



Moral Injury: alertering

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'Moral injury', in het Nederlands ook wel 'moreel trauma' genoemd, is een begrip dat verwijst naar de psychosociale klachten die mensen kunnen ontwikkelen wanneer zij ervaringen hebben meegemaakt waarin belangrijke morele verwachtingen en overtuigingen worden geschonden.

Elke maand zet de ARQ-bibliotheek nieuwe publicaties over *Moral Injury* op deze lijst.

Voor eerdere updates kunt u mailen naar de [ARQ-bibliotheek](#).

Deze attendering hoort bij het [themadossier Moral Injury](#).

Alenezi, A., & Alshammari, M. H. (2024, February 20). *The Mediating Role of Resilience Between Vicarious Trauma, Compassion Fatigue and Moral Injury of Nurses in Saudi Arabia: A Structural Equation Model*. <https://doi.org/10.21203/rs.3.rs-3953510/v1>

Background: Nurses possess the capacity to deliver exceptional care, but their ability is greatly affected by the related issues of vicarious trauma (VT), compassion fatigue (CF), and moral injury (MI). Nurses have inherent resilience despite the challenges, enabling them to confront and overcome these difficulties with determination and professionalism. This study explored the role of resilience as a mediator between the effects of vicarious trauma, compassion fatigue, and moral injury among nurses in Saudi Arabia. Methods: In this study, 511 staff nurses were recruited from three hospitals in Hail, Saudi Arabia. The research was conducted using a quantitative correlation cross-sectional design, and a structural equation model (SEM) was developed, guided by the STROBE criteria. The participants were selected through consecutive sampling. Results: The findings demonstrate that vicarious trauma positively affects resilience, compassion fatigue, and moral injury. Resilience has a positive impact on both compassion fatigue and moral injury. Furthermore, compassion fatigue directly influences moral injury. Conclusion: Our study found that resilience is the strongest predictor of CF, while CF has the greatest impact on MI.

Barrett, E. (2024). Moral Injury: A Typology. *Journal of Military Ethics*, 0(0), 1–10. <https://doi.org/10.1080/15027570.2024.2314807>

This article offers suggestions for categorizing combat-related moral injuries, highlights possible causes of these injuries in veterans, and touches upon broadly-conceived measures to prevent and repair them. The first part identifies three prevailing definitions – lost trust, guilt, and harm to one's capacity for right action and moral virtue – and argues for an emphasis on the latter. In service of highlighting areas for future empirical research and clinical awareness, the second part outlines possible veteran-related causes associated with these three definitions, including unwarranted distrust of authorities, misapplying the theodicy problem to human acts, undue survivor's guilt, wars that fail to meet ad bellum criteria, causing permissible collateral damage, and killing combatants without regret and for pleasure. The third part mentions strategies for preventing character harm, and then discusses the cognitive, rehabilitative, and psychological aspects of moral repair.

Biggs, D., Blackburn, L., Black, C., & Shanmugam, S. (2024). *Physiotherapy Under Pressure: A Cross-Sectional Study on The Interplay Between Perfectionism, Moral Injury, and Burnout*. medRxiv. <https://doi.org/10.1101/2024.02.09.24302501>

Background Given the escalating challenges for UK-based physiotherapists in workload pressures, budget constraints, staff shortages and patient wait times, the profession (of 65,000 registered physiotherapists) requires immediate care and review of therapist health. This pioneering study aims to examine perfectionism, moral injury, and burnout among UK-based physiotherapists across the NHS, private practice, sports, and academia. Method This cross-sectional study utilised an online survey and

