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Uniformed Services University

Research Update – May 7, 2026

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- Complexity of exposure to mass-casualty conflict and terror stress: A population study following a major civilian targeted event.
- Combination treatment for chronic insomnia disorder in adults: an American Academy of Sleep Medicine clinical practice guideline.
- A gendered network analysis of somatic, psychological, and healthcare utilization patterns among parents of service members in wartime.
- Trends and Thematic Clusters in Moral Injury Research: A Bibliometric Analysis.
- Moral injury events, pain intensity, and functional mobility in post-9/11 U.S. combat veterans.
- Links of Interest
- Resource of the Week: A Systems-Based Approach to Supporting Individuals Who Have Experienced Grief and Loss (SAMHSA)

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https://doi.org/10.1007/s11920-026-01664-6

SAFEGUARD: Transforming Military Suicide Prevention Through Predictive Analytics and Targeted Interventions.

Nassif, T. H., Adler, A. B., Atkinson, R. D., Bentley, K. H., Bonomi, R. E., D'Olympia, J., Edwards, E. R., Fortgang, R. G., Gaudiano, B. A., Geraci, J. C., Goodman, M., Herman, D., Kleiman, E. M., Maggio, S., McDaniel, A., Naifeh, J. A., Nock, M. K., Paine, C., Regan, T., Torous, J., … Kessler, R. C.

Current Psychiatry Reports
Volume 28, article number 16, (2026)

Purpose of Review
Machine learning predictive modeling can support scalable prevention of suicide-related behavior (SRB). SAFEGUARD is a three-pronged universal, indicated, and clinical SRB-prevention intervention system focused on key military career touchpoints.

Recent Findings
The targeted SAFEGUARD interventions are designed to improve on the mixed results of universal interventions. Level Up uses digital tools, personalized messaging, and remote booster sessions to deliver customized universal military-focused cognitive behavioral therapy skills training designed to reduce SRBs during first duty assignments. Operation Life Force delivers remote group dialectical behavior therapy skills training with a mental toughness focus to soldiers identified during annual physicals as high-risk for SRBs. Pathfinding delivers remote wrap-around case management after psychiatric inpatient discharge to soldiers identified as high-risk for SRBs.

Summary
SAFEGUARD is a data-driven system for SRB prevention that delivers targeted best-practice interventions at critical points to optimize impact and efficiently use mental health resources across the military.

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https://doi.org/10.1016/j.jad.2026.121692

Predicting next-day suicidal urges, depression, and PTSD symptoms using ecological momentary assessments and passive sensing of sleep among military service members and veterans.

Lin, T., Wiley, J., Zhu, Y., Tang, M., Taylor, D. J., Pruiksma, K. E., Feler, B., Kautz, M., Baker, J. C., Khazem, L., Bryan, C. J., & Brown, L. A. (

Journal of Affective Disorders
Volume 406, 1 August 2026, 121692

Highlights

- Severe nightmares and poor sleep quality predicted higher next-day suicide risks.
- EMA outperformed wearable in assessing sleep as a predictor of suicide risks.
- Military personnel showed higher adherence to wearable devices than EMA.
- Wearable-assessed sleep added predictive value for suicide urges and depression.
- Integrating EMA and wearable sensors enhances real-time detection of suicide risks.

Abstract

Backgrounds

Suicide risk fluctuates rapidly, highlighting the importance of identifying risk factors for acute suicidal urges. This study examined whether nightly sleep measured actively via self-report ecological momentary assessment (EMA) and passively via wearable sensors predicted next-day suicidal urges, depression, and PTSD symptoms among military service members and veterans.

Methods

Military service members and veterans with current suicidal ideation or a suicide attempt in the past month (N = 86) completed seven EMA surveys per day and wore a wearable device (Fitbit) for 28 days. Using multilevel models, we examined sleep assessed by EMA-only, wearable-only, and EMA + wearable as predictors of next-day suicidal urges, depression, and PTSD symptoms, and compared the predictive utility of the three approaches.

Results

Participants completed 7898 EMA observations (48.9% adherence) and wore a

wearable device (Fitbit) for 79.43% of the study period. More severe nightmares and poorer sleep quality assessed by EMA predicted next next-day suicidal urges (maximum and average), suicidal beliefs, depression, and PTSD symptoms. Wearable-assessed sleep duration deviation significantly predicted next-day maximum suicidal urges. Wearable-assessed sleep regularity index predicted next-day depression. EMA-only models consistently outperformed wearable-only models in predicting next-day suicide risks and mental health outcomes, and combining EMA and wearable demonstrated best model fit.

Conclusion
Our findings suggest that self-reported sleep via EMA has strong utility in predicting near-term suicidal risk, depression, and PTSD, while wearable devices can provide low-burden, supplemental information. Integrating wearables and EMA may enhance the prediction and inform just-in-time suicide interventions.

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https://doi.org/10.1002/jclp.70105

The Impact of Combat Exposure on Suicidal Behavior Among U.S. Military Personnel: The Moderating Roles of Moral Injury and Stigma.

Im, S., & Woo, S.

Journal of Clinical Psychology
Volume 82, Issue 5, May 2026, Pages 765-774

This study analyzed data from the Military Health and Well-being Project (MHWBP) to examine the influence of combat exposure on suicidal behavior among U.S. military personnel with combat experience, focusing on the moderated effects of moral injury and stigma. Data from 1,495 service members were analyzed, revealing significant correlations among the variables. The Process Macro was employed to assess the impact of moral injury and stigma on suicidal behavior. Furthermore, moderated moderation analyses were conducted, revealing that combat experience had a stronger relationship on suicidal behavior among individuals with high levels of moral injury and stigma. These findings shed light on the interacting factors through which combat exposure affects suicidal behavior among military personnel and are discussed in terms of their implications, limitations, and future research directions.

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https://doi.org/10.1017/S0033291724002460

Examining the association between aggression and suicide attempts among army soldiers.

Krauss, A., Greene, A. L., Edwards, E. R., & Goodman, M.

