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To cite this article: Hazel R. Atuel, Ryan Chesnut, Cameron Richardson, Daniel F. Perkins & Carl A. Castro (2020): Exploring Moral Injury: Theory, Measurement, and Applications, Military Behavioral Health, DOI: [10.1080/21635781.2020.1753604](https://doi.org/10.1080/21635781.2020.1753604)

To link to this article: <https://doi.org/10.1080/21635781.2020.1753604>



Published online: 17 Apr 2020.



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Exploring Moral Injury: Theory, Measurement, and Applications

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ABSTRACT

This research brief summarizes and highlights presentations on moral injury related to theory, measurement, and applications. The overall was to identify current gaps and propose next steps to advance the science of moral injury.

KEYWORDS

Moral injury; theory; measurement; applications; research

During the writing of this research brief (late March 2020), our world is facing a new normal. On a global level, the coronavirus outbreak has disrupted how we work, interact with each other, engage in mundane activities, and participate in community life. Our daily lives had to change. And, in a relatively short period of time, we were compelled and propelled to accommodate alternative ways of living to survive. We had to change. As we explore new ways or continue old ways of thriving in newly defined individual and social spaces, one thing is clear: the experience of change is both personal and communal. Personal because each of us had unique ways of readjusting and communal because this pivoting is a shared experience with others who are proximal and distal to us. Ultimately, this experience has changed both our personal stories and community histories.

What does this reflection on the coronavirus pandemic have to do with a research brief on moral injury? Because as social scientists, we simply could not help ourselves but think, try to make sense of, or even go as far as to find purpose in this chaos. We could conceive of this unprecedented worldwide event as a real-world experiment on our response to the suffering or death we read in our news feeds, or possibly know of directly or indirectly. How are we changed by the knowledge or experience of our own or others' suffering as well as the death of others? We are raising this critical question upfront because some of the issues at the heart of moral injury speak to the human capacity and ability to respond to an adverse singular

event or series of events that have moral implications. Whether or not this outbreak, particularly focusing on the human factors at work (e.g., decisions made at various levels, rhetoric used to frame the event), will eventually fall under the rubric of moral injury will be a topic of later discussions. For now, we would like to acknowledge and note that these historic events might force us to reconsider our current knowledge of moral injury in the foreseeable future. Stated differently, what we are going through is perhaps an invitation to move us beyond what we already know and have applied to a subset of the population to a more expanded understanding that will have wider implications to the varieties of human experience.

With that said, let us now turn to what we initially set out to do.

Toward a science of moral injury

In the Fall of 2019, we at the University of Southern California's Center for Innovation and Research on Veterans & Military Families (USC) and the Pennsylvania State University's Clearinghouse for Military Family Readiness (PSU) were in the planning stages of a military research summit to be held in early February 2020. What emerged from our conversations was that we were leaning toward building a science of moral injury. Admittedly a very ambitious research agenda, that prompted us to ask each other, "where do we even start?". We chose to answer three basic questions: (1) what do we already know, (2)

what else do we need to know, and (3) what are the scientific building-blocks needed to move the field forward? Guided by these queries and reined in by what can be done in a one-day summit, we decided to focus on identifying gaps in and advancements for the current knowledge base in terms of theory, measurement, and applications. We do not need to belabor you, the reader, on the importance of theory and measurement in laying the conceptual foundation of a particular field, coupled with the critical role of applications in empirically demonstrating the robustness and utility of a particular construct. What was important for us was to set the conceptual and empirical footings as parallel tracks within this budding scientific field.

Considering that the majority of research has focused on the clinical correlates of moral injury (see Griffin et al., 2019 for the most recent review), we decided to convene researchers and practitioners who offered alternative explanations or presented on relatively new findings that had direct consequences to theory, measurement, or practice (in terms of prevention and intervention). Our deliberate choice to hear divergent perspectives was driven by a desire to promote conversations that would forge new ways of conceptualizing and measuring moral injury, as well as its cross-cultural applications. Hence, on February 11, 2020, USC and PSU hosted the joint research summit titled, “Exploring Moral Injury: Theory, Measurement, and Applications” in Los Angeles, California. What follows are summaries and highlights of the different presentations shared at the summit.