implementation of Structure Equation Modelling (SEM) to assess the interplay of Perfectionism (Multidimension Perfectionism Scale-Short Form), Moral Injury (Moral Injury Symptoms Scale-Healthcare Professionals) and Burnout (Shirom-Melamed Burnout Questionnaire). Our sample size calculation shows representation of the UK physiotherapy profession via utilisation of 95% confidence interval with a 5% margin of error. Findings Our analysis conducted on (n=402) UK-based physiotherapists reveals significant burnout levels – 96% are categorised as moderate to high. Furthermore, associations and SEM of Perfectionism and Moral Injury collectively account for a substantial proportion of burnout variability ($r^2=0.62$), highlighting their sequential impact on burnout manifestation. Interpretation With such high levels of burnout, urgent intervention is paramount. Elevated burnout presents challenges for the physiotherapy profession as staff retention, accurate and effective patient care, and overall health are severely impacted due to burnout. Recognising and addressing perfectionism and moral injury becomes pivotal to mitigate its impact on individual and collective health. Funding No funding was acquired for this research project.

Boska, R. L., Bishop, T. M., Capron, D. W., Paxton Willing, M. M., & Ashrafioun, L. (2024). Difficulties with emotion regulation within PTSD clusters and moral injury subtypes. *Military Psychology, 0*(0), 1–9. <https://doi.org/10.1080/08995605.2024.2322904>

Treatment and research centered on trauma-related mental health issues have largely focused on posttraumatic stress disorder (PTSD); however, moral injury is another important mental health concern requiring attention. There is a paucity of research examining how PTSD and moral injury affect emotion regulation. The current investigation examined how PTSD clusters and moral injury subtypes were uniquely associated with difficulties with emotion regulation. Participants consisted of 253 previously deployed military personnel who were recruited online. To be included in the study, participants had to verify that they had served in the U.S. Military, had been deployed as part of their military service, and endorsed elevated levels of symptoms associated with PTSD and/or moral injury. A hierarchical linear regression was conducted to examine the association between PTSD symptom clusters, moral injury subtypes, and difficulties with emotion regulation. Results indicated that alterations in arousal and reactivity was the only PTSD symptom cluster associated with difficulties with emotion regulation. Self-transgressions was the only facet of moral injury significantly associated with difficulties with emotion regulation. This is the first study to examine the association between emotion dysregulation, PTSD symptom clusters, and moral injury in previously deployed U.S. Military.

Brennan, C. J., Roberts, C., & Cole, J. C. (2024). Prevalence of occupational moral injury and post-traumatic embitterment disorder: a systematic review and meta-analysis. *BMJ Open, 14*(2), e071776. <https://doi.org/10.1136/bmjopen-2023-071776>

Objectives Occupational moral injury and post-traumatic embitterment disorder (PTED) describe the psychological distress caused by exposure to injustice at work. This meta-analysis aims to determine the prevalence of occupational moral injury and PTED and establish whether prevalence estimates differ depending on occupation. Design A systematic review and meta-analysis. Data sources Google Scholar, PubMed, APA PsycINFO, Web of Science Core Collection, Scopus, ScienceDirect and Sage Journals Online were searched in June 2020 and updated in November 2022. Eligibility criteria for selecting studies Observational studies that measured prevalence or average scores of moral injury, or PTED in any occupational group and any geographical location. Data extraction and synthesis Two independent reviewers screened and coded eligible studies. Study design, participant demographics, sampling method, location, measurement tool and prevalence or average scores were extracted. Risk of bias was assessed using the Quality Assessment Checklist for Prevalence Studies tool. Meta-analysis was conducted using random effects models. Results that could not be combined were summarised qualitatively in a narrative synthesis using the Guidance for Systematic Reviews. Results In total, 88 studies across armed forces and veterans, healthcare, first responders, educators, journalists, child protection service employees, the unemployed, public-sector employees and mixed occupations were included. Studies included in each separate meta-analysis based on the measure used ranged from 2 to

30. The pooled prevalence of clinically relevant moral injury in healthcare professionals was 45%, and exposure to any potentially morally injurious event (PMIE) across occupations was 67%. Exposure to transgressions by others and betrayal was significantly lower in the armed forces than civilian occupations. Pooled prevalence of PTED across occupations was 26%. Conclusion Exposure to PMIEs, moral injury symptoms and PTED are prevalent at work and exposure to transgressions by others and betrayal are more likely in civilian occupations than the armed forces. PROSPERO registration number CRD42020191766.