Psychological Medicine
2024; 54(15): 4222-4230

Background
Suicide is a major concern among active-duty military personnel. Aggression represents a salient risk factor for suicide among civilians, yet is relatively understudied among military populations. Although several theories posit a relation between aggression and suicide with putative underlying mechanisms of social isolation, access to firearms, and alcohol use, researchers have yet to test these potential mediators. This study uses rich, longitudinal data from the Army Study to Assess Risk and Resilience (STARRS) Pre/Post Deployment Study (PPDS) to examine whether aggression longitudinally predicts suicide attempts and to identify mediators of this association.

Methods
Army soldiers (N = 8483) completed assessments 1 month prior to deployment and 1, 2–3, and 9–12 months post-deployment. Participants reported on their physical and verbal aggression, suicide attempts, social network size, firearm ownership, and frequency of alcohol use.

Results
As expected, pre-deployment aggression was significantly associated with suicide attempts at 12-months post-deployment even after controlling for lifetime suicide attempts. Social network size and alcohol use frequency mediated this association, but firearm ownership did not.

Conclusions
Findings further implicate aggression as an important suicide risk factor among military personnel and suggest that social isolation and alcohol use may partially account for this association.

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https://doi.org/10.1002/jts.70037

Predicting externalizing symptom trajectories in U.S. National Guard recruits: The role of adverse childhood experiences.

Sloan, A. F., Bron, T., Marquardt, C. A., Disner, S. G., Noorbaloochi, S., Polusny, M. A., & Schaefer, J. D.

Journal of Traumatic Stress
Volume 39, Issue 2, April 2026, Pages 282-294

Adverse childhood experiences (ACEs) are strongly associated with increased risk of externalizing problems. Despite their prevalence in military populations, limited research links ACEs to longitudinal externalizing problem trajectories during military service transition. This study aimed to identify distinct trajectories of externalizing problems (deviant behavior, alcohol use, and drug use) in U.S. Army National Guard recruits and examine how baseline ACEs predict membership in higher-risk trajectories during the transition to military service. A longitudinal cohort of 707 Army National Guard recruits was assessed before basic combat training and at four follow-ups over 18 months. Growth mixture modeling was used to identify distinct trajectories for deviant behavior, alcohol use, and drug use, whereas logistic regression analyses were conducted to examine associations between baseline ACEs and trajectory group membership. For each domain, we identified distinct trajectory patterns beyond stable-low: decreasing-increasing and increasing-decreasing deviant behavior trajectories, stable-high and increasing alcohol use trajectories, and a variable drug-users trajectory. Relative to stable-low class membership, higher ACE scores were associated with increased odds of membership in the decreasing-increasing, OR = 1.26, 95% CI [1.12, 1.41], and increasing-decreasing, OR = 1.26, 95% CI [1.15, 1.37], deviant behavior; stable-high alcohol, OR = 1.13, 95% CI [1.03, 1.25]; and drug-users, OR = 1.19, 95% CI [1.11, 1.28], trajectories. Specific ACEs uniquely predicted higher-risk trajectories. These findings suggest that ACEs may have longitudinal effects on the unfolding of externalizing symptom trajectories among military recruits, highlighting the need to address preexisting developmental vulnerabilities when examining pathways to psychopathology during significant life transitions.

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https://doi.org/10.55460/J.Spec.Oper.Med.2026.3AAM-LY7L

Case Report on the Augmentation of Cognitive Processing Therapy with Spiritual Counseling to Address Faith-Based Concerns for an Operator with High Religiosity.

Schroedter, B., Schimmelpfennig, M., & Murphy, J. W.

Journal of Special Operations Medicine
Spring 2026

This case report describes treatment of a Special Operations Forces (SOF) Operator with high religiosity experiencing posttraumatic stress disorder (PTSD) and moral injury after exposure to indirect combat-related trauma via real-time audiovisual drone feed. The patient completed virtual massed cognitive processing therapy (CPT) augmented by a single spiritual counseling session to address faith-based concerns interfering with trauma processing. Initial symptom exacerbation occurred early during CPT, but following spiritual counseling, the patient engaged more fully in therapy, leading to a significant reduction in PTSD and depressive symptoms. This case highlights the importance of identifying and addressing faith-related moral injury early in treatment and suggests that integrating spiritual counseling with CPT may enhance outcomes for Operators and other Servicemembers suffering with vicarious posttraumatic stress stemming from indirect combat exposure.

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https://doi.org/10.1097/EDE.0000000000001983

Validity of military service as reported on U.S. death certificates.

Johnson, C. Y., Akushevich, L., Batchelder, H. R., Price, A. E., Holliday, K. M., Hill, E. D., Fish, L. J., Sangvai, D., & Østbye, T.

Epidemiology
April 01, 2026

Background:
Although death certificates are widely used to study mortality in the general population, their use to study mortality among individuals with military service has been limited in part by a lack of information on the validity of military service reported on death

certificates. Our objective was to estimate bias parameters for misclassification of military service to facilitate quantitative bias analysis in studies of mortality in military populations.

Methods:
We included 2014-2021 death certificates from decedents aged 18–64 years who resided and died in Alabama, Michigan, Minnesota, Montana, or Oregon. Death certificates were linked to military service records by the U.S. Defense Manpower Data Center (DMDC) using Social Security Number. Military service was defined as any service in the Regular, Reserve, or National Guard components of the U.S. military in DMDC records. We estimated sensitivity, specificity, and predictive values for military service reported on death certificates stratified by demographics, military characteristics, and manner of death.

Results:
Among the 467,075 death certificates included, 9.3% indicated military service; however, military records showed that 10.9% had served (sensitivity 81.5%, 95% confidence interval [CI]: 81.2–81.8%; specificity 99.5%, 95% CI: 99.5–99.5%). Sensitivity was lower among female (72.3%) compared to male (82.2%) servicemembers and was particularly low for those who had never served on active duty (63.5%).

Conclusions:
Military service was underreported on death certificates, especially for female servicemembers and those without active-duty service. The bias parameters we estimated can be used to account for this misclassification when analyzing death certificates.

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https://doi.org/10.1016/j.psychres.2026.117049

Coping efficacy as a mediator between combat exposure events and probable PTSD.

