injury. This intervention strategy for repairing moral injury comprises eight steps and can be considered an early prototype of ADT. Step 1: Establish a strong working alliance and relationship of trust and care. Step 2: Help clients understand what moral injury is and its effects, and jointly develop a plan for change. Step 3: Use exposure therapy to identify and transform harmful, unforgivable beliefs about morally injurious experiences. Step 4: Examine erroneous beliefs about self and world, integrating moral values with self-worth. Step 5: Use empty-chair technique for imagined dialogue with a loving, compassionate moral authority (parent, grandparent, coach, priest). Step 6: Make amends and practice self-forgiveness. Step 7: Reconnect with self or others. Step 8: Evaluate future goals and values. Although these steps are sequentially arranged, in practice they overlap, with some steps needing to continue throughout treatment.

Steenkamp et al. (2011) developed ADT based on CBT. This was the first treatment protocol specifically designed for individuals with moral injury, aiming to promote re-evaluation of events and achieve self-forgiveness and positive behavioral change through imaginal exposure exercises. The therapy comprises six

weekly 90-minute sessions. Considering that active-duty military personnel may be deployed elsewhere at any time, it is much shorter than standard CBT. The first session focuses on assessing the service member's current status, identifying the most distressing and hurtful events, teaching about ADT, and establishing realistic goals. The middle four sessions combine imaginal exposure exercises to emotionally process war memories, excavate various elements and associations, help clients express authentic, unfiltered beliefs about the experience' s meaning and impact (e.g., shame, self-loathing), and encourage imagined dialogue with a moral authority. The final session reviews and reinforces positive lessons learned to plan long-term development (Litz et al., 2016). Initial pilot trials showed participants' PTSD symptoms, depressive symptoms, and harmful posttraumatic cognitions decreased, with participants rating the intervention favorably (Steenkamp et al., 2011).

5.2 Cognitive Processing Therapy

Cognitive Processing Therapy, based on social cognitive theory, was originally developed to treat PTSD. Resick and Schnicke (1992) proposed that individuals incorporate new trauma-related information into existing schemas through three methods: assimilation (changing new information to match original beliefs), accommodation (adjusting original beliefs to incorporate new information), and over-accommodation (completely changing original beliefs to accommodate new information). Accommodation of traumatic information can lead to positive changes, while over-accommodation leads to maladaptive beliefs about self, others, and society, negatively impacting self-worth, safety, and ability to trust self and others. Finally, individuals' natural recovery from trauma stalls, and these beliefs cause guilt, shame, and self-destructive behavior (Resick et al., 2016). In moral injury cases, individuals experience excessive guilt, self-blame, or betrayal over what they should or should not have done, generating maladaptive beliefs such as "I am a bad person" or "I am unworthy (of respect)" (Held et al., 2018). CPT helps trauma survivors develop new personal meaning related to trauma through cognitive restructuring, thereby restoring natural posttrauma recovery. As a treatment, CPT is highly effective in reducing symptoms of depression, guilt, shame, anger, and suicidal ideation (Galovski et al., 2013; Resick et al., 2012; Resick et al., 2015)—all core features of moral injury.

Although CPT has demonstrated effectiveness in addressing moral injury-related symptoms, it does not address spiritual issues in PTSD treatment, which constitute an important component of moral injury. Pearce et al. (2018) modified CPT to propose SICPT. This therapy comprises 12 sessions of 50-60 minutes each over 6-12 weeks. Unlike CPT, SICPT directly targets moral injury as an obstacle to recovery from PTSD, helping individuals use spiritual or religious resources to challenge erroneous thinking patterns and thereby change misinterpretations of injuries. When moral injury stems from deliberate actions or inactions, individuals' guilt or self-blame may not arise from misinterpretation, and cognitive restructuring alone may be

insufficient. Therefore, SICPT introduces spiritual concepts (compassion, forgiveness, blessing, repentance, etc.) and organizes corresponding ritual activities. Additionally, SICPT encourages individuals to obtain support from religious communities or participate in religious activities to promote recovery and social integration. Finally, given that spiritual struggle (including anger at God, anger that God allowed such situations, etc.) is part of moral injury, SICPT also concretizes and addresses individuals' spiritual struggles. Since the therapy utilizes religious beliefs, SICPT is only applicable to individuals with religious faith (Pearce et al., 2018). A multi-site study showed that among 427 U.S. veterans surveyed, nearly 75% considered religion important or very important in their lives, over 80% believed religion influenced their spirituality, and more than two-thirds expressed willingness to accept spiritually integrated treatment like SICPT (Koenig et al., 2018b).

5.3 Complementary and Alternative Medicine–Spiritual Care

Complementary and Alternative Medicine is an extremely broad concept encompassing traditional medicines and folk therapies worldwide. Because it includes non-scientific content, it is not part of modern Western medical systems. However, as more therapies' mechanisms and effectiveness are scientifically validated, CAM is becoming a beneficial supplement to modern Western medicine. "Spiritual care" is widely recognized as a CAM service, among which pastoral care and mindfulness may be useful in treating those with moral injury (Kopacz et al., 2016).