D'Alessandro-Lowe, A. M., Patel, H., Easterbrook, B., Ritchie, K., Brown, A., Xue, Y., Karram, M., Millman, H., Sullo, E., Pichtikova, M., Nicholson, A., Heber, A., Malain, A., O'Connor, C., Schielke, H., Rodrigues, S., Hosseiny, F., McCabe, R. E., Lanius, R. A., & McKinnon, M. C. (2024). The independent and combined impact of moral injury and moral distress on post-traumatic stress disorder symptoms among healthcare workers during the COVID-19 pandemic. *European Journal of Psychotraumatology*, 15(1), 2299661. <https://doi.org/10.1080/20008066.2023.2299661>

Background: Healthcare workers (HCWs) across the globe have reported symptoms of Post-Traumatic Stress Disorder (PTSD) during the COVID-19 pandemic. Moral Injury (MI) has been associated with PTSD in military populations, but is not well studied in healthcare contexts. Moral Distress (MD), a related concept, may enhance understandings of MI and its relation to PTSD among HCWs. This study examined the independent and combined impact of MI and MD on PTSD symptoms in Canadian HCWs during the pandemic. Methods: HCWs participated in an online survey between February and December 2021, with questions regarding sociodemographics, mental health and trauma history (e.g. MI, MD, PTSD, dissociation, depression, anxiety, stress, childhood adversity). Structural equation modelling was used to analyze the independent and combined impact of MI and MD on PTSD symptoms (including dissociation) among the sample when controlling for sex, age, depression, anxiety, stress, and childhood adversity. Results: A structural equation model independently regressing both MI and MD onto PTSD accounted for 74.4% of the variance in PTSD symptoms. Here, MI was strongly and significantly associated with PTSD symptoms ($\beta = .412$, $p < .0001$) to a higher degree than MD ($\beta = .187$, $p < .0001$), after controlling for age, sex, depression, anxiety, stress and childhood adversity. A model regressing a combined MD and MI construct onto PTSD predicted approximately 87% of the variance in PTSD symptoms ($r^2 = .87$, $p < .0001$), with MD/MI strongly and significantly associated with PTSD ($\beta = .813$, $p < .0001$), after controlling for age, sex, depression, anxiety, stress, and childhood adversity. Conclusion: Our results support a relation between MI and PTSD among HCWs and suggest that a combined MD and MI construct is most strongly associated with PTSD symptoms. Further research is needed better understand the mechanisms through which MD/MI are associated with PTSD. MI and MD were each independently associated with PTSD symptoms (including dissociation), when controlling for sex, age, childhood adversity, depression, anxiety and stress. Combining both MI and MD constructs into a single latent variable accounted for the greatest proportion of variance explained in PTSD symptoms among HCWs during the COVID-19 pandemic. Results suggest that expanding the construct of MI to include team and systemic organisational MD may be appropriate in the healthcare context.

Gray, M. J., Gray, M. J., & Amaya, S. (2024). The psychological and emotional impact of unintentional killing: Moral injury in a civilian population. *Traumatology*, No Pagination Specified-No Pagination Specified. <https://doi.org/10.1037/trm0000466>

Moral injury (MI) refers to functionally impairing guilt, shame, and emotional distress emanating from events in which one's actions or inactions result in death, serious injury, or great harm to others. The great majority of research bearing on this emerging construct to date has focused on military populations

and combat contexts; much less is known about characteristics and correlates of MI among civilians. Though most civilians will not encounter the types of events that give rise to MI in combat settings, accidents culminating in death or serious injury to others can and do happen. This article focuses on the presentation of MI, posttraumatic stress, and depressive symptoms among 131 individuals who were responsible for accidents that killed other individuals. Findings revealed that MI, posttraumatic stress disorder, and depressive symptoms remained significantly elevated for years after the accident. Regression analyses showed that event-related bullying/ostracization by others and self-blame were associated with poorer adjustment while social support and connectedness were associated with better outcomes. Connectedness with others mediated the association between social support and MI. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