Shelef, L., Bechor, U., Ohayon, O., Rotschield, J., & Shalev, A.

Psychiatry Research
Volume 360, June 2026, 117049

Highlights

- Combat exposure showed weak correlations with symptoms severity, whereas coping efficacy domains demonstrated strong negative associations with both PTSD and general psychological distress.
- Preserved task performance and self-worth significantly mediated the combat exposure-PTSD relationship.
- For psychological distress, only task performance showed significant mediation.
- Functional coping deficits, particularly in task performance and self-worth, serve as key mediators between combat exposure to psychological symptoms.

Abstract

Combat exposure significantly increases the risk of PTSD and psychological distress among military personnel. PTSD is often associated with poorer coping with personal and interpersonal demands. This cross-sectional study examined whether functional coping efficacy mediates the relationship between combat exposure and psychological outcomes among 1076 Israeli reserve soldiers (96.5% male, mean age 30.7 years) referred to a military Combat Stress Reaction Unit for evaluation and treatment during the war following the October 7th attack. Participants completed assessments measuring combat exposure; a brief Coping Efficacy Scale evaluated task performance, emotional control, interpersonal relationships and self-worth. The PTSD Checklist for DSM-5 (PCL-5) quantified PTSD severity and inferred probable PTSD status (PCL score ≥33), and the Brief Symptoms Inventory (BSI) evaluated psychological distress (BSI score ≥40). Mediation analyses examined direct and indirect statistical pathways between combat exposure and clinical outcomes. Combat exposure showed weak correlations with symptoms severity ($r = 0.11$, $p < .001$), whereas coping efficacy domains demonstrated strong negative associations with PTSD and general psychological distress ($r = -0.33$ to -0.60, all $p < .001$). Indirect association models indicated task performance and self-worth were significantly linked to the relationship between combat exposure and PTSD symptoms (indirect effects: $\beta = 0.03$, $p < .001$ for both). For general psychological distress, only task performance showed significant indirect association ($\beta = 0.04$, $p < .001$). These findings highlight functional coping domains, particularly task performance and self-worth, as strongly associated with psychological outcomes following combat exposure and underscore their potential clinical relevance in early assessment and intervention planning.

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https://doi.org/10.1080/01612840.2025.2596209

Navigating Moral Distress and Moral Injury in Military Veterans: Clinical Implications for Nursing Practice.

Olenick, M., Clark, N., Thomas, K., Clements, P. T., Helmke, L., Khati, K., & Germaine, A.

Issues in Mental Health Nursing
Volume 47, 2026 - Issue 3

Moral distress (MD) and moral injury (MI) are potential consequences of military service among veterans. They can be manifested as deep emotional, psychological, and spiritual wounds that are difficult to heal. These deep wounds can go unrecognized because managing specific psychological symptoms can obscure the broader moral and spiritual wounds veterans carry after serving in combat. This paper discusses MD and MI clinical implications for nurses in all specialties and levels or care, but especially for mental health nurses. This paper also explores veterans' psychological and behavioral manifestations of MD and MIy, examines the impact of these conditions, and identifies nursing strategies that foster moral repair. Additionally, it calls for policy initiatives to empower nurses in delivering holistic, veteran-centered care and promote moral healing.

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https://doi.org/10.1080/10615806.2026.2653255

An experimental examination of the situational variables that influence the traumatic stress response.

Inhaber, J., & Ashbaugh, A. R.

Anxiety, Stress, & Coping
Published online: 06 Apr 2026

Background:
Research suggests that trauma characteristics influence posttraumatic outcomes. Dangerous life-threatening events are associated with fear and anxiety; moral transgressions with guilt, shame and anger; perpetrating moral transgressions with self-conscious moral emotions (e.g., guilt, shame); and witnessing transgressions with

other-condemning moral emotions (e.g., contempt, disgust). However, research linking situational features to posttraumatic outcomes is limited. This study investigated the influence of trauma-related situational variables on cognitive-emotional appraisals of stressful events.

Method:
Undergraduate and Community participants imagined themselves as the protagonist in auditory vignettes depicting moral transgressions or life-threatening situations. They were randomly assigned to a self-condition (e.g., protagonist-enacted events; n = 114), or other-condition (e.g., protagonist-witnessed events; n = 131). After each vignette, participants provided ratings of self-conscious and other-condemning emotions and cognitions, and fear on a 7-point scale.

Results:
Moral vignettes evoked stronger moral emotions and cognitions than life-threat vignettes, with Bayesian t-tests yielding extreme evidence for these differences (all BF10 > 100). Compared to the other-condition, moral vignettes in the self-condition evoked greater self-conscious emotions and cognitions (BF10 > 100), lower other-condemning emotions (BF10 > 100), and no difference in other-condemning cognitions (BF10 = .085).

Conclusion:
Findings strengthen the theoretical rationale for integrating situational factors into conceptualizations of posttraumatic outcomes.

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https://doi.org/10.1016/j.jad.2026.121700

Betrayal as consequence and catalyst: Longitudinal and reciprocal relations with PTSD and depression during ongoing conflict.

Kapel Lev-Ari, R., Haim-Nachum, S., Markowitz, J. C., Fisch, C. T., Lazarov, A., Levi-Belz, Y., Lurie, I., Wainberg, M. L., Mendlovic, S., Neria, Y., & Amsalem, D.

Journal of Affective Disorders
Volume 406, 1 August 2026, 121700

Highlights
- Longitudinal study of civilians during ongoing armed conflict

- Betrayal predicts and is predicted by PTSD and depression over time
- Bidirectional links between PTSD and depression were identified
- Betrayal–PTSD link is stronger under high trauma exposure.
- Depression and betrayal links are stronger under low trauma exposure.
- Findings underscore the need to address moral injury due to betrayal and institutional mistrust.

Abstract

Background

Ongoing armed conflicts expose civilian populations to sustained psychological trauma. While PTSD and depression are well documented, evidence suggests that civilians may also experience moral injury, particularly through a sense of potential moral injuries, events of betrayal (PMIE-Betrayal) by leaders or institutions. This betrayal can manifest as feelings of abandonment, unfulfilled promises of safety, or perceived neglect. Despite known links to distress, betrayal's evolving relationship with PTSD and depression during ongoing trauma is less known.