Theoretical frameworks on moral injury

Dr. Donna Ames (University of California, Los Angeles and the Los Angeles Veterans Affairs Medical Center) presented on the spiritual dimension of moral injury – ranging from measurement (Koenig et al., 2018) to spiritually integrated treatments (Pearce et al., 2018). This work is in collaboration with Dr. Harold Koenig whose work on moral injury is based on the intersection of spirituality, theology, and health. First, based on the validation studies of the Moral Injury Symptom Scale-Military Version (MISS-M; Koenig et al., 2018), results reveal that Post-Traumatic Stress Disorder (PTSD) is distinct from moral injury, suggesting that what can be described as an inner conflict (e.g., spiritual struggles, shame, loss of trust, meaning, and hope) can be differentiated from clinical symptoms (e.g., PTSD symptoms, depression, anxiety). Moreover, Dr. Ames stressed the

importance of the relational component of moral injury. As she explained, a person suffering from moral injury has a broken relationship with self, with another person, and/or with a higher being or power. When spirituality or religiosity is salient, there is the possibility of receiving treatments other than or above and beyond the traditional offerings made available at Veterans Affairs Medical Centers, specifically Cognitive Processing Therapy (CPT; Resick et al., 2017) and Prolonged Exposure Therapy (PE; Foa et al., 2007). Second, developed in conjunction with chaplains, spiritually integrated treatments focus on moral injury dimensions (e.g., shame, moral concerns, religious struggles, loss of faith) that are not part of secular treatment modules. When tailored this way, healing is postulated to occur at the level of the soul and involves engaging in traditional spiritual or religious acts such as lament, repentance, confession, and atonement.

Dr. Hazel Atuel (USC) presented on a virtue-based definition of moral injury (Atuel & Castro, 2019; Atuel, Jones, Greenberg, Williamson, Barr, Vermetten et al., *in preparation*) that borrows from moral philosophy (e.g., *Nicomachean Ethics*; trans. 2006), moral psychology (e.g., Strohming et al., 2017), character psychology (e.g., Lapsley & Stey, 2014), and social psychology (e.g., Brewer, 1991). This multidisciplinary framework advances a broader theoretical foundation that is not defined by and does not necessarily reflect clinical impairments. This framework provides a character pathway that is differentiated from the traditional clinical pathway by defining moral injury as a psychological state that arises in the aftermath of moral failure. To have an effect on an individual’s character and identity, the moral failure experience has to be of significance, often involving suffering or death. The definition of suffering, however, is not limited to traumatic events (e.g., war trauma, sexual assault). Rather, suffering is argued to stem from a wider range of behaviors or interactions reflecting the lack of human goodness (or human excellence in terms of the Aristotelian moral virtues), with simple acts (e.g., apathy or meanness toward another person) on one end and traumatic events at the other end of this spectrum. Moral injury situates an individual in a less than virtuous state of being (in the Aristotelian context of character and identity), where the moral injury struggle is postulated to be an identity negotiation process between the ‘good-me’ (real-self) and the ‘bad-me’ (who the person has become in the aftermath of moral failure).

Measurement¹

A number of measurement gaps were identified prior to the summit, the most pressing of which is the need for more high-quality data and replication trials to help test theoretical propositions and preliminary empirical findings. In service to this goal, Dr. Cameron Richardson (PSU) presented on a recent conceptual replication and extension of prior factor analytic work on the Moral Injury Event Scale (Richardson et al., 2020) and associated definitional and measurement considerations drawn in part from social domain theory (Turiel, 1983; Smetana, 2006). Essential to the task of developing a science of moral injury is to be clear on what is and is not within the scope of investigation. With the goal of achieving clarity on scope, Dr. Richardson attempted to differentiate between moral transgressions, which encompass actions that impinge on others' welfare, and social conventional transgressions, which comprise potentially important yet morally irrelevant actions that fall outside agreed upon norms. A prototypic example of a social conventional transgression in a military context is the failure to salute a superior. In this scenario, the action has been sanctioned by the Military as a means of showing respect and maintaining order and efficiency; however, an individual choosing to transgress, or a unit collaboratively choosing to forgo the formality of the salute, is not anticipated to affect an individual's welfare, and as such it is anticipated to lie outside the bounds of moral injury.

Regarding the attempt to replicate the MIES factor structures found in prior studies (Nash et al., 2013; Bryan et al., 2016), Dr. Richardson noted he and his colleagues found that a two-factor solution, which differed from previous solutions, fit the data best for a normative sample of veterans drawn from the Veterans Metric Initiative (TVMI; Vogt et al., 2018), which is a panel study of post-9/11 US veterans' reintegration into civilian life. The two-factor solution consisted of self- and other-transgressions, which is aligned with current theoretical notions of moral injury sub-types (Litz et al., 2018; Stein et al., 2012). In addition, he and colleagues found that the event (e.g., "I saw things that were morally wrong") and reaction (e.g., "I am troubled by having witnessed others' immoral acts") items were statistically indistinguishable (Richardson et al., 2020); thus, the removal of the event items did not appreciably affect model fit.