Hamilton, J. (2023). Recruiting, training, and the permissible bounds of preventing and mitigating moral injury in the U.S. Military. In *Preventing and treating the invisible wounds of war: Combat trauma, moral injury, and psychological health* (pp. 263–282). Oxford University Press.

<https://doi.org/10.1093/oso/9780197646588.003.0012>

As moral injury has been recognized in a growing number of settings, policymakers and decision-makers have called for specially tailored, discipline-specific prevention and mitigation measures. In the military context, a comprehensive discourse has begun to focus on recruitment, training, combat operations, and after-action support. While these measures are mutually supporting and each deserves careful consideration, this chapter focuses mainly on identifying individuals who are less susceptible to moral injury on the modern battlefield. This is tricky business. On the one hand, warfighters possessing high moral standards may be more prone to moral injury. On the other hand, our military requires that warfighters possess unwavering moral standards. Striking a balance between a military staffed by warfighters highly susceptible to moral injury and those with no moral code is a delicate balancing act. This chapter aims to locate the permissible bounds of military recruiting and training practices aimed at preventing and mitigating moral injury, and offers concrete recommendations that fall within these bounds. The chapter briefly explores the nature of moral injury. It examines three different combat scenarios to highlight its normative dimension. Finally, the chapter presents specific recruiting, training, and operations strategies aimed at preventing and mitigating moral injury from combat. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

Kline, A. C., Harlé, K. M., Panza, K. E., Nichter, B., Lyons, R., Pitts, M., Haller, M., Allard, C. B., Capone, C., & Norman, S. B. (n.d.). Changes in guilt cognitions mediate the effect of trauma-informed guilt reduction therapy on PTSD and depression outcomes. *Journal of Clinical Psychology, n/a(n/a)*.

<https://doi.org/10.1002/jclp.23659>

Objective Trauma-informed guilt reduction therapy (TrIGR), a six-session cognitive behavioral therapy targeting trauma-related guilt and distress, reduces guilt and symptoms of posttraumatic stress disorder (PTSD) and depression, yet little is known regarding how and why TrIGR may be effective. Method This study examined treatment-related changes in avoidant coping and trauma-related guilt cognitions as possible mediators of treatment effects on PTSD and depression outcomes at 3- and 6-month follow-up. Data were from a randomized controlled trial for treatment of trauma-related guilt comparing TrIGR and supportive care therapy among 145 post-9/11 US veterans (Mage = 39.2 [8.1], 93.8% male). Results At pretreatment, most (86%) met PTSD criteria. Intent to treat analyses using parallel mediation models indicated changes in guilt cognitions, but not avoidant coping, mediated the effect of TrIGR on reducing PTSD severity at 3-month ($a \times b = -0.15$, $p < 0.01$, 95% CI: [-0.24 to -0.06], $p = 0.001$) and 6-month ($a \times b = -0.17$, 95% CI: [-0.26 to -0.07], $p = 0.001$) follow-up. Similarly, changes in guilt cognitions, but not avoidant coping, mediated the effect of TrIGR on reducing depression severity at 3-month ($a \times b = -0.10$, 95% CI: [-0.18 to -0.02], $p = 0.02$) and 6-month ($a \times b = -0.11$, 95% CI: [-0.20 to -0.03], $p = 0.01$) follow-up. Conclusions Compared to guilt cognitions, changes in avoidant coping were less integral to downstream PTSD and depression symptom reduction. Guilt cognition change may be a salient active

ingredient of PTSD and depression treatment for those with trauma-related guilt and a key therapy element to which providers should be attuned.