Methods

685 adults residing in conflict-affected areas in Israel, completed assessments at three time points in three months (baseline, 30-day, and 90-day assessments), reporting PTSD symptoms, depressive symptoms, betrayal-related moral injury, and war-related stressors. Structural equation modeling and multi-group analyses examined reciprocal (bi-directional) associations, comparing individuals with higher versus lower levels of war-related trauma exposure.

Results

High rates of PTSD (16–17%), depression (9–11%), and comorbid PTSD-depression (20–24%) persisted across time. Longitudinal cross-lagged analysis revealed novel bi-directional associations between PTSD and depression, with a sense of betrayal predicting later symptom severity and being shaped by earlier distress. Among highly exposed individuals, betrayal was more strongly linked to PTSD, while among those with lower exposure, it was more closely related to depression.

Conclusions

Betrayal plays a central role in the development and maintenance of PTSD and depression, acting as both a consequence and a driver of psychological distress. A heightened sensitivity to perceived betrayal may increase vulnerability for potentially morally injurious experiences (PMIEs), reinforcing the need for trauma-informed care that addresses moral injury and institutional trust in civilian populations facing ongoing threats.

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https://doi.org/10.1016/j.jaac.2026.03.024

Mental Health Diagnoses in Bereaved Children Following Loss of Active-Duty Service Member Fathers in 2001-2006: A Case-Control Study.

Ogle, C. M., Rice, A. J., Zhou, J., Fisher, J. E., Hisle-Gorman, E., & Cozza, S. J.

Journal of the American Academy of Child & Adolescent Psychiatry
March 29, 2026

Objective
In a retrospective case-controlled study of children of deceased male active duty service members, we examined the prevalence of mental health diagnoses in paternally bereaved children before loss and one and two years after loss compared to non-bereaved children.

Method
Prevalence rates of mental health diagnoses in 1,212 bereaved and 1,212 non-bereaved children (matched on child age; child sex; pre-loss military healthcare utilization; parental military rank and deployment history) were calculated based on electronic medical record data in the military healthcare system. Logistic regressions compared prevalence rates between bereaved and non-bereaved children one and two years following paternal loss.

Results
Prevalence rates of depressive and adjustment disorders were two- to four-times higher in bereaved compared to non-bereaved youth one and two years after loss. Rates of acute stress disorder/posttraumatic stress disorder (PTSD) were 9.5 times higher in the first year post-loss in bereaved versus non-bereaved youth. Models stratified by sex indicated rates of depressive disorders, adjustment disorders, and acute stress disorder/PTSD were higher in both bereaved male and female youth compared to their non-bereaved counterparts. However, few sex differences were found. An examination of developmental differences indicated that bereaved school-age children had higher rates of acute stress disorder/PTSD compared to adolescents in the first year after death.

Conclusion
Paternal bereavement is associated with increased prevalence of depressive disorders, adjustment disorder, and acute stress disorder/PTSD 1- and 2-years post-loss among children in active duty families. Paternally bereaved school-age children may be at heightened risk for trauma-related diagnoses.

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https://doi.org/10.1002/smi.70175

Methods of Repeated Monitoring of Stress and Stress-Related Mental Health Outcomes in Military Personnel and Veterans: A Systematic Review.

Metts, A., Harris, E., Martinez, N. M., Pearson, R., & Creech, S. K.

Stress & Health
Volume 42, Issue 2, April 2026, e70175

Military personnel and veterans are exposed to high levels of stress throughout their military careers and following separation and are susceptible to stress-related psychopathology. The objective of this systematic review is to evaluate research on the repeated monitoring of stress and stress-related mental health outcomes in these populations (PROSPERO ID#CRD42024587783; Funding: US Department of Veterans Affairs). Systematic searches of three databases (APA PsycInfo, PubMed, PTSDPubs) were conducted from inception until September 30, 2025. Inclusion criteria were military or veteran samples, self-report or clinician-rated stress, depression, anxiety, trauma-related distress, or mood measures, repeated monitoring within a 4-week timeframe, and original peer reviewed research. Each study was assessed for risk of bias with an empirically supported critical appraisal checklist. Data were synthesised by three authors (A.M., E.H., and N.M.M.). Of the 61 included studies, most were in majority male (94.9%), White (82.6%), and veteran-only (67.2%) samples. Traditional self-report measures were the most used assessment type (32.7%), followed by ecological momentary assessment (26.2%). Most studies monitored posttraumatic stress disorder (PTSD) (52.5%) and depressive (44.3%) symptoms, with fewer studies measuring stress (31.1%) and anxiety (11.5%). Approximately a quarter (26.2%) measured stress and stress-related mental health outcomes concurrently. Most studies measuring mood were completed in samples with a primary focus on PTSD (63.2%). Although repeated assessment in military and veteran populations provides important insight into changes in stress and stress-related outcomes, studies together were limited by inconsistencies

in methodology. We highlight potential contributions in methodology to capture risk and resilience and improve outcomes for these populations.

Trial Registration
This systematic review was pre-registered:
https://www.crd.york.ac.uk/PROSPERO/view/CRD42024587783

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https://doi.org/10.1080/20008066.2026.2646757

Understanding the clinical profile of Continuous Traumatic Stress Responses: insights from the adaptation of the Continuous Traumatic Stress Response Scale (CTSR) in Ukrainian military personnel.

Avramchuk, O., Mykolaychuk, M., Zavada, T., Demydiuk, V., Goral, A., & Senyk, O.

European Journal of Psychotraumatology
Volume 17, 2026 - Issue 1

Background:
Despite ongoing debate on the necessity of using the Continuous Traumatic Stress Response (CTSR) concept in contexts of repetitive threat – where the traditional post-traumatic stress disorder (PTSD) paradigm is insufficient [Goral, A., Feder-Bubis, P., Lahad, M., & Aharonson-Daniel, L. (2022). 'In the middle, between anxiety victims and PTSD, there are people that have some kind of a disorder that has no name yet' Insights about the traumatic stress consequences of exposure to ongoing threat. Trauma Care, 2(2), 185–196. https://doi.org/10.3390/traumacare2020015], validated measurement tools remain scarce. Moreover, because previous operationalizations focused primarily on civilian populations, adapting CTSR measures to military contexts is essential given their sensitivity to contextual factors.