¹We originally invited at least two speakers for each topic. Due to scheduling conflicts, Dr. Cameron Richardson became the lone speaker on measurement.

Given the generality of the item wording, discussion revolved around the potential utility of deploying the MIES as a non-threatening screener.

Applications

The third focus of our research summit involved discussions pertaining to the application of moral injury theory and measurement to the everyday lives of military service members, their families, and their communities. Since Litz et al. (2009) seminal article on moral injury that reinvigorated social scientists' interest in the topic, an abundance of scholarly work has been produced. A search of the Scopus database from 1960 to 2008 produced only eight scholarly works with the term "moral injury" in the abstract. In contrast, a search from 2009 to the present returned 265 scholarly products containing the term "moral injury" in the abstract.

The notable increase in scholarly attention over the last decade has primarily focused on definitional, theoretical, and operational clarity. Arguably, significant gaps in scholarship focused on rigorous examinations of moral injury's impact on functioning (e.g., individual, familial, communal), associated risk and protective factors, and methods and mechanisms for healing moral wounds still exists. Yet, the need for applied moral injury research was fully recognized by the summit organizers and attendees, because it is perhaps the most pressing issue facing practitioners, policy-makers, communities, and families engaging with those who have been morally injured.

Our time spent discussing moral injury applications involved three presentations that covered moral injury's impact on US veterans' social well-being, Adaptive Disclosure as a therapeutic treatment option for morally injured service members, and the experience of moral injury among UK veterans.

Moral injury is postulated to be associated with impaired social well-being (Carey & Hodgson, 2018; Jinkerson, 2016; Koenig et al., 2017; Litz et al., 2009). To date, there is a paucity of research examining the relationships between moral injury arising from self- and other-directed transgressions and social well-being, especially among veterans. Dr. Ryan Chesnut (PSU) presented on a longitudinal study using the first four waves of data from TVMI (Vogt et al., 2018) that he and his colleagues conducted to examine the relationships among self- and other-directed moral injury and four aspects of social well-being: social support, social functioning, social activity involvement, and social satisfaction (Chesnut et al., [under](#)

review). He noted three important findings from their analyses. First, other-directed moral injury was inversely related to all four social well-being outcomes at baseline; however, self-directed moral injury was negatively associated with baseline social functioning but positively associated with baseline social activity involvement. Second, all four social well-being outcomes declined over time. Third, self- and other-directed moral injury differentially predicted these declines in social well-being with other-directed moral injury having consistently stronger effects than self-directed moral injury. Collectively, these findings imply that the relationships among moral injury subtypes and veterans' social well-being are complex and require greater scholarly attention. Moreover, these findings indicate the period of service separation may be an optimal window for targeting prevention and treatment efforts to curtail veterans' declines in social well-being.

While consensus continues to mount that moral injury is a unique type of psychological stressor, there is an ongoing debate about best practices for treatment. Some scholars (Held et al., 2018; Paul et al., 2014) argue established evidence-based treatments for PTSD should suffice, while other scholars (Gray et al., 2012; Litz et al., 2016) suggest standard PTSD treatments may be insufficient for treating moral injury. Dr. Matt Gray (University of Wyoming) presented on a therapeutic approach, Adaptive Disclosure, that he and his colleagues developed to address combat-related stress stemming from three sources: fear, loss, and moral injury. He noted two principal challenges with applying established PTSD treatments to moral injury: (1) individuals' appraisals of the morally injurious experience(s) may be accurate, which may make cognitive restructuring practices inutile or possibly even harmful; and (2) shame and guilt (the primary emotional reactions of moral injury) are fundamentally different than fear and anxiety (the primary emotional reactions of PTSD), which may make exposure techniques ineffective. Given these challenges, Adaptive Disclosure seeks to help service members experiencing distress due to moral injury by helping them make sense of the morally injurious experience(s) and focusing their attention on what the future holds for them. Adaptive Disclosure stresses forgiveness (of both self and others) and making amends (real or symbolic). Dr. Gray presented the results of a small, uncontrolled feasibility study of a six-session version of Adaptive Disclosure implemented with 44 Marines at Camp Pendleton (Gray et al., 2012). Results indicated Adaptive Disclosure merits further exploration as a treatment for moral injury.

Currently, a non-inferiority trial is underway investigating the effects of a 12-session version of Adaptive Disclosure on combat-related stress conditions compared to the standard version of CPT (Resick et al., 2017).