Levi-Belz, Y., Ben-Yehuda, A., Levinstein, Y., & Zerach, G. (2024). Moral injury and pre-deployment personality factors as contributors to psychiatric symptomatology among combatants: a two-year prospective study. *European Journal of Psychotraumatology*, 15(1), 2312773.

<https://doi.org/10.1080/20008066.2024.2312773>

Background: Combatants who are exposed to events that transgress deeply held moral beliefs might face lasting psychopathological outcomes, referred to as Moral Injury (MI). However, knowledge about pre-deployment factors that might moderate the negative consequences of MI is sparse. In this prospective study, we examined pre-enlistment characteristics and pre-deployment personality factors as possible moderators in the link between exposure to potentially morally injurious events (PMIEs) and psychiatric symptomatology among Israeli active-duty combatants. **Methods:** A sample of 335 active-duty Israeli combatants participated in a 2.5-year prospective study with three waves of measurements (T1: 12 months before enlistment, T2: Six months following enlistment – pre-deployment, and T3: 18 months following enlistment – post-deployment). Participants' characteristics were assessed via semi-structured interviews (T1) and validated self-report measures of personality factors: emotional regulation, impulsivity, and aggression (T2) and combat exposure, PMIEs, psychiatric symptomatology and posttraumatic symptoms (T3) between 2019 and 2021. **Results:** Pre-enlistment psychiatric difficulties and negative life events contributed to higher exposure to PMIEs post-deployment. Higher levels of pre-deployment aggression and lower levels of emotional regulation and impulsivity moderated the association between betrayal, PMIEs and psychiatric symptomatology post-deployment, above and beyond pre-enlistment psychiatric difficulties and life events. **Conclusions:** Our results highlight that pre-deployment emotional regulation, impulsivity and aggressiveness levels should be assessed, screened, and identified among combatants, as they all facilitate psychiatric symptomatology (and PTSS) after combatants are exposed to PMIEs of betrayal. Such pre-assessment will enable the identification of at-risk combatants and might provide them with tailor-made preparation regarding moral and ethical situations that should be investigated in future research. Pre-enlistment psychiatric difficulties contributed to higher exposure to PMIEs post-deployment. Pre-deployment personality moderated the associations between PMIEs and psychiatric symptomatology among combatants. Higher levels of pre-deployment emotional regulation moderated the association between betrayal PMIEs and post-deployment PTSS symptoms. Pre-enlistment psychiatric difficulties contributed to higher exposure to PMIEs post-deployment. Pre-deployment personality moderated the associations between PMIEs and psychiatric symptomatology among combatants. Higher levels of pre-deployment emotional regulation moderated the association between betrayal PMIEs and post-deployment PTSS symptoms.

Levi-Belz, Y., Blank, C., Groweiss, Y., & Neria, Y. (2024, February 6). *The impact of betrayal-based moral injury on PTSD and depression in the aftermath of the October 7th 2023 terror attack in Israel: A nationwide prospective study*. <https://doi.org/10.21203/rs.3.rs-3903864/v1>

With more than 1300 civilians murdered and 240 civilians kidnapped, the massacre of October 7th is one of the deadliest terrorist attacks in modern history. The mental health consequences of terrorist attacks have been documented. However, little is known of the impact of betrayal-based moral injury (MI)—in which individuals feel betrayed by leaders they once trusted—on levels of psychological burden in the aftermath of such an attack. In this national prospective cohort study, we examined to what extent the experience of betrayal exacerbates the risk for posttraumatic stress disorder (PTSD) and depression in the wake of the October 7th terrorist attack. A representative sample of 710 Israeli adults (362 female, 51.1%), Jews (557, 79.9%) and Arabs (153, 20.1%), aged 18–85 ($M = 41.01$, $SD = 13.72$) completed validated self-report questionnaires assessing PTSD, depression, and betrayal-related MI at two timepoints: T1, in August 2023 (6–7 weeks before the attack) and T2, in November 2023 (5–6 weeks after the attack). In two hierarchical logistic regressions, we found that experience of betrayal predicted diagnoses of both PTSD ($OR = 1.75$, 95% $CI = 1.18–2.60$) and depression ($OR = 2.01$, 95% $CI = 1.35–$