Objective:
The present study aimed to adapt the CTSR scale [Goral, A., Feder-Bubis, P., Lahad, M., Galea, S., O'Rourke, N., & Aharonson-Daniel, L. (2021). Development and validation of the Continuous Traumatic Stress Response scale (CTSR) among adults exposed to ongoing security threats. PLoS One, 16(5), e0251724. https://doi.org/10.1371/journal.pone.0251724] for Ukrainian military personnel by examining their specific psychoemotional responses to continuous traumatic stress (CTS).

Methods:
A total of 1,902 military personnel completed 25 CTSR items, the Patient Health Questionnaire-9, the International Trauma Questionnaire, and a sociodemographic survey. Exploratory and confirmatory factor analyses were used to identify context-specific psychological responses to CTS, followed by assessments of homogeneity and discriminant validity.

Results:
Cross-validation procedure resulted in a three-factor structure encompassing psychoemotional responses of exhaustion, helplessness – depression, and psychosocial disruption. This structure was confirmed by CFA and supported by Cronbach's α values ranging from 0.74 to 0.87. Correlation between PTSD and CTSR remained below the 0.7 threshold, indicating good construct discrimination. Notably, higher CTSR scores were observed among younger personnel with shorter service length and among administrative staff compared to combat and combat-support personnel.

Conclusions:
The adapted CTSR scale revealed a focused clinical profile of CTSR in a military context. While PTSD-related events increased CTSR levels, discriminant validity analysis confirmed the two constructs as clearly distinct. Further analyses indicated that CTSR may be more applicable to military personnel operating in settings of mild-to-moderate ongoing stress rather than in high-exposure combat situations. Content analysis further revealed overlap between CTSR and depressive or burnout-like manifestations. The findings suggest that the CTSR framework may offer a more comprehensive conceptualization of psychological responses to recurrent, yet not high-exposure, threat.

HIGHLIGHTS

- The Continuous Traumatic Stress Response (CTSR) scale was adapted for Ukrainian military personnel. A three-factor clinical profile comprising exhaustion, helplessness-depression, and psychosocial disruption was identified, showing strong psychometric properties, including satisfactory construct validity (CFA) and internal consistency (Cronbach's α). Covariances with depression and posttraumatic stress disorder (PTSD) symptoms, none of which exceeded 50%, provided evidence of good construct discrimination.

- Although the severity of CTSR symptoms increased with the number of PTSD-related experiences, findings supported the conceptual independence of the two

constructs. Further analyses suggest that CTSR may be particularly suited to populations exposed to continuous moderate stress rather than acute high-exposure combat conditions. Content analysis additionally revealed symptom overlap with depressive and burnout-related manifestations, such as exhaustion, powerlessness, motivation loss, despondency, changes in self-perception and behaviour.

- The findings reinforce the conceptualization of CTSR as a multidimensional construct that shares common features with other mental health conditions arising from the dysregulation of psychological and physiological systems under conditions of sustained allostatic load, but is clearly distinctive from PTSD.

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https://doi.org/10.1136/oemed-2025-110647

Adverse mental health outcomes and alcohol misuse among UK Armed Forces personnel: fourth phase of a 20-year cohort study of military personnel who served during the Iraq and Afghanistan conflicts.

Sharp, M. L., Jones, M., Franchini, S., Leal, R., Hull, L., Molloy, N., Burdett, H., Leightley, D., Simms, A., Stone, J., Greenberg, N., Murphy, D., MacManus, D., Wessely, S., Stevelink, S. A. M., & Fear, N. T.

Occupational and Environmental Medicine
Published Online First: 08 April 2026

Objectives
Twenty years since the start of UK Armed Forces participation in the Iraq and Afghanistan conflicts post-2001, the extent to which these deployments continue to impact mental health outcomes and alcohol misuse in UK military personnel is unknown. This is the reporting of the fourth phase, cross-sectional study of a longitudinal cohort study that has assessed the health and well-being of UK serving and ex-serving personnel since 2004.

Methods
Participants were eligible for the most recent phase (2022–2023) if they took part previously (2014–2016) and consented to recontact. Primary outcome measures included symptoms of common mental disorders (CMD), such as depression and

anxiety, probable posttraumatic stress disorder (PTSD), complex PTSD (C-PTSD) and alcohol misuse.

Results
In the overall sample (n=4104, response rate=54.6%), CMD were the most prevalent outcome (27.8%), followed by probable PTSD (9.4%) and alcohol misuse (8.4%). The majority of PTSD experienced met the criteria for C-PTSD (72.7%). Ex-serving Regulars compared with serving Regulars reported a higher prevalence of PTSD (10.5% vs 7.4%, adjusted OR (AOR)=1.68, 95% CI 1.12 to 2.51) and C-PTSD (6.5% vs 3.9%, AOR=1.80, 95% CI (1.07 to 3.05); a higher prevalence of both disorders was also reported in serving/ex-serving Regulars whose last deployment to Iraq/Afghanistan was in a combat role.

Conclusion
Although the majority of those who deployed to Iraq or Afghanistan remain well, there is an enduring impact of combat deployment on PTSD. Attention should continue to be directed towards the prevention, early detection and treatment needs of this cohort.

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https://doi.org/10.1001/jamanetworkopen.2026.5110

Residential Therapy With Navigated Transcranial Magnetic Stimulation for Combat-Related PTSD: A Randomized Clinical Trial.

Fox, P. T., Salinas, F. S., Roache, J. D., Quinones, M., Vaughan, P. W., Franklin, C., Straud, C. L., Price, L., Unzueta-Hernandez, M., Woolsey, M. K., Chavez, A. M., Hoselton, D. A., Brundige, A. R., Litz, B. T., Young-McCaughan, S., Keane, T. M., Peterson, A. L., & Consortium to Alleviate PTSD

JAMA Network Open
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Key Points
Question
Does adding navigated transcranial magnetic stimulation (TMS) to an intensive residential program for combat-related posttraumatic stress disorder (PTSD) improve outcomes?