Pastoral care originally referred to emotional and spiritual support provided by pastors or bishops to congregants in religious activities. Today, however, pastoral care extends beyond religious groups, defined as a therapeutic approach characterized by dialogue between caregiver and care-seeker that explores religious interpretations of the possibilities and implications of the care-seeker's current situation (Furniss, 1994). Pastoral care does not impose values and beliefs on care-seekers but listens non-judgmentally, supports and helps with their needs and desires, and maintains attention to issues of self-identity and faith (Raffay et al., 2016). Kopacz et al. (2016) believe pastoral care can help individuals regain meaning and purpose, face suffering, seek forgiveness, and practice gratitude. Empirical research has also found that patients receiving pastoral care can be more honest with themselves, more optimistic about their illness, experience significantly reduced anxiety, and feel peaceful and more in control (Lobb et al., 2019). Additionally, a recent study reported a novel interdisciplinary intervention model for moral injury, providing a good start for cross-disciplinary intervention. This model' s greatest feature is collaboration between a chaplain and psychologist co-facilitating a moral injury group for 12 weeks, 90 minutes per session. Pilot results showed participants had reduced depressive symptoms, improved psychological functioning, and increased self-compassion, with results unaffected by concurrent other psychotherapy (Cenkner et al., 2020). Overall, pastoral care can help individuals mobilize spiritual resources to address forgive-

ness, guilt, and other issues related to moral injury. In contexts where citizens commonly have religious faith, pastoral care with religious elements has high familiarity and acceptance, while also showing inclusiveness toward non-religious populations (Lobb et al., 2019), making it an effective intervention.

Additionally, mindfulness-based therapies can serve as an option for treating moral injury. These methods include Mindfulness-Based Stress Reduction (MBSR), Acceptance and Commitment Therapy (ACT) (Nieuwsma et al., 2015), and Mindfulness-Based Cognitive Therapy (MBCT). These approaches' core is cultivating mindfulness—a purposeful, conscious attention to and awareness of the present moment without judgment, analysis, or reaction, simply observing and noticing. Mindfulness-based therapies can help individuals improve attention, better control emotions and awareness, and bring about positive physiological and psychological changes. Previous research has found that non-judgmental attitudes toward experience and conscious awareness are related to PTSD symptoms and mental health status among veterans (Stephenson et al., 2017). Recent research further validates the potential utility of mindfulness-based therapies among active-duty military personnel reporting moral injury (Hamrick et al., 2019).

6 Summary and Outlook

The emergence and development of morality has a long history. As early as the Spring and Autumn period, Guanzi first combined the characters "dao" (way) and "de" (virtue). Moral injury is not a new phenomenon either—as long as individuals have moral concepts, they inevitably suffer varying degrees of moral injury when facing moral conflicts. Although morality has a long history, academic definition and scientific research on moral injury have only occurred in the past decade. Nevertheless, during these ten-plus years, researchers from psychology, psychiatry, ethics, and other fields have conducted extensive empirical research in military populations, achieving many results regarding moral injury' s concept, mechanisms, measurement, and intervention. Several issues remain for further consideration and represent directions for future research.

6.1 Distinguishing Events from Outcomes and Improving Theoretical Models

Most existing research equates exposure to potentially morally injurious events with suffering moral injury. In reality, exposure to potentially morally injurious events is only a necessary condition for moral injury outcomes, not a sufficient one. Whether potentially morally injurious events evolve into moral injury is also influenced by individual cognition, social support, and other factors. Potentially morally injurious events may cause distress, but this distress itself can be considered a normal response to immoral events. Only when individuals cannot reconcile this cognitive conflict is the term moral injury appropriate (Farnsworth et al., 2017). Additionally, although researchers have proposed theoretical models to explain moral injury' s development and its protective and risk factors,

research on moral injury mechanisms remains severely lacking, representing a major challenge in this field.

6.2 Continuous Scale Development and Establishment of Diagnostic Criteria

Although researchers have developed multiple specialized multi-dimensional scales for assessing moral injury with validated clinical effectiveness, these studies generally have insufficiently broad and representative samples, making it uncertain whether they accurately and comprehensively capture the moral injury concept. Moreover, these scales' development lacks a "gold standard" to measure moral injury outcomes (Koenig et al., 2019; Griffin et al., 2019)—that is, at what scale score can moral injury be diagnosed, and what clinical significance do higher scores have? Therefore, diagnostic criteria for moral injury remain to be established.

6.3 Attention to Cultural Background Differences and Definition of Moral Standards

Moral injury arises when behaviors or events violate individuals' moral beliefs. However, different individuals may adhere to different moral standards and make different moral judgments. The United States is a predominantly Christian country, and religion is closely linked to morality. Christian doctrine contains much moral content that guides and constrains believers. In this cultural context, individuals facing moral injury often seek religious support, and corresponding interventions generally incorporate religious elements. In contrast, Chinese people generally do not adhere to religious faith. In China' s cultural context, moral constraints often derive from traditional culture and social public opinion, lacking a unified measurement standard. Therefore, future research on moral injury in China should attend to such cultural differences. Notably, different professions have their own professional ethics codes that constrain and regulate practitioners. For example, across different countries and cultural backgrounds, the Hippocratic Oath and Nightingale Pledge are widely accepted by doctors and nurses, providing a unified moral standard for studying moral injury among healthcare workers and facilitating cross-cultural research comparisons. When researchers wish to study moral injury in other populations, approaching from the perspective of professional ethics codes may serve as a research strategy.

6.4 Expanding Research Populations and Broadening Applicability

Although the moral injury concept emerged from research with military samples and current research primarily focuses on military populations, this does not mean moral injury is unique to military personnel. Research has begun to examine different populations, including refugees (Nickerson et al., 2015), social workers (Haight et al., 2016), school staff (Levinson, 2015), police (Papazoglou & Chopko, 2017), and healthcare workers in the COVID-19 context (Mantri

et al., 2020; Wang et al., 2020; Hines et al., 2021). Although research on moral injury in non-military populations remains limited, these studies represent good beginnings, as different populations may face different moral contexts and exhibit different moral injury symptoms after experiencing different types of potentially morally injurious events. Therefore, future research expanding moral injury study populations will help more finely categorize different moral injury types, broaden moral injury' s applicability, enrich its connotation, and expand the concept' s breadth.

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Note: Figure translations are in progress. See original paper for figures.