2.91) at T2, beyond probable PTSD/depression at T1 and demographic and trauma-related variables. Moreover, in two repeated-measure analyses predicting PTSD/depression symptoms, we found significant interactions between PTSD/depression trajectories and betrayal, meaning that the increase of PTSD/depression symptoms was significantly higher among participants experiencing betrayal by leaders in the context of the attack. Our study highlights the impact of betrayal-based MI on the dramatic increase in psychopathology following the October 7th terror attack in Israel's population. Clinicians treating individuals coping with PTSD and depression should attend to their patients' possible exposure to betrayal-based MI following the attack. Moreover, national leaders and policymakers should take significant steps to repair the public's betrayal experience.

LiVecche, M. (2024). Kevlar for the Soul: Moral Theology and Force Protection. *Journal of Military Ethics*, 0(0), 1–15. <https://doi.org/10.1080/15027570.2024.2309768>

This article is an examination of killing in war in its moral and normative dimension – with attention given to how killing affects the acting agent. The author argues against the commonplace belief – often tacitly held if not consciously asserted – among academics, the general public, and even – if surprisingly – military professionals, that killing, including in a justified war, is always morally wrong – even when legally sanctioned and necessary to avert a greater moral wrong. This critique of the “killing is wrong but in war it is necessary” trope is motivated in part by the large numbers of psychiatric battle casualties (specifically moral injury) suffered during operations in Iraq and Afghanistan, and which have attended military activity throughout history. The article approaches the issue through the field of Christian ethical reflection on just war. In building a moral framework for killing in combat, the article explores a typology of homicide, intention, double effect, love, and whether the attitudinal expectations of just warriors in the Christian tradition is realistic in combat. With this moral framework for killing in hand, this article concludes by drawing a critical distinction between moral injury and moral bruising.

Luban, D. (2024). Moral Injury and Atonement. *Journal of Military Ethics*, 0(0), 1–13. <https://doi.org/10.1080/15027570.2024.2318879>

This article, originally presented as a keynote address at the 2019 McCain conference, proposes that we must take seriously the “moral” component of moral injury. In addition to psychological treatment, wounded warriors suffering moral injury require atonement for genuine transgressions, and insight when the conduct they regard as transgression actually is not. The article defines the dimensions of moral injury as parallel to those of physical injury: pain, loss of functionality, and (in some cases) disfigurement. It then asks how atonement can be achieved, turning to an unusual source for inspiration: the laws of atonement set out by the medieval Jewish philosopher Moses Maimonides. Maimonides proposes four requirements: verbal confession, repentance, reparation, and apology. The article explains their meaning in the context of contemporary wounded warriors. Finally, it argues that Judaism's unique tradition of collective atonement offers an important model for the armed services.

Molendijk, T. (2024). Morale and Moral Injury among Russian and Ukrainian Combatants. In *Reflections on the Russia-Ukraine War* (pp. 97–121). Leiden University Press.

This chapter explores morale and moral injury in the Russia-Ukraine War, emphasising the role of narratives. Ukrainians have been engaged in a fierce struggle for their very existence, while the morale-boosting narratives among Russian forces have faced serious challenges. Yet, the involvement of NATO countries possibly reinforced an ‘us against the rest’ mentality in Russian troops. Also, on the battlefield, unique dynamics shape morale, with the willingness to sacrifice for comrades being paramount for combat readiness. Previous conflicts' insights suggest that both sides face a substantial risk of moral injury. Russian soldiers, in particular, may be susceptible to moral injury, not as deep remorse but as feelings of betrayal by their leadership and society post-deployment. This chapter contemplates how ‘us/them’ narratives in Western societies shape our understanding of the crisis. A tragic narrative, rather than a superheroes versus villains tale, might better capture the human aspect of war.