Findings
In this randomized clinical trial enrolling 119 military personnel and veterans, active navigated TMS provided greater reduction of PTSD symptoms during treatment and longer remissions than sham when added to trauma-focused prolonged exposure and cognitive behavioral treatments in an intensive residential setting. Clinically significant reductions in PTSD symptoms were achieved by 85% of active TMS vs 59% of sham recipients at 1-month follow-up.

Meaning
These findings suggest that navigated TMS can be an efficacious addition to behavioral therapy for combat-related PTSD.

Abstract
Importance
Improved treatments for combat-related posttraumatic stress disorder (PTSD) are needed.

Objective
To determine whether navigated transcranial magnetic stimulation (TMS) is efficacious when added to intensive residential therapy for combat-related PTSD.

Design, Setting, and Participants
A 1:1 randomized clinical trial with 30-day treatment and 1- and 3-month follow-ups was conducted in a residential facility specializing in military mental health with geographically broad catchment. Enrollment was from July 2017 to March 2019. Participants were military personnel with PTSD recruited from treatment facility admissions. Patients, staff, and assessors were blinded to treatment arm. Data were analyzed from November 2020 to April 2023.

Interventions
Both trial arms received intensive residential treatment as standard of care (SoC). SoC included manualized prolonged exposure twice per week combined with daily, day-long psychotherapeutic augmentations as a 30-day program. Navigated TMS (active or sham) was added to SoC. TMS was individually targeted both anatomically (structural) and connectomically (functional) using magnetic resonance imaging and delivered by robotic stereotaxy. TMS was delivered daily (7 d/wk) for up to 20 sessions.

Main Outcomes and Measures
The primary outcome was symptom-severity change in PTSD Checklist for DSM-5 (PCL-5) scores between baseline and end-of-treatment assessments. Secondary

outcomes were Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) and Patient Health Questionnaire–9 (PHQ-9) depression module scores across treatment and follow-up phases.

Results
Among 129 military personnel and veterans screened, 119 with moderate (9 [8%]), severe (56 [47%]), or extreme (54 [45%]) PTSD were randomized (60 to active TMS and 59 to sham TMS), with 6 dropouts (5%) before end of treatment. Mean (SD) participant age was 37.6 (6.5) years; 107 (90%) were male. For both treatment arms, all measures confirmed significant symptom relief relative to baseline. At end of treatment, both PTSD measures showed superior symptom relief for active TMS: mean PCL-5 score difference, −5.94 (95% CI, −11.77 to −0.10; P = .02); mean CAPS-5 score difference, −6.03 (95% CI, −10.84 to −1.22; P = .008). In follow-up, 2 measures showed superior symptom relief durability for active TMS: PCL-5 (mean score difference, −12.30; 95% CI, −22.03 to −2.57; P = .008) and PHQ-9 (mean score difference, −3.45; 95% CI, −0.03 to −6.86; P = .03). Reliable change indices showed superior symptom relief durability for active vs sham TMS on the PCL-5 (85% [95% CI, 71%-98%] vs 59% [95% CI, 41%-78%] at 1 month; P = .03).

Conclusions and Relevance
In this randomized clinical trial of combat-related PTSD, navigated TMS was efficacious when added to intensive residential treatment. This suggests that navigated TMS neuromodulation can effectively reduce PTSD symptoms.

Trial Registration
ClinicalTrials.gov Identifier: NCT02853032

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https://doi.org/10.1016/j.jad.2026.121565

Complexity of exposure to mass-casualty conflict and terror stress: A population study following a major civilian targeted event.

Shahar, G., Elad-Strenger, J., Lassri, D., Lerman, S. F., Schiller, M., Aloni, R., Ben-Shachar, M. S., & Shelef, L.

Journal of Affective Disorders
Volume 405, 15 July 2026, 121565

Highlights

- Complex military/terror events are challenging to assess and understand
- M2D-ACTM tool captures reactions to October 7, 2023 terror in large Israeli sample
- Self vs. other exposure show distinct PTSD, depression, anxiety, somatic links
- Subjective stress predicts mental health better than exposure counts
- Curvilinear effects and – to a lesser extent – interactions with life events shape trauma outcomes

Abstract

Objectives

The October 7, 2023 events exposed both Israelis, Palestinians, and the entire middle east to unprecedented complex trauma. Guided by theoretical considerations and expert panel discussions, we identified seven distinct exposure domains: missile attacks, physical violence, evacuation, combat participation, hostage involvement, media exposure, and group-based marginalization. We examined actual exposure, that of self and significant others, to these domains alongside subjective stress and major stressful life events. Outcomes included PTSD, depression, anxiety, and somatic symptoms.

Methods

A representative sample of Israeli-Jewish adults (N = 928) surveyed for political stress prior to the October 7th 23 events were assessed again in December 2023. They completed a newly developed measure capturing the above seven exposure domains, a measure of major stressful events, and measures of the above outcomes. Hierarchical Regression Analysis was employed to identify both linear and curvilinear effects of exposure, moderated by life stress.

Results

Self and significant others' exposure were unrelated to subjective stress (rs: 0.09 and 0.14, ns) but differentially predicted all symptom types. Subjective stress was the strongest predictor of outcomes overall (βs: 0.18–0.35). Curvilinear effects and interactions between trauma exposure and major life stress were documented, although the latter interactions were substantially trimmed by sensitivity analyses.

Conclusions

A comprehensive conceptualization and assessment mass-casualty armed conflict is essential for identifying stress–distress profiles and guiding personalized care and preventive interventions worldwide.

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https://doi.org/10.1007/s44470-025-00038-8

Combination treatment for chronic insomnia disorder in adults: an American Academy of Sleep Medicine clinical practice guideline.

Buysse, D. J., Arnedt, J. T., Buenaver, L., Chang, J. L., Fernandez-Mendoza, J., Patel, S. I., Zhou, E. S., Falck-Ytter, Y., Hyer, S., Kazmi, U., Singh, M., & Wickwire, E. M.