Our research summit's presentations predominately focused on moral injury within the context of US military service. However, moral injury is not unique to the US. Dr. Victoria Williamson (King's Center for Military Health Research) presented on work that she and her colleagues have undertaken to examine moral injury within UK veterans (Williamson et al., 2020). Similar to studies of US veterans, Dr. Williamson and her colleagues found that moral injury was a common experience among the veterans they interviewed. Dr. Williamson also noted that while morally injurious events were uniquely experienced by some of the veterans in their study, a number of veterans also reported experiencing mixed events, that is experiences that simultaneously threatened their life and transgressed their deeply held moral beliefs. This highlights the complexity of combat and suggests treatments designed for combat-related stress conditions need to be able to address multiple experiences. Veterans who reported morally injurious and mixed events also described impairments in their mental, social (including familial), and occupational functioning. A number of risk factors for experiencing moral injury were identified, such as unclear rules of engagement, lack of unit preparedness, and lack of support from commanders and social networks. Similar to the presentation on moral injury and US veterans' social well-being, Dr. Williamson noted the transition from military to civilian life may be an important period for providing prevention and intervention services, as this transition could be a risk factor for the development of moral injury and its associated sequelae.

Next steps

Our research summit culminated in a discussion of how to advance the field of moral injury. This discussion mirrored the summit's programmatic structure of theory, measurement, and applications.

Theory

There was consensus that further attention needs to be given to defining and delineating the moral injury construct. Currently, there is no agreed upon definition of moral injury and a number of related terms are beginning to emerge within the literature, such as moral pain (Farnsworth et al., 2017), moral frustration (Litz &

Kerig, 2019), and moral distress (Litz & Kerig, 2019). Indeed, some speakers at the summit introduced new terminology during their presentations, such as moral decay and moral dissonance. Certainly, moral injury is a complex psychological experience requiring a detailed and nuanced array of terminology to adequately explain its etiology and developmental course. However, without a clear and agreed upon conceptual definition, the research waters will continue to be muddied, and the field will not advance at an adequate pace to effectively inform practice.

Perhaps this slow progress in laying a theoretical foundation can be primarily attributed to social scientists being siloed within our own academic disciplines. If moral injury, as some have argued (e.g., Shay, 2003), is a relatively new term for an age-old problem, we need to look to older disciplines to realize the conceptual gains we seek. For us, this means borrowing from various branches within philosophy, theology, and religious studies, to name just a few. What the past decade has taught us is the study of moral injury does not and cannot be solely within the purview of our own discipline (e.g., psychology), but needs to be informed by a multidisciplinary framework. Only then can we broaden the lexicon of moral injury beyond its current clinical confines, and expand its applicability into the realm of everyday human experiences. This long-term theoretical investment must be made to advance the field.

In the short-term and at the very least, in order for the field to achieve conceptual clarity, agreement must be reached on what makes moral injury unique and differentiated from other psychological states and mental health issues. In our opinion, the most closely related construct that moral injury needs to be delineated from is PTSD. Research focused on this differentiation is accumulating (e.g., Barnes et al., 2019; Bryan et al., 2018; Koenig et al., 2020), yet the question continues to be asked: “Is moral injury distinct from PTSD?” What is needed at this point is a resource that synthesizes the extant research focused on differentiating moral injury and PTSD in a non-technical manner that is of practical use regardless of one’s professional background. Currently, we are working to develop such a resource by creating an evidence-informed visual matrix of the unique and overlapping aspects of moral injury and PTSD.

Measurement

Our discussions highlighted several gaps in the current knowledge base that need to be addressed for the field to make significant progress over the next decade. Since the introduction of the MIES in 2013, a

number of moral injury measures have been developed, such as the Moral Injury Questionnaire (Currier et al., 2015), the Expressions of Moral Injury Scale – Military Version (Currier et al., 2018)), the Moral Injury Symptom Scale (Koenig et al., 2018), and the Perpetration-Induced Distress Scale for civilians (Steinmetz et al., 2019). Currently, there is an international consortium of researchers and clinicians working on the development of a new scale, the Moral Injury Outcome Scale (Yeterian et al., 2019). These moral injury specific instruments are in addition to a number of currently available psychological measures that assess one or more theoretically relevant aspects of moral injury (for a review, see Koenig et al., 2019).