Neimic, S. (2024). *To Be Of Service*. 10(1), 32–35. <https://doi.org/10.21061/jvs.v10i1.541>

The documentary film *To Be Of Service*, released in 2019, intricately weaves the narratives of US military veterans who grapple with the emotional scars of post-traumatic stress disorder (PTSD) and moral injury (MI) and the indispensable role played by the service dogs who help them heal. Through poignant firsthand accounts, these veterans articulate the emotional and physical toll exacted by wartime experiences, revealing a profound sense of brokenness, isolation, and unpreparedness for civilian life. This documentary is a testament to the dedication and sacrifices of military service members and offers an emotional exploration of the profound consequences of war. It illuminates the struggles and triumphs of veterans through the deep connections forged with their loyal service dogs and the transformative impact they have on veterans' quality of life. The financial challenges associated with acquiring a service dog emerge as a pressing issue, underscoring the necessity for heightened public awareness and support for veterans' transitional needs.

Nichter, B., Hill, M. L., Maguen, S., Norman, S. B., Fischer, I. C., & Pietrzak, R. H. (2024). Health and psychiatric impairment associated with moral injury, military sexual trauma, and their co-occurrence in U.S. combat veterans. *Journal of Psychosomatic Research*, 179, 111617.

<https://doi.org/10.1016/j.jpsychores.2024.111617>

Background Military sexual trauma (MST) and moral injury (MI) are associated with adverse psychiatric and health outcomes among military veterans. However, no known population-based studies have examined the incremental burden associated with the co-occurrence of these experiences relative to either alone. **Method** Cross-sectional data were analyzed from the National Health and Resilience in Veterans Study, a nationally representative sample of 1330 U.S. combat veterans. Veterans reported on history of exposure to MST and potentially morally injurious events (PMIEs). Analyses estimated the lifetime prevalence of MST only, PMIEs only, and co-occurring MST and PMIEs; and examined associations between MST/PMIEs status and psychiatric and physical health comorbidities, functioning, and suicidality. **Results** The lifetime weighted prevalence of exposure to MST only, PMIEs only, and co-occurring MST and PMIEs were 2.7%, 32.3%, and 4.5%, respectively. Compared with all other groups, the co-occurring MST + PMIEs group reported greater severity of posttraumatic stress, depression, generalized anxiety, and insomnia symptoms. They also scored lower on measures of physical, mental, and psychosocial functioning, and reported a greater number of chronic medical conditions and somatic complaints. Veterans with co-occurring MST + PMIEs were more than twice as likely as those with MST only to report past-year suicidal ideation. **Conclusions** The co-occurrence of MST and MI is associated with a greater psychiatric and health burden among combat veterans than either experience alone. **Results** underscore the importance of assessing and treating MST and MI in this population. Findings underscore the importance for future work to parse overlap between morally salient aspects of MST and the concept of moral injury.

Phelps, A. J., Adler, A. B., Belanger, S. a. H., Bennett, C., Cramm, H., Dell, L., Fikretoglu, D., Forbes, D., Heber, A., Hosseiny, F., Morganstein, J. C., Murphy, D., Nazarov, A., Pedlar, D., Richardson, J. D., Sadler, N., Williamson, V., Greenberg, N., & Jetly, R. (2024). Addressing moral injury in the military. *BMJ Mil Health*, 170(1), 51–55. <https://doi.org/10.1136/bmjmilitary-2022-002128>