Journal of Clinical Sleep Medicine
Published: 13 April 2026

Introduction
This guideline establishes clinical practice recommendations for combination treatment of chronic insomnia disorder in adults, defined here as treatment with cognitive-behavioral therapy for insomnia (CBT-I) started concurrently with pharmacotherapy.

Methods
The American Academy of Sleep Medicine (AASM) commissioned a task force of experts in sleep medicine to develop recommendations and assign strengths to those recommendations based on a systematic review of the literature and an assessment of the evidence using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) process. The task force provided a summary of the relevant literature, the certainty of evidence, the balance of benefits and harms, patient values and preferences, and resource use considerations that support the recommendations. The AASM Board of Directors approved the final recommendations.

Recommendations
The following recommendations are intended as a guide for clinicians on the use of combination treatment for chronic insomnia disorder in adults. Each recommendation statement is assigned a strength (“Strong” or “Conditional”). A “Strong” recommendation (i.e., “We recommend…”) is one that clinicians should follow under most circumstances. A “Conditional” recommendation (i.e., “We suggest…”) is one that requires that the clinician use clinical knowledge and experience and strongly consider the patient’s values and preferences to determine the best course of action. One recommendation includes a remark that provides additional context to guide clinicians with implementation of this recommendation.

Conditional recommendation for:
1. In adults with chronic insomnia disorder, the AASM suggests the use of combination treatment with CBT-I plus insomnia medication over insomnia medication alone. (Conditional recommendation, low certainty of evidence).

Conditional recommendation against:
2. In adults with chronic insomnia disorder, the AASM suggests against the use of combination treatment of CBT-I plus insomnia medication over CBT-I alone. (Conditional recommendation, low certainty of evidence).

Remark: Patients who place higher value on increasing total sleep time early in the course of treatment, and/or who place lower value on reducing daytime symptoms with treatment, may reasonably select combination treatment versus CBT-I alone.

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https://doi.org/10.3389/fpubh.2026.1742802

A gendered network analysis of somatic, psychological, and healthcare utilization patterns among parents of service members in wartime.

Hamama-Raz, Y., & Hamama, L.

Frontiers in Public Health: Public Mental Health
26 March 2026

Introduction:
Parents of actively serving soldiers experience sustained stress that affects psychological, somatic, and behavioral health, yet the interrelations among these domains and gender differences are understudied.

Methods:
We studied 402 Israeli parents (201 mothers, 201 fathers from unrelated households) of sons/daughters aged 18-27 serving in regular or reserve duty during wartime, recruited via a national online panel (data collected in August 2025). Participants completed self-report questionnaires related to psychological, somatic, and behavioral health domains. Network analysis was conducted to observe gendered network differences between mothers and fathers, comparing them via edge and centrality invariance tests, and evaluating them using global architecture, bridge centrality, predictability, and small-world properties.

Results:
Mothers reported greater psychological distress, sleep disturbances, somatic symptoms, pain, and more frequent healthcare utilization. Their network had shorter path lengths, higher predictability, and healthcare visits as a dominant bridge; somatic symptoms and sleep disturbances were key connectors. Fathers' network was denser yet more compartmentalized, with bridges concentrated on somatic/pain and adverse events; alcohol use was isolated.

Conclusions:
Mothers exhibited more integrated, rapidly spreading symptom networks closely tied to healthcare engagement, whereas fathers' networks were more segmented and less visible in terms of help-seeking. These patterns support gender-sensitive screening and interventions for parents of service members.

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https://doi.org/10.1007/s10943-026-02635-0

Trends and Thematic Clusters in Moral Injury Research: A Bibliometric Analysis.

Hassan, W., Carey, L. B., & Hodgson, T. J.

Journal of Religion and Health
Published: 18 April 2026

Moral injury (MI) spans biological, psychological, social, and spiritual domains, yet systematic bibliometric evaluation remains scarce. A bibliometric analysis of Scopus-indexed publications containing “moral injury” (1992–2025) was conducted using three search strategies (i) Title–Abstract–Keywords (TAK), (ii) Abstract-only (AO), and (iii) Title-only (TO). Publication types, annual trends, and the performance of authors, institutions, countries, sponsors, and journals were examined. A total of 2,081 documents were identified, including articles (1,491), reviews (164), book chapters (193), and editorials (75). TAK yielded 1,655 records, AO 1,400 records, and TO 879 records, demonstrating notable variation in dataset size. Output remained limited until 2017, followed by rapid growth from 2018, peaking in 2025. The USA led global production, followed by the UK, Canada, and Australia. TAK analysis identified the most prolific authors in this review by country: in the USA, Maguen, S. (36) and Koenig, H.G. (34); in the UK, Greenberg, N. (37) and Murphy, D. (36); in Canada, McKinnon, M.C. (23) and Nazarov, A. (21); and in Australia, Carey, L.B. (13) and Nickerson, A. (10).

Other top contributors by country are also identified. Within this study, prolific institutions included VA Medical Center, King's College London, Western University, McMaster University, Duke University Medical Center, and the Boston University Chobanian and Avedisian School of Medicine. Prominent journals were 'Psychological Trauma: Theory, Research, Practice, and Policy', the 'European Journal of Psychotraumatology', 'Traumatology', 'Frontiers in Psychiatry', and the 'Journal of Religion and Health'. Title-based co-word analysis (AO and TO datasets) identified ten thematic clusters covering psychological outcomes, military and healthcare contexts, ethics, assessment, and interventions. Analysis of the top 100 most cited papers highlighted five foundational themes in conceptualization, measurement, mental health outcomes, and treatment approaches. MI research expanded rapidly after 2018, emphasizing the need for methodological transparency through a bibliometric study across multidisciplinary fields. While not all authors/coauthors or their respective institutions and nations have been acknowledged within this analysis of MI research, nevertheless the significant leaders have been identified, as have a number of key research and clinical themes. Search strategy selection however, substantially determines dataset size, contributor visibility, and thematic representation, hence a number of limitations regarding this analysis are noted.