Yet, despite the wide array of options for measuring the moral injury construct, there is no gold standard assessment. Moreover, a screening tool is not currently available, which certainly hampers the field’s ability to efficiently identify those in need of greater support and evaluate treatment impact. Our consensus opinion is that the field needs to shift from measurement development to refinement. Important questions for the field to answer are: (1) “What are the various moral injury assessments actually measuring?”; (2) “How well are they measuring what they purport to assess?”; (3) “What are their similarities?”; (4) “What are their differences?”; and (5) “Which measures work best for whom and under what circumstances?” This last question is an especially important one for the field to ask, as moral injury will likely be experienced and expressed differently in various populations (e.g., normative vs clinical samples, active duty vs reserve or national guard samples, military vs civilian samples) and in response to one’s perceived level of involvement and/or control over the morally injurious event (e.g., perpetrator, victim, witness).

Methods

Although we did not have presentations addressing methodology (another scientific building-block), we recognized the importance of not being solely reliant on quantitative methods for measuring moral injury. There is a richness to the moral injury construct that cannot be adequately captured through a series of closed-ended questions. The qualitative work Dr. Williamson presented at our summit made this explicitly clear. Qualitative methods can enhance our understanding of moral injury by providing us with first-hand accounts of individuals’ experiences with transgressive acts, suffering, and healing. In other words, the use of qualitative methods allows for a

retrospective thick description approach (see Geertz, 2008) to the moral injury experience and contextualizes moral injury within a trajectory that interacts with an individual's biography, history, situation, relationships, and interactions (see Denzin, 2011). After all, moral injury is an event or series of events that occur at a given point in time within a person's lifetime. The rich descriptions gained from this type of research can help to refine the content of quantitative measures. Finally, in addition, think-aloud protocols can be employed with the currently available moral injury instruments as a means of gaining deeper insight in to participants' cognitive processes related to scale items. This would allow researchers to know if respondents are understanding scale items as intended, as well as provide insight in to how best to adjust item wording if needed.

Applications

Finally, our discussion turned to ways to advance applied moral injury research. Similar to the multitude of moral injury measures, we noted there are a plethora of treatments currently available for moral injury. Dr. Gray presented on Adaptive Disclosure, but other proposed treatment options include Prolonged Exposure (Foa et al., 2007), Cognitive Processing Therapy (Resick et al., 2017), Spiritually Integrated Cognitive Processing Therapy (Pearce et al., 2018), Impact of Killing (Maguen et al., 2017), Acceptance and Commitment Therapy (Nieuwsma et al., 2015), and Eye Movement Desensitization and Reprocessing therapy (Hurley, 2018). Yet, despite the impressive number of intervention options, there is a general lack of efficacy or effectiveness data supporting their utility for treating moral injury (Griffin et al., 2019). Attention needs to shift from developing or modifying interventions for moral injury to rigorously examining their impact. The non-inferiority trial Dr. Gray mentioned in his presentation is a good first step in this direction. Further, evaluation studies documenting implementation barriers encountered and solutions found are required to advance practice. To that end, researchers may want to consider using effectiveness-implementation hybrid designs (Curran et al., 2012).

In addition to shifting the field's attention to efficacy and effectiveness trials, we also discussed the merits of adopting a public health approach to treating moral injury. Such an approach would involve a continuum of care ranging from prevention to intervention to maintenance. The public health framework developed by the Institute of Medicine (O'Connell et al., 2009) could serve as a useful template for developing a moral injury

continuum of care. Given the current state of affairs with respect to treatment, which necessarily inhibits our ability to study maintenance at this time, focusing on prevention efforts appears to be the most logical way to advance a public health perspective on moral injury. Such work would need to focus on identifying risk and protective factors and examining the utility of implementing specific programs, such as Battlemind (Castro et al., 2006) and Battlefield-Ethics Training (Warner et al., 2011), at the universal, selective, and indicated levels of prevention.

The social scientific study of moral injury is moving into its adolescent years. While the last decade saw a significant increase in the amount of scholarly attention devoted to the moral injury construct, there is still much work to be done to ensure the next decade of research produces a mature field of study. Our research summit identified a number of useful directions and initiatives for the field to pursue. Our hope is that our summit, and this report, will stimulate scholarly activities and collaborations that lead us to a comprehensive science of moral injury. Such a science would allow us as researchers, clinicians, practitioners, and policy-makers to achieve the most important function of studying moral injury: meeting the needs of our service members, their families, and their communities.

Acknowledgements

We would like to thank the international delegation of presenters and attendees for coming to the 2020 Joint USC-PSU Military Research Summit as well as the Panel Presentation at the Los Angeles Veterans Collaborative. We would also like to thank the generous support of Prudential Financial and our respective institutions.

Funding

Dr. Victoria Williamson presented findings from a research study funded by the Forces in Mind Trust (FiMT17/0920E).

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