Moral injury is a relatively new, but increasingly studied, construct in the field of mental health, particularly in relation to current and ex-serving military personnel. Moral injury refers to the enduring psychosocial, spiritual or ethical harms that can result from exposure to high-stakes events that strongly clash with one's moral beliefs. There is a pressing need for further research to advance understanding of the nature of moral injury; its relationship to mental disorders such as posttraumatic stress disorder and depression; triggering events and underpinning mechanisms; and prevalence, prevention and treatment. In the meantime, military leaders have an immediate need for guidance on how moral injury should be addressed and, where possible, prevented. Such guidance should be theoretically sound, evidence-informed and ethically responsible. Further, the implementation of any practice change based on the guidance should contribute to the advancement of science through robust evaluation. This paper draws

together current research on moral injury, best-practice approaches in the adjacent field of psychological resilience, and principles of effective implementation and evaluation. This research is combined with the military and veteran mental health expertise of the authors to provide guidance on the design, implementation and evaluation of moral injury interventions in the military. The paper discusses relevant training in military ethical practice, as well as the key roles leaders have in creating cohesive teams and having frank discussions about the moral and ethical challenges that military personnel face.

Steen, S. (2023, November 29). *The Internal Consistency of the Moral Injury Event Scale: A Reliability Generalisation Meta-Analysis and Systematic Review, 2021-2022* [Data Collection]. <https://doi.org/10.5255/UKDA-SN-856807>

The Moral Injury Event Scale (MIES) is a tool for measuring exposure to potentially morally injurious event(s) and distress. While it reported satisfactory psychometric properties in its early development studies, it has since been used in multiple contexts and populations without assessment of its changing reliability or validity. A meta-analysis was conducted to assess the MIES psychometric properties across databases (PsychINFO; PTSD Pubs; MEDLINE; Scopus; Web of Science) was undertaken to identify studies reporting MIES reliability and validity data. A total of 42 records were found up-to-April-2022. Most papers reported Cronbach's Alpha so analyses of other reliability and validity metrics (e.g., test-retest, inter-rater reliability) were not possible. The review found the MIES to be a generally internally consistent tool based on alpha estimates at both Full-scale ($\alpha=.88$) and Sub-scales ($\alpha=.82-.92$). The review uncovered high heterogeneity and inconsistencies in its administration and modification although figures generally remained above acceptable levels ($\alpha \geq .70$). Based on the review, the MIES represents an internally reliably tool for measuring potentially morally injurious events and distress at both Full and Sub-Scales according to pooled Cronbach's Alpha estimates. (Supplementary Tables)

Weissinger, G. M., Swavely, D., Holtz, H., Brewer, K. C., Alderfer, M., Lynn, L., Yoder, A., Adil, T., Wasser, T., Cifra, D., & Rushton, C. (2024). Critical Care Nurses' Moral Resilience, Moral Injury, Institutional Betrayal, and Traumatic Stress After COVID-19. *American Journal of Critical Care*, 33(2), 105–114. <https://doi.org/10.4037/ajcc2024481>

Traumatic stress and moral injury may contribute to burnout, but their relationship to institutional betrayal and moral resilience is poorly understood, leaving risk and protective factors understudied. To examine traumatic stress symptoms, moral injury symptoms, moral resilience, and institutional betrayal experienced by critical care nurses and examine how moral injury and traumatic stress symptoms relate to moral resilience, institutional betrayal, and patient-related burnout. This cross-sectional study included 121 critical care nurses and used an online survey. Validated instruments were used to measure key variables. Descriptive statistics, regression analyses, and group t tests were used to examine relationships among variables. Of participating nurses, 71.5% reported significant moral injury symptoms and/or traumatic stress. Both moral injury symptoms and traumatic stress were associated with burnout. Regression models showed that institutional betrayal was associated with increased likelihood of traumatic stress and moral injury. Increases in scores on Response to Moral Adversity subscale of moral resilience were associated with a lower likelihood of traumatic stress and moral injury symptoms. Moral resilience, especially response to difficult circumstances, may be protective in critical care environments, but system factors (eg, institutional betrayal) must also be addressed systemically rather than relying on individual-level interventions to address nurses' needs.