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Moral injury events, pain intensity, and functional mobility in post-9/11 U.S. combat veterans.

Wild, M. G., Coppin, J. D., Greer, D., Mendoza, C., Herbert, M. S., Creech, S. K., & O'Brien, S. F.

The Journal of Pain
Volume 44, 106287, July 2026

Highlights

- Moral injury events (betrayal or wrongdoing) are related to pain among United States veterans.
- Experiences of betrayal are more closely related to pain intensity than experiences of wrongdoing.
- Functional mobility is affected by betrayal through pain intensity.
- Combat exposure severity increased women and men veterans' endorsements of betrayal and pain.

Abstract
Moral injury—functionally impairing alterations in one's sense of self and relatedness to others that results from high magnitude events involving perceived wrongdoing or betrayal—is associated with worse psychological and functional outcomes. The association between moral injury and chronic pain, however, is under-investigated as are the ways moral injury might contribute to pain and psychosocial functioning following combat. To address this gap, we assessed the association of self-reported wrongdoing and betrayal with pain and functional mobility. We hypothesized that wrongdoing and betrayal would be positively associated with pain intensity and, through pain intensity, functional mobility difficulties in a Bayesian latent variable model. We also hypothesized that combat exposure would affect the rates of endorsement of wrongdoing, betrayal, pain, and mobility difficulties. We conducted secondary data analysis in a sample of 323 post-9/11 U.S. combat veterans (70% male, 33.6% Black/African American). In the latent variable model, pain intensity (0.38, 95%CI: 0.23–0.55) was related to decreased functional mobility. Betrayal, but not wrongdoing, was associated with pain intensity (0.20,95%CI:0.05–0.36). Betrayal also had an indirect impact on mobility through pain intensity (indirect effect: 0.09,95%CI: 0.03–0.16). Increasing levels of combat exposure were associated with increasing endorsement of betrayal, pain, and mobility difficulties. Overall, betrayal was more strongly associated with pain intensity and functional mobility than wrongdoing. Results suggest that betrayal experiences may have more physical and functional impacts than experiences of wrongdoing, and that biopsychosocial interventions for pain may benefit from targeting comorbid moral injury.

Perspective
This article explores how potentially morally injurious betrayal and wrongdoing, chronic pain, and functional mobility are related in U.S. combat veterans. Results suggest that experiences of betrayal are associated with chronic pain and mobility. Betrayal experiences may be important to assess among U.S. combat veterans receiving chronic pain interventions.

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Links of Interest:

CDP Upcoming Training Events
https://deploymentpsych.org/training

Staff Perspective: CDP's Tool to Help Understand Readiness Evaluations
https://deploymentpsych.org/blog/staff-perspective-cdp%E2%80%99s-tool-help-understand-readiness-evaluations

Staff Perspective: The Opportunities and Limitations of Sleep Tracking Technology
https://deploymentpsych.org/blog/staff-perspective-opportunities-and-limitations-sleep-tracking-technology

Sleep and Fatigue Management in the DoW
https://deploymentpsych.org/Sleep-Summit

Every Mental Health Journey Begins with Being Seen
https://www.samhsa.gov/blog/every-mental-health-journey-begins-being-seen

Why Pediatric Health is a National Security Imperative
https://news.usuhs.edu/2026/04/why-pediatric-health-is-national.html

Brain function evaluations to be part of Marine health records
https://www.militarytimes.com/news/your-marine-corps/2026/04/29/brain-function-evaluations-to-be-part-of-marine-health-records/

A Combat Infantryman Stood In the Gap. Made the Calculation. Pulled the Trigger. But At What Cost?
https://thewarhorse.org/iraq-army-combat-infantry-veteran/

'A beans and rice diet': Government watchdog finds issues with military cost of living pay
https://www.militarytimes.com/pay-benefits/2026/05/01/a-beans-and-rice-diet-government-watchdog-finds-issues-with-military-cost-of-living-pay/

- Military Personnel: DOD Should Improve Processes for Determining Cost-of-Living Allowances (GAO)

Reservists sue Pentagon over denied transition health care benefits
https://federalnewsnetwork.com/workforce/2026/05/reservists-sue-pentagon-over-denied-transition-health-care-benefits/

A nearly year-long deployment at sea takes a toll on military families
https://www.npr.org/2026/05/05/nx-s1-5812641/uss-ford-deployment

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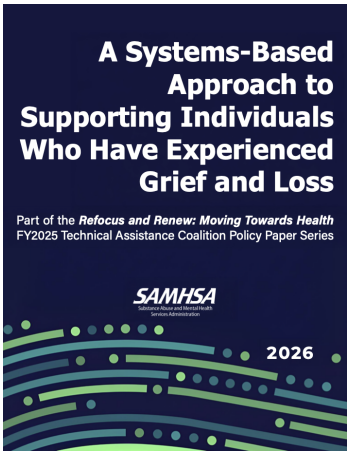
Resource of the Week: [A Systems-Based Approach to Supporting Individuals Who Have Experienced Grief and Loss]

From the Substance Abuse and Mental Health Services Administration (SAMHSA):

> It has been estimated that 27 million people are impacted by bereavement as a result of the approximately 3.1 million deaths in the United States every year. The death of a loved one is a universal experience and one of the most severe stressors in a person's life. Grief is the natural response to bereavement that can be intensely painful, disorienting, and disabling, often affecting the health and mental health of those who experience it. Yet health, mental health, and substance use service providers and service systems leaders often fail to recognize and understand grief and thus do not provide the support grieving individuals might need. Parallel to the work of trauma-informed services, promoting grief literacy as well as offering an organized approach to grief interventions can benefit support staff and recipients of services and provide a common platform from which to improve the care of people who are in mental health services and the care of people who serve them. This paper presents a G.R.I.E.F. framework for system leaders and policymakers to help set an intention to shape grief-informed service delivery systems. Doing so would equip everyday service providers with knowledge and skills to walk alongside individuals experiencing loss; to gain their trust; and to validate, support, and guide them on their grief journey. The G.R.I.E.F. framework outlines five core principles to guide the development and implementation of high-quality grief-informed services throughout the community and within clinical service systems.



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