Unresolved Gaps in LSCO: Revisiting Psychological Injury in Combat

A Monograph

by

MAJ Ike M. Ukachi
US Army

School of Advanced Military Studies
US Army Command and General Staff College
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Name of Candidate: MAJ Ike M. Ukachi

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Approved by:

_____//signed/29 MAR 21//MTC____, Monograph Director
Mark T. Calhoun, PhD

_____//signed/2 APR 21//MTA_____, Seminar Leader
Matthew T. Archambault, COL

_____//signed/3 May 21/BAP//_____, Director, School of Advanced Military Studies
Brian A. Payne, COL

Accepted this 20th day of May 2021 by:

_____, Assistant Dean of Academics for Degree Programs
Dale F. Spurlin, PhD and Research, CGSC

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Abstract

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The US Army has gained much of its current understanding of psychological injury, especially the central role of trauma in causing the injury, in the backdrop of recent conflicts. However, recent conflicts have not always resembled past high-intensity conflicts when psychological injury rates were staggering. As the US Army pivots its doctrine and organization back to large-scale combat operations that resemble past conflicts, it is the right time to revisit psychological injury in combat to ensure that today's measures will hold up to yesterday's war. This monograph revisits psychological injury in combat and asks if a century's worth of misunderstanding masked its prevalence, shaped the current approach towards its treatment, and if current efforts are sufficient to prepare soldiers for the inevitability of facing this old foe in combat. A survey of the current US Army landscape reveals that the prevalence is indeed known. However, some language and narrative continue to detract. Also, the myriad of defunct and existing programs, as well as the existing treatment philosophy and capacity, do not always comport with the contemporary understanding of psychological injury. Concerning large-scale combat operations, the issue of psychological injury in combat remains unresolved.

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Abbreviations

APA	American Psychological Association
COSC	Combat and Operational Stress Control
COSR	Combat and Operational Stress Reaction
CSF	Comprehensive Soldier Fitness
CSF2	Comprehensive Soldier and Family Fitness
CSR	Combat Stress Reaction
DSM	Diagnostic and Statistical Manual of Mental Disorders
KIA	Killed in Action
LSCO	Large Scale Combat Operations
MRT	Master Resilience Training
PDHA	Post-Deployment Health Assessment
PDHRA	Post-Deployment Health Reassessment
PHA	Periodic Health Assessment
PTE	Potentially Traumatizing Event
PTG	Post-Traumatic Growth
PTSD	Post-Traumatic Stress Disorder
RTD	Return to Duty
SRP	Soldier Readiness Processing
US	United States
WIA	Wounded in Action
WWI	World War I
WWII	World War II

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Introduction

> It is immensely important that no soldier, whatever his rank, should wait for war to expose him to those aspects of active service that amaze and confuse him when he first comes across them. If he has met them even once before, they will begin to be familiar to him.
>
> —Carl von Clausewitz, *On War*

The US Army has grappled with psychological injury on the battlefield from the earliest conflicts in this nation's history to the current conflict in Afghanistan. There is no escaping the carnage of warfare and the casualties that war leaves in its wake. The subject of this study is those casualties whose war wounds are not so easy to see. The current understanding of psychological injury informs us these injured soldiers suffering from psychological injury are just as injured as any other casualties. As the US Army pivots its doctrine and theory back to large-scale combat operations (LSCO), the specter of facing peer or near-peer adversaries makes it paramount to understand all the gaps where those adversaries may possess an advantage. A century's worth of misunderstanding concerning psychological injury masked the prevalence of its occurrence, shaped the narrative concerning care and treatment of sufferers, and explains the corresponding absence of psychological preparation.

In recent conflicts, the US Army has maintained an advantage on the battlefield, especially in technology and capability overmatch. This advantage allowed the US Army to prosecute conflicts on its terms while minimizing casualties. When an adversary can neutralize this technological capability advantage, attrition becomes a critical variable that can decide outcomes on the battlefield. Psychological injury contributes to this attrition. Despite the extensive literature on the broad landscape of psychological injury, especially in the field of post-traumatic stress disorder (PTSD), lightly traveled hills and valleys remain. One such valley is the period during combat when the soldiers on the battlefield remain immersed in all the trauma that causes this psychological injury. The US Army's approach to, and understanding of

psychological injury has evolved, and this evolution has paralleled the changing character of conflict. Unfortunately, the recent conflicts do not reflect the scope and scale of LSCO. For this reason, the US Army's entire framework and narrative surrounding psychological injury reflect the time when the US Army made sense of this phenomenon. It is only prudent that the current understanding is overlaid on models of past conflict to see if it constitutes an unresolved gap.

The number of soldiers present in a theater does not accurately represent the actual capacity of a fighting force. There have been soldiers in past conflicts who were psychologically unable to perform as expected or placed in forward treatment centers and never deemed injured enough for evacuation from the theater of operations.[1] This is not merely a matter of passivity in combat, reluctance to fire, or fear that inhibits some soldiers from performing their duties as expected. Rather, many soldiers cannot perform as expected in combat because they succumb to psychological injury. In past LSCO, soldiers have had to deploy to the same theater of operations for multiple duty tours. Based on the ever-increasing knowledge of psychological injury, it is indeed plausible that some of those soldiers who returned to combat were already psychologically injured and therefore not fit for duty. The analysis that follows sheds light on those casualties, tabulates and analyzes their occurrence rate, examines the methods of casualty identification and treatment, critiques the principles that guide their treatment, and surmises if the current posture will enable or inhibit overall success.

This begs the question of how well the US Army currently understands psychological injury and whether that understanding is sufficient in language and approach to describe the nature of this phenomenon. Based on this primary question, a series of three secondary questions follow:

[1] L. Holmes Ginn, Jr., W. E. Wilkinson, and Edward J. Whiteley, "Combat Exhaustion," in the *Reports of the General Board. United States Forces, European Theater* (Washington, DC: Department of the Army, US Army Center of Military History, 1946), 1-2.

1. Is psychological injury in soldiers during combat more pervasive than previously understood?

2. Will the current treatment principles for psychological injury work in LSCO?

3. Is the US Army doing enough to prepare soldiers for combat psychologically?

As argued below, these psychological injury rates are high enough to have a significant and adverse effect on the overall combat power needed to sustain operations for the duration of LSCO.

The US Army has documented cases of psychological injury in every conflict since the American Civil War. However, given the US Army's recent doctrinal pivot to LSCO, data from World War I (WWI), World War II (WWII), and the Korean War are the most relevant.[2] Each of these conflicts displayed the following four unique characteristics listed below.

1. The conflicts were large-scale combat operations.[3]

2. The conflicts were protracted engagements requiring some soldiers to serve multiple duty tours.[4]

3. A peer or near-peer adversary waged the conflict.[5]

4. The conflict had sustained periods characterized by either army's inability to achieve a decisive breakthrough.

Other previous examples of LSCO, like either the First or Second Gulf Wars, do not fully meet all the criteria above. The US Army deems the reoccurrence of this type of LSCO both

[2] US Department of the Army, Field Manual (FM) 3-0, *Operations* (Washington, DC: Government Publishing Office, 2017), 1-2.

[3] US Army, FM 3-0, 1-1. LSCO is used in the doctrinal sense to refer to the operations in the far right extreme of the conflict continuum associated with war.

[4] The US Army tour of duty is frequently adjusted depending on operational needs and tempo. It also depends on if the US Army is actively engaged in conflict or not. Over the past century, tours of duty in combat have generally lasted from six to twelve months in duration.

[5] US Army, FM 3-0, 1-9. Peer adversaries are understood to represent threats that possess roughly equal combat power in geographical proximity to a conflict area with US forces.

dangerous and likely enough to warrant a change in doctrine.[6] If the US Army does engage in a future conflict that resembles any of the conflicts mentioned above, available casualty data will be the basis of predicting any expected rate of casualties. Unfortunately, the available data on these conflicts do not always include psychological injury. Furthermore, several factors contributed to an under-reporting and mischaracterization of these injuries. The General Board in the European Theater of Operations noted that no exact statistics were available for combat exhaustion because its 1945 study did not consider combat exhaustion a reportable disease during WWII.[7] For context, the *American Psychiatric Associations' Diagnostic and Statistical Manual*, 3d Edition (DSM-III) first listed PTSD in 1980.[8]

Finally, many defunct and existing programs tell the ongoing story of the US Army's attempt to solve a problem whose definition has changed many times over the past century. Some of these programs include Battlemind, Comprehensive Soldier Fitness (CSF), Comprehensive Soldier and Family Fitness (CSF2), Master Resilience Trainer (MRT), Periodic Health Assessment (PHA), Post-Deployment Health Assessment (PDHA), and Post-Deployment Health Reassessment (PDHRA). Assessment of the suitability and effectiveness of these programs contributes to the analysis presented below.

The information is presented in four sections. The first section is the introduction and background, which provides an overview of the subject, the central hypothesis, and the background of psychological injury. It includes the scope and methodology of the research project. The second section is a problem-framing section that establishes the necessity of this topic. It takes a comprehensive view of the topic by first tracing a brief history of psychological injury in combat and shows how the US Army's understanding and awareness has evolved across

[6] US Army, FM 3-0, 1-2.

[7] Ginn, Wilkinson, and Whiteley, "Combat Exhaustion," 1-2.

[8] Institute of Medicine of the National Academies, *Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations: Initial Assessment* (Washington, DC: National Academies Press, 2012), 25.

the span of the past century. This section deconstructs the US Army's previous attempts at defining the problem and shows how inaccurate problem-framing led to ineffective problem-solving. It also presents and critiques the current army posture and understanding of the subject. The third section presents the relevant data concerning prevalence, treatment, and preparation. This section includes the analysis, overall impact, and recommendations. Finally, the fourth section is a summary of the main points highlighted in the monograph. This section also contains subject areas closely related to the primary and secondary questions that fall outside this argument's scope.

Methodology

The foundation of this study is the willingness to challenge accepted theory and a series of analyses based on available research and data. An exploration into the evolving nomenclature of psychological injury reveals underlying assumptions those names conjured. Psychological injury is a highly technical subject, and so the military draws its cues from academia. Combat, too, is a unique endeavor, and so academia draws its cues on psychological injury from the military. This exploration into the dual evolution of psychological injury language reveals tensions and discontinuities still present in the ongoing discourse. Both the history and contemporary understanding of psychological injury serve as the basis for determining if a century's worth of misunderstanding exists.

The first series of analyses provide the best estimates for psychological injury in the absence of available data. These estimates reveal the most appropriate historical templates to use when projecting estimates for future conflict. In the next analysis, the tenets of psychological injury treatment are scrutinized to validate their efficacy or to determine if they were a vestige of a time past when misunderstanding was rampant. The final analysis presents a survey of the US Army's current posture regarding psychological preparation to determine if what is available is sufficient.

Understanding Psychological Injury: Problems and Issues

Psychological injury is a problem in need of the right language to frame its discourse. A century's worth of misunderstanding and imprecise language surround its nature. Psychological injury has never stopped inflicting havoc on soldiers in combat, and it has taken a long time to make sense of this problem. Still, there is much to learn. Throughout this misunderstanding, the US Army instituted various programs to prepare soldiers for the eventuality of meeting this ancient foe again on the battlefield. The definition of psychological injury continues to center around the adverse or maladaptive reactions it causes, and two terms that dominate the psychological injury discourse are *PTSD* and *combat stress*. Neither term provides an adequate description. A more appropriate name for the phenomenon of psychological injury in combat is *intra-traumatic stress*. Intra denotes the ongoing occurrence of trauma during combat. The use of the term stress without disorder is necessary because psychological injury causes stress that may or may not lead to an adverse reaction or disorder.

The name given to any phenomenon shapes the narrative surrounding it and serves as the compass to orient understanding. Unfortunately, the adverse reaction to psychological injury continues to drive the language used to define it. The American Psychiatric Association listed combat as one of the possible causative factors of a gross stress reaction in the first edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-I) published in 1952, categorizing it under the broad heading of transient situational personality disorders.[9] The second edition, DSM-II, published in 1968, retained the class of disorder as a transient situational disturbance but updated the category as an adjustment reaction specifically occurring in adult life.[10] The third

[9] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 1st ed. (Washington, DC: American Psychiatric Association, 1952), 40.

[10] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 2nd ed. (Washington, DC: American Psychiatric Association, 1968), 49.

edition, DSM-III, published in 1980, and the subsequent revised third edition, DSM-III-R, published in 1987, list PTSD as a new diagnostic term to describe this injury that can occur after a psychologically distressing event and categorized it as an anxiety disorder.[11] The fourth edition, DSM-IV, published in 1994, retained the name and class of disorder.[12] The current edition, DSM-V, published in 2013, also retains the term PTSD but has now categorized PTSD as a trauma and stressor related disorder.[13]

The American Psychological Association (APA) defines PTSD as an anxiety problem that develops in some people after extremely traumatic events, such as combat, crime, an accident, or natural disaster.[14] It is this trauma that captures the essence of psychological injury in combat. Indeed, acute stress disorder, PTSD, or any number of maladaptive psychiatric disorders may arise from the trauma in combat. However, waiting to address PTSD after combat does not help the soldier who is still in combat. Though not widely held, this discussion about changing the term PTSD is not new. In 2012, the US Army Vice Chief of Staff, General Peter Chiarelli, requested that the APA drop the word "disorder" from PTSD because of the stigmatizing effect on soldiers suffering from Psychological Injury and hesitant to be identified as such.[15] The contention here is that the term PTSD is doubly inapplicable because it fails to account for the broad spectrum of psychological injury, especially as it pertains to inter-traumatic stress in combat that may not lead to a disorder. Figure 1 shows a progression of stress from traumatic events and the possibility of an injury ending up in post-traumatic growth. Information from the

[11] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 3rd ed, revised. (Washington, DC: American Psychiatric Association, 1987), 247.

[12] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (Washington, DC: American Psychiatric Association, 1994), 424.

[13] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. (Washington, DC: American Psychiatric Association, 2013), 265.

[14] "Post-traumatic Stress Disorder," American Psychological Association, accessed November 25, 2020, https://www.apa.org/topics/ptsd.

[15] Michael P. Fisher and Terry L. Schell, *The Role and Importance of the 'D' in PTSD* (Santa Monica, CA: RAND, 2013), 1.

current understanding of PTSD can inform the understanding of psychological injury, but for clarity, not all psychological injury is PTSD.

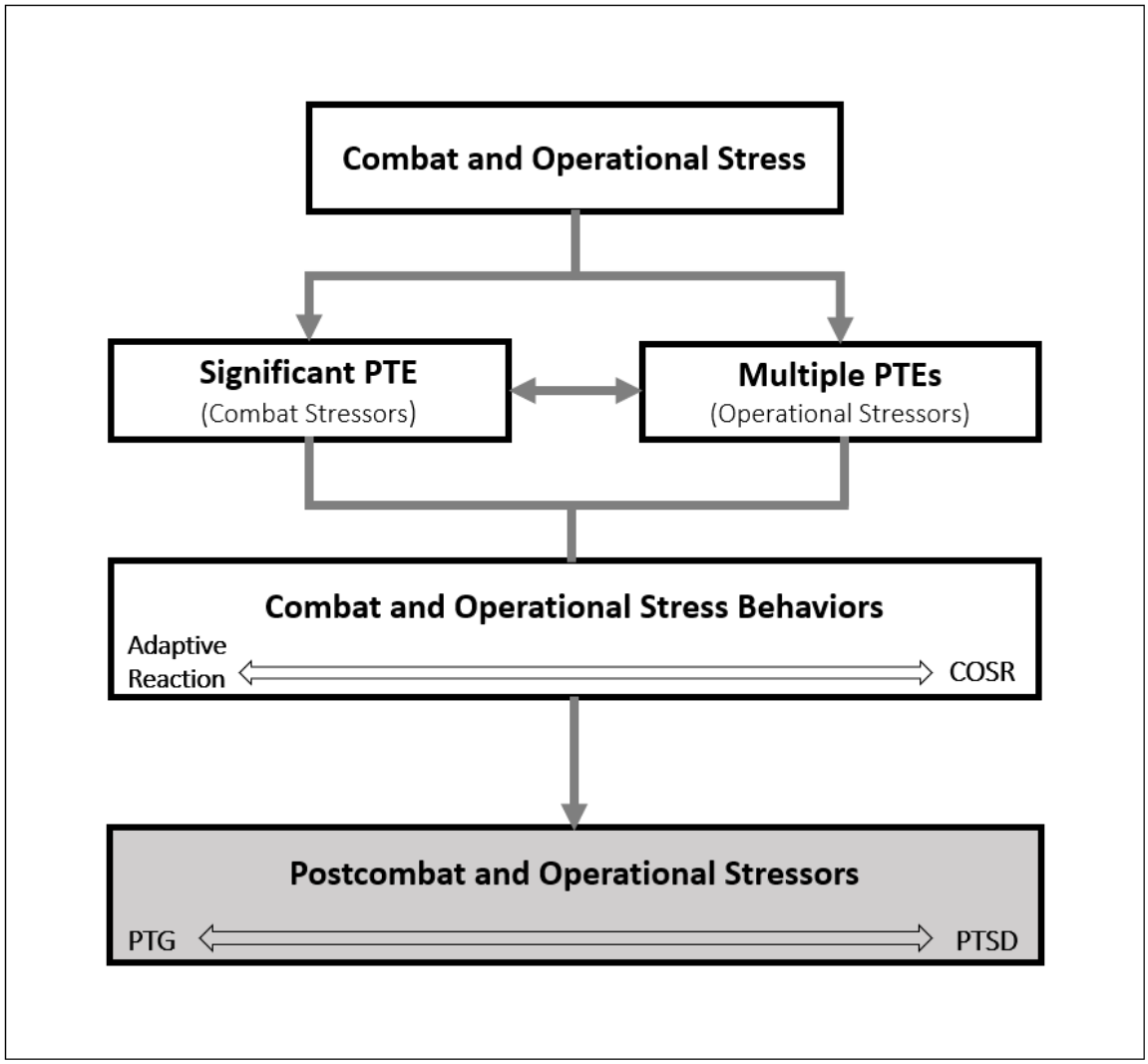

Figure 1. Combat and Operational Stress Effect Model. US Department of the Army, Field Manual (FM) 6-22.5, *Combat and Operational Stress Control Manual for Leaders and Soldiers* (Washington, DC: Government Printing Office, 2009), 1-3.

Like the medical community, the US Army has run a parallel course of misunderstanding as it searches for the right language to frame this problem. Perhaps the most egregious of pitfalls in this evolving search to capture the essence of psychological injury is the inaccurate label of cowardice. When mislabeled, leaders, peers, and subordinates will undoubtedly have a frame of understanding based on the colloquial use of the term and evolving narrative formed about its sufferers. In 1943 Lieutenant General George Patton slapped a soldier in a hospital and called him

'yellow-bellied' when he saw him crying in his hospital bed.[16] General Dwight D. Eisenhower reprimanded Patton for this action, and admittedly, the reporting on this incident only reveals one senior leader's perspective on psychological injury. Later, after the slapping incident, Patton had a lengthy discussion with the psychiatrist concerning *shell shock* on the battlefield. There are two takeaways from this interaction with Patton, the soldier, and the psychiatrist who admitted him into the treatment facility. First, Patton made a comment that it was hard to differentiate a soldier who was suffering from shock or one who was trying to escape from the front, and secondly, there is Patton's tacit admittance that there is a probability of shock being prevalent in the front.[17]

The broad headings of Combat and Operational Stress Control (COSC) and Combat and Operational Stress Reaction (COSR) describe the US Army's current posture and understanding.[18] In this new paradigm, combat stress is defined as "a process, within an individual, of reacting to and preparing to deal with physical and mental stressors occurring during combat-related duties or military operations."[19] Those reactions can be in response to enemy action or from other sources, such as environment, mission demand, or the member's unit, leaders, or family.[20] This definition goes farther than previous terms like shell shock, war neurosis, combat fatigue, or battle stress reaction in its attempt to describe the indelible presence of trauma on the battlefield. The term combat stress, like PTSD, inadvertently shifts focus from the cause of injury. There is stress associated with combat, but it is not combat that causes

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[16] "Army Admits Gen. Patton Struck Soldier," *United Press International*, November 23, 1943, accessed November 30, 2020, https://www.upi.com/Archives/1943/11/23/Army-admits-Gen-Patton-struck-soldier/6331533140623/.

[17] Ibid.

[18] US Department of the Army, Field Manual (FM) 6-22.5, *Combat and Operational Stress Control Manual for Leaders and Soldiers* (Washington, DC: Government Publishing Office, 2016), 1-1.

[19] Office of the Inspector General, *Evaluation Report on the Management of Combat Stress Control in the Department of Defense, Report No. 96-079* (Washington, DC: Department of Defense, February 29, 1996), 8.

[20] Ibid.

psychological injury. It is the trauma that some may experience in combat that causes the injury. Table 1 briefly summarizes the US Army's language used to describe psychological injury and the corresponding period.[21] It also shows the major conflict during the period, the listed indicators at the time, and the general attitude towards the care provided for the sufferers gleaned from texts and medical standards.

The historical symptoms of psychological injury comport with our current understanding of commonly reported combat stress symptoms as listed in figure 2 (stress behaviors across the range of military operations).[22] This establishes psychological injury as the same recurring phenomenon ever-present in combat. Since the publishing of DSM-III and DSM-III-R, a key distinguishing factor for PTSD is that a person who has PTSD has experienced an event outside the range of usual human experience.[23] To be clear, nothing about the carnage of war falls inside the spectrum of what society considers normal, and this does not mean that war experiences fall outside the limits of expected occurrences for subjects conditioned to this arena. Events that may fall outside the range of typical human experience can be uniquely normal or abnormal to the person experiencing the event. This uniqueness of response explains why it is hard to predict or identify the type of event that can psychologically injure a soldier. It becomes even harder to identify what type of soldier may succumb to a traumatic event based on their unique past experiences, training, or preparation. There is no metric to determine how long a soldier can be exposed to a potentially traumatic event (PTE) before the trauma injures psychologically. The two critical concepts concerning trauma that emerge here are intensity and exposure. Trauma in warfare can be intense and short-lived or lacking in intensity but sustained over a prolonged

[21] Kenneth C. Hyams, Stephen Wignall, and Robert Roswell, "War Syndromes and Their Evaluation: From the U.S. Civil War to the Persian Gulf War," *Annals of Internal Medicine* 125, no. 5 (September 1, 1996): 398–401

[22] US Department of the Army, Army Techniques Publication (ATP) 4-02.8, *Force Health Protection* (Washington, DC: Government Publishing Office, 2016), 4-6.

[23] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 3rd ed, revised. (Washington, DC: American Psychiatric Association, 1987), 247.

period. Either case can be just as unforgettable in the mind of the person experiencing it. Non-specific factors like the traumatic event itself, the length of exposure, the intensity, the individual soldier, and what is considered normal for the person experiencing it are variables that determine the likelihood of psychological injury.

Table 1. US Army Evolving Name and Approach Towards Psychological Injury

	Name(s) of Condition	Noted Symptoms	Attitude Towards Condition
Prior to WWI	Nostalgia, Homesickness, Weakness of the Heart, Irritable Heart, Da Costa's Syndrome, Soldiers Heart	Shortness of breath, palpitations, sharp or burning chest pain (particularly on exertion)	Not directly attributable to combat. More likely associated with an infectious disease or strenuous military duties. In young soldiers, a condition exacerbated by obsessive thoughts of home.
WWI	Cowardice, Effort Syndrome, Hysteria Neurasthenia, War Neurosis, Shell Shock	Fatigue, headache, dizziness, confusion, impaired concentration, forgetfulness, nightmares	Early research indicated that casualties evacuated to the rear were more likely to become chronic psychiatric casualties. Emphasis was on the expedient return to duty for moral support. Care was based on the emerging tenets of proximity, immediacy, and expectancy.
WWII	Effort Syndrome Battle Fatigue Combat Exhaustion Combat Fatigue	Fatigue, palpitations Diarrhea, headache impaired concentration Forgetfulness Disturbed Sleep	Guiding tenets for care adapted from WWI. Psychiatrists assigned to every Division. Emphasis remained on expedient return to duty. The use of diagnostic labels like war neurosis discouraged because it insinuated the need for the psychologically injured soldier to be treated as a patient.
KOREAN WAR	Combat Stress	No change from WWII	New rotation system implemented (9 months in combat, 13 months in support unit). Mid tour Rest and Recreation instituted. The emphasis remained on providing care within proximity to the unit.
VIETNAM WAR	Combat Stress, Psychiatric Casualty	Drug abuse, addiction Alcoholism, misconduct behavior	Psychiatric program in place early in the conflict. Lower documented cases of psychiatric cases than in the previous conflict. Rampant associated stress coping symptoms. Acknowledged increase in neuro-psychiatric cases in the latter stages of the conflict.
GULF WAR	Combat Stress Psychiatric Casualty	Disturbed sleep, impaired concentration Forgetfulness, irritability depression	Combat stress control units deployed and dispersed in the theater of operations. Battle fatigue and misconduct stress behaviors are preventable with effective leadership.

Source: Adapted by author from Kenneth C. Hyams, Stephen Wignall, and Robert Roswell, "War Syndromes and Their Evaluation: From the U.S. Civil War to the Persian Gulf War," *Annals of Internal* Medicine 125, no. 5 (1996): 399-401.

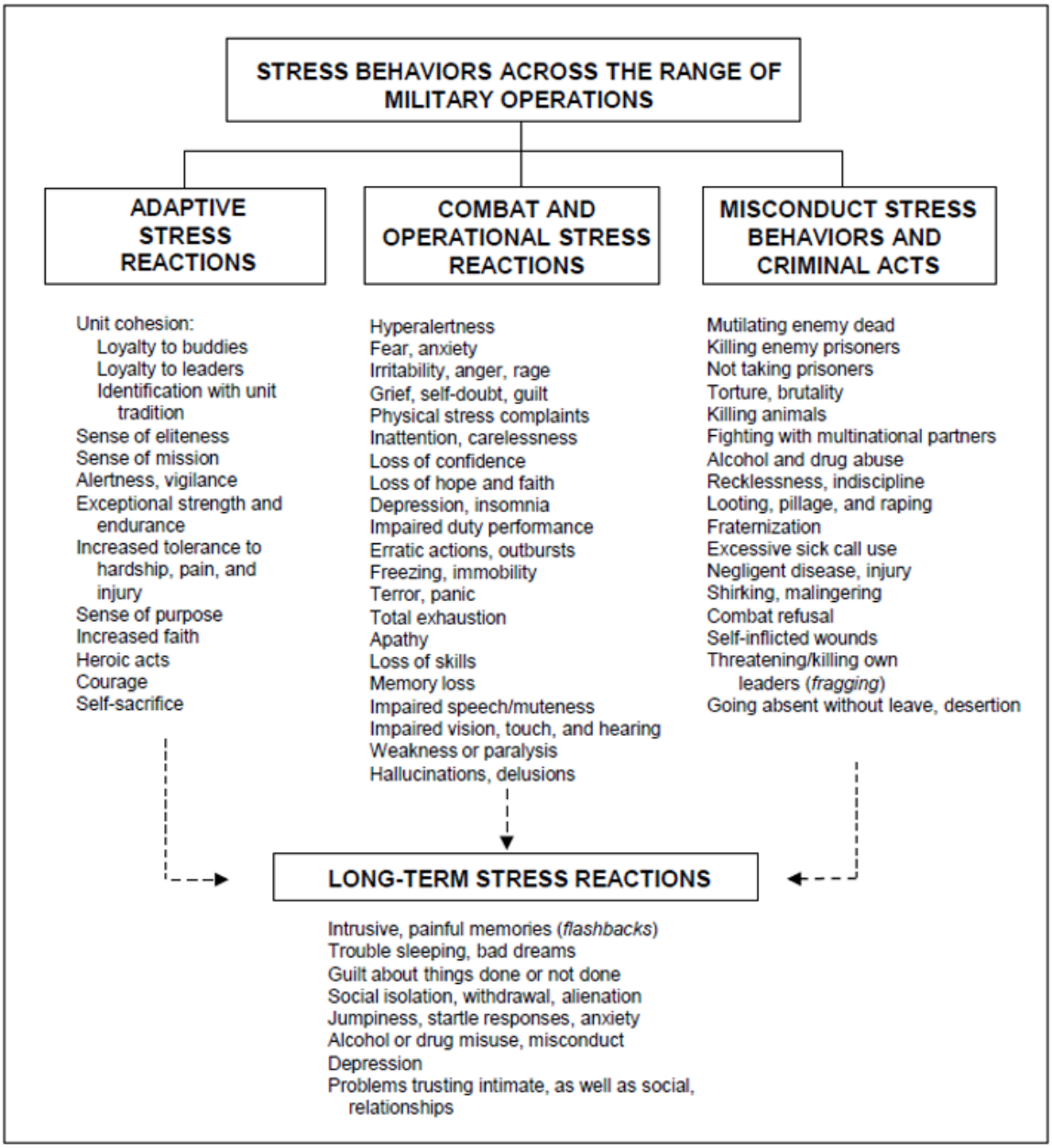

Figure 2. Stress Behaviors Across the Range of Military Operations. US Department of the Army, Army Techniques Publication (ATP) 4-02.8, *Force Health Protection* (Washington, DC: Government Printing Office, 2016), 4-6.

All these variables make psychological injury in LSCO a potentially dangerous gap for the US Army. "The sheer intensity, chaos, and destruction caused by large armies conducting operations against each other in support of national objectives are typical of these types of

conflicts."[24] If psychological injury starts with trauma, and LSCO describes operations with increased intensity, chaos, and destruction, then the scale of trauma in LSCO will predictably be much larger than in other non-LSCO conflicts. One unique challenge that LSCO presents is the problem of facing peer adversaries. The conundrum is that when adversaries match each other's capabilities on the battlefield, the inability to break through becomes more likely. This lack of decisive breakthrough increases the probability of protracted conflict, and protracted conflict increases exposure to trauma. It becomes apparent in this context that the term intra-traumatic stress is much more applicable to what soldiers will experience than non-descript combat stress or PTSD diagnosed after combat.

Psychological is defined as "being of, pertaining to, dealing with, or affecting the mind, especially as a function of awareness, feeling, or motivation; the term psychiatric is defined as relating to mental illness or its treatment."[25] For the soldier on the battlefield experiencing trauma, these nuanced definitions of psychological and psychiatric injury amount to a distinction without a difference. Any soldier who has experienced sufficient trauma to cause injury contributes to combat power attrition even if that soldier is never diagnosed or reported as a casualty. Soldiers suffering from a psychological injury can cope with varying degrees of difficulty or denial, and for others, the condition is completely debilitating. Psychological injury starts with trauma, and it affects the brain. The APA defines trauma as an emotional response to a terrible event like an accident, rape, or natural disaster.[26] The APA does not have a formal definition of psychological injury as it covers a broad range of conditions. For these reasons, the effects of psychological injury are easy to ignore or leave untreated. Even when indicators are present, these indicators may differ for individual soldiers who have experienced the same

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[24] US Army, FM 3-0, 1-2.

[25] *Dictionary.com*, s.v. "Psychiatric," accessed November 26, 2020, https://www.dictionary.com/browse/psychiatric.

[26] "Trauma," American Psychological Association, 2020, accessed November 25, 2020, https://www.apa.org/topics/trauma.

trauma. This ambiguity matters because as we search for understanding in archived records and accounts, the ambiguity in categorization leads to the non-uniformity of available data. Furthermore, the presence of trauma does not always mean injury, and the presence of injury does not always necessitate an evacuation from the battlefield. In this manner, psychological injury is a casualty of its pedantry.

The Prevalence of Psychological Injury and Rate of Occurrence

In past LSCO, combat operations were inherently joint operations, and this modus operandi will probably continue for the foreseeable future. Casualty reporting in WWI and WWII adhered to this construct. Consequently, there were no exact casualty statistics for specific injuries such as psychological categorized by service component in the active theater of operations. Some previous attempts at reexamining the data to segregate into components have some utility but are still inexact for several reasons. They include:

1. Service members deploying more than once to the same protracted conflict.
2. Service members deploying to a theater while never directly experiencing combat.
3. Service members already stationed in the region before the start of the conflict.

In some cases, the available data spans multiple theaters for the same conflict and lacks uniformity in categorization. The unique nature of each service means their exposure to PTEs in combat is different. In both previous conflicts, an approximate number of service members by component in the theater of operations must be established to determine the unique prevalence of psychological injury in the US Army. Table 2 and Table 3 show the number of casualties from past principal conflicts tabulated by service members and the US Army as a singular component.

Table 2. US Military Personnel Serving and Casualties Sustained in Principal Conflicts

Conflict	Total US Servicemembers (Peak Strength)	Casualties (US Servicemembers)			
		Total Deaths	Battle Deaths	Other Deaths	Wounds (Not Mortal)
WWI	4,734,991	116,516	53,402	63,114	204,002
WWII	16,112,566	405,399	291,557	113,842	670,846
Korean War	5,720,000	36,574	33,739	2,835	103,284
Vietnam War	8,744,000	58,220	47,434	10,786	303,644
Gulf War	2,225,000	382	147	235	467

Source: "DoD Personnel, Workforce Reports & Publications," Defense Manpower Data Center, accessed December 18, 2020, https://dcas.dmdc.osd.mil/dcas/pages/report_principal_wars.xhtml.

Table 3. US Army Personnel Serving and Casualties Sustained in Principal Conflicts

Conflict	Total US Army (Peak Strength)	Casualties (US Army)			
		Total Deaths	Battle Deaths	Other Deaths	Wounds (Not Mortal)
WWI	4,057,101	106,378	50,510	55,868	193,663
WWII	11,260,000	318,274	234,874	83,400	565,861
Korean War	2,834,000	29,856	27,731	2,125	77,596
Vietnam War	4,368,000	38,224	30,963	7,261	201525
Gulf War	782,000	224	98	126	931

Source: "DoD Personnel, Workforce Reports & Publications," Defense Manpower Data Center, accessed December 18, 2020, https://dcas.dmdc.osd.mil/dcas/pages/report_principal_wars.xhtml.

The data in tables 2 and 3 highlight that the US Army bears the preponderance of casualties in LSCO; therefore, the cause of these casualties is of utmost importance to the US Army as it pivots back to LSCO. In WWI, the US Army represented 85.7 percent of the total US service members at peak strength but bore 94.6 percent of battle deaths; 50,510 of the 53,402 casualties. The US Army also suffered 94.9 percent of *wounds not mortal*; 193,663 of the 204,002 casualties. The unlikelihood of both percentages of battle deaths and wounds not mortal being this statistically close suggests that either both numbers are estimates using the same planning factor, or one of these numbers is accurate (battle deaths), and the other is an estimate based on the former as a modeling ratio. In any event, the percentages of a key casualty statistic

from WWI (battle deaths of 94.6 percent and wounds not mortal of 94.9 percent) demonstrate the critical impact of LSCO on an army. In WWII, the US Army represented 69.9 percent of the total US service members, accounting for 80.6 percent of the battle deaths (318,274 of the 405,399 casualties) and 84.4 percent of wounds not mortal (83,400 of the 113,842 casualties). The numbers are less drastic for the US Army in the Korean War where actual records exist by individual service component; 49.5 percent of US service members, while accounting for 82.3 percent of battle deaths and 75.1 percent of wounds not mortal.

Table 4 lists the battle deaths per day for the conflicts. Both the battle deaths and the battle deaths per day are key statistics in understanding *combat intensity*. Combat intensity is defined as the rate of casualty occurrence per day.[27] Combat intensity is calculated using the sum of KIA and (wounded in action) WIA numbers and determining the number occurring per day. This method demonstrates the Korean War was a lower intensity conflict than WWI and WWII. The combat intensity numerical value helps to differentiate conflicts when applying planning factors to estimate psychological injury rates. Table 5 provides the number of soldiers deployed to the theater of operations and the corresponding number of battle deaths. Unlike WWI and WWII, actual numbers are available for the Korean War and beyond. The number of US Army soldiers who deployed to the Korean War is 1,153,000. The total battle deaths for service members in the Korean War is 36,574 of 1,789,000 serving in theater, a rate of 2.0 percent. For the US Army in Korea, the number of battle deaths is 27,731 of 1,153,000 serving in theater, a rate of 2.4 percent. This establishes 2.4 percent as the baseline post-conflict factor for estimating the number of soldiers serving in theater during LSCO.

[27] Russ Zajtchuk and Ronald F. Bellamy, eds., *War Psychiatry* (San Antonio, TX: Borden Institute, US Army Medical Department Center and School, 1995), 41.

Table 4. Combat Intensity and US Army Casualties Sustained in Principal Conflicts

Conflict	# of Days	Casualties US Army				
		Battle Deaths (KIA)	Wounds (Not Mortal) (WIA)	Peak Strength	% BD/Peak Strength	Combat Intensity (KIA+WIA/Day)
WWI (06 APR 17 - 11 NOV 18)	554	50,510	193,663	4,057,101	1.24%	440
WWII (08 DEC 41 - 02 SEP 45)	1364	234,874	565,861	11,260,000	2.09%	587
Korean War (26 JUN 50 – 30 SEP 54)	1128	27,731	77,596	2,834,000	0.98%	93.4
Vietnam War (05 AUG 64 – 15 AUG 73)	3297	30,963	201525	4,368,000	0.71%	70.5
Gulf War (17 JAN 91 - 28 FEB 91)	42	98	931	782,000	0.01%	24.5

Source: "DoD Personnel, Workforce Reports & Publications," Defense Manpower Data Center, accessed December 18, 2020, https://dcas.dmdc.osd.mil/dcas/pages/report_principal_wars.xhtml. The number of days is based on the official start dates of the conflict and the official declaration date for the cessation of hostilities.

Table 5. US Military Personnel and US Army Personnel Serving in Principal Conflicts

Conflict	US Servicemembers		US Army	
	Number Serving	Serving In Theater	Number Serving	Serving In Theater
WWI	4,734, 991	Data Unavailable	4,057,101	2,104,583 (51.87%) **
WWII	16,112,566	Data Unavailable	11,260,000	9,786,417 (86.9%) **
Korean War	5,720,000	1,789,000 (31.3%)	2,834,000	1,153,000 (40.7%)
Vietnam War	8,744,000	3,403,000 (38.9%)	4,368,000	2,276,000 (52.1%)
Gulf War	2,225,000	694,550 (31.2%)	782,000	350,166 (44.8%)

Source: "DoD Personnel, Workforce Reports & Publications," Defense Manpower Data Center, accessed December 18, 2020, https://dcas.dmdc.osd.mil/dcas/pages/report_principal_wars.xhtml. **The numbers of US Army soldiers serving in the theater are estimates by the author based on post-conflict planning factors.

Based on this post-conflict factor of 2.4 percent, an acceptable estimate for total soldiers serving in theater in WWI is 2,104,583 (50,510 battle deaths). In WWII, the estimate for total soldiers serving in theater is 9,786,417 (234,874 battle deaths). In the absence of accurate records, the computed numbers for deployed soldiers, casualty rates, and other combat stress reaction (CSR) planning factors are the basis for estimating psychological injury rates. Some estimates for

war veterans who served in combat developing PTSD are as high as 15-40 percent.[28] The more precise planning factor used by the US Army before the Vietnam war was one CSR for every four WIA during high-intensity conflict.[29] These numbers would prove to be much higher than recorded in the Vietnam War and every major conflict since. In this case, the data does not invalidate the planning factor. Instead, the data in table 4 confirm that the more recent principal conflicts are examples of low-intensity conflict measured by combat intensity. For this reason, the same planning factor is not suitable to project forward for psychological injury rates in high-intensity LSCO.

Using the planning factor of one CSR for every four WIA, the estimated number of soldiers that experienced an adverse stress reaction in WWI is 48,415; an average of eighty-eight soldiers experiencing adverse stress reactions per day of active conflict. The same planning factor provides an estimated number of 141,465 soldiers that experienced an adverse reaction in WWII: an average of 104 soldiers experiencing adverse stress reactions per day of active conflict. When applying the CSR planning factors to the Korean War, the initial estimates are much higher than the actual reported numbers. In the Korean War, the actual number of soldiers who experienced adverse stress reactions was 3,822; however, based on the planning factor of one CSR for every four WIA, an estimated 25,821 soldiers were expected to have adverse reactions to combat stress.[30] The above means that in the Korean War, there was one CSR for every twenty-seven WIA casualties.

As it pertains to LSCO against a peer or near-peer adversary, all the above data from these three conflicts—WWI, WWII, and the Korean War—suggests the following:

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[28] Charles R. Figley and William P Nash, eds., *Combat Stress Injury: Theory, Research, and Management* (2006; repr., New York: Routledge, 2007), 223.

[29] US Department of the Army, Field Manual (FM) 22-51, *Leaders' Manual for Combat Stress Control* (Washington, DC: Government Publishing Office, 1994), 6.

[30] Figley and Nash, eds., *Combat Stress Injury*, 21.

1. The expected number of battle deaths per deployed soldier is generally between 1 and 2 percent of the US Army's peak strength.

2. The rate of occurrence for psychological injury is not the same for every LSCO.

3. The rate of occurrence for psychological injury increases in higher intensity conflict. Table 5 provides a percentage of soldiers serving who can expect to deploy to an active theater compared to all US service members. Based on the data, 41-87 percent of service members served in the theater of operations in past LSCO. As of October 2020, there are 1,010,065 active duty, reserve, and National Guard soldiers serving in the US Army.[31] At this troop strength, it means approximately 414,127-878,756 soldiers can expect to deploy to a theater of operations in the event of LSCO against a peer or near-peer adversary. Of this number, 2.5 percent is a reliable planning factor for expected battle deaths per deployed soldier, and one CSR for every four WIA in the theater is a credible estimate for psychological injury despite the lower numbers seen in post-WWII conflicts. There is no way to project what measures the US Army will take to ensure an adequate number of soldiers is available in the event of LSCO against a near or peer adversary or what it will take to prosecute the conflict to its end. However, what is certain is that the data for casualties and psychological injury portends a critical manpower vulnerability.

Efficacy of Current Approach and Treatment Philosophy

The efficacy of the US Army's current approach to CSR management is a factor of both the foundational principles in use and the capacity. These foundational principles of psychological injury care have seen some modification and iteration through the years. The acronym for brevity, immediacy, contact, expectancy, proximity, and simplicity (BICEPS) stems from original principles of proximity, immediacy, and expectancy (PIE), which formed the basis

[31] "DoD Personnel, Workforce Reports & Publications," Defense Manpower Data Center, accessed 23 December 2020, https://dwp.dmdc.osd.mil/dwp/app/dod-data-reports/workforce-reports. Based on 486,625 active duty, 334,650 Army National Guard, and 188,790 Reserves as of September 2020.

of care. PIE, which is at the core of the expanded BICEPS acronym, was central in ensuring the optimal return to duty (RTD) rates in WWI.[32] Although it took until the Korean War to codify the acronyms and lessons learned into doctrine, the principles have always informed how care was echeloned and located on the battlefield. The effective management of combat stress and the deployment of medical capabilities according to these fundamental principles are generally credited as the reasons for the lower-than-expected rate of CSR in the Korean War.[33] The impetus for continued scrutiny of these principles stems from the fact that the Korean War was a low-intensity conflict. Therefore, these principles used in the management of CSR have not yet been validated in a high-intensity LSCO. Table 6 presents the foundational principles from current US Army doctrine. According to the tenets of PIE, psychologically injured soldiers should be treated as close to the soldiers' unit as operations allow. The further removed that a soldier is from the losing unit, the less likely the chance for a successful RTD case. The problem with BICEPS or PIE in its original form is that its origins date back to when the US Army was still making sense of psychological injury.

[32] US Army, FM 6-22.5, 3-11.

[33] Edgar Jones and Simon Wessely, "Forward Psychiatry in the Military: Its Origins and Effectiveness," *Journal of Traumatic Stress* 16, no. 4 (2003): 411.

Table 6. Combat and Operational Stress Control Management Principles

BREVITY	Initial rest and replenishment at COSC facilities located in close proximity to the soldier's unit should last no more than 1 to 3 days (US Marine Corps and US Navy is 3 to 4 days). Those requiring further treatment are moved to the next role of care. Since many require no further treatment, military commanders expect their soldiers to rapidly return to duty.
IMMEDIACY	It is essential that COSC measures be initiated as soon as possible when operations permit. Intervention is provided as soon as symptoms appear.
CONTACT	The soldier must be encouraged to continue to think of himself as a soldier, rather than a patient or a sick person. The chain of command remains directly involved in the soldier's recovery and return to duty. The COSC team coordinates with the unit's leaders to learn whether the overstressed individual was a good performer prior to the COSR. Whenever possible, representatives of the unit or messages from the unit tell the soldier that he is needed and wanted back.
EXPECTANCY	The individual is explicitly told that he is reacting normally to extreme stress and is expected to recover and return to full duty in a few hours or days. A military leader is extremely effective in this area of treatment. Of all the things said to a soldier suffering from a COSR, the words of his small-unit leader have the greatest impact due to the positive bonding process that occurs. A simple statement from the small-unit leader to the soldier that he is reacting normally to COSR and is expected back soon will have a positive impact.
PROXIMITY	Soldiers requiring observation or care beyond the unit level are evacuated to facilities in close proximity to but separate from the medical or surgical patients at the battalion aid station or medical company nearest the soldiers' unit. It is best to send soldiers who cannot continue their mission and require more extensive intervention to a facility other than a hospital, unless no other alternative is possible. Combat and operational stress reactions are often more effectively managed in areas close to the soldier's parent unit.
SIMPLICITY	The principle of simplicity indicates the need to use brief and straightforward methods to restore physical well-being and self-confidence. The actions used for controlling COSRs (commonly referred to as the 5Rs) involve the following actions: ▪ **R**eassurance of normality. ▪ **R**est (respite from combat or break from the work). ▪ **R**eplenish bodily needs ▪ **R**estore confidence with purposeful activities and contact with his unit. ▪ **R**eturn to duty and reunite Soldier with his unit.

Source: US Department of the Army, Army Techniques Publication (ATP) 4-02.8, *Force Health Protection* (Washington, DC: Government Printing Office, 2016), 4-7.

Although knowledge and understanding have increased dramatically, these foundational principles have never changed. For instance, a less common acronym used during WWI, adopted from the British Army and long since revised, was the designation of soldiers as not yet diagnosed, nervous (NYDN). This acronym was troublesome for two reasons: the prevailing notion of fear and nervousness being the cause of psychological injury and the hesitancy to

formally diagnose a patient, thereby relieving the medical system from having to assign a patient status to the suffering soldiers.[34] Another instance from WWI that persists today is good unit morale and cohesion and its reductive impact on psychological injury.[35] Morale is not a tangible or scientifically measurable quantity. Change in leadership, actions by members of the unit, or inaction by leaders in the unit are a few examples of events that can quickly change unit morale. Morale may indeed be a palliative after a PTE, but contemporary understanding informs that trauma is the main culprit.

For context, it is in this environment that the principles of PIE became the standard approach for managing psychological injury. Much of what we know about trauma, stress, psychological injury, and PTSD has been revised multiple times, and as knowledge builds, all legacy concepts should be open to reexamination. PIE, which is at the core of BICEPS, is a logical approach to maintain combat power on the front lines, but in the light of contemporary understanding of trauma, some issues arise with BICEPS. Concerning proximity, if the source of trauma is in the unit, around the unit, or caused by activities that the unit is embroiled in, proximity as a core consideration for treatment is counterproductive. Concerning immediacy, PTSD and other maladaptive stress reactions are known to occur much later after the PTE.[36] Concerning expectancy, it is a worthwhile stance to believe that soldiers will fully recover and treat them as such. The issue lies in a situation where treatment is insufficient. In such a case, and under the weight of expectancy, a psychologically injured soldier may be inadvertently cornered into believing that they are fine, and that soldier's leaders may view any indication of the contrary as the result of internal inadequacies or mere disillusionment.

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[34] Zajtchuk and Bellamy, eds., *War Psychiatry*, 155.

[35] US Army, FM 6-22.5, 2-6.

[36] Ibid., 1-2.

Current US Army doctrine states that the goal of COSC is to maximize return to duty rates for soldiers temporarily incapacitated with psychological injury.[37] However, for several decades the belief persisted that an overwhelming majority of psychological injury cases were treated and expediently returned to duty. After the initial struggles with roll-out and implementation of the expanded psychiatric capability at the division level, the US Army reported exceedingly high rates of successful RTD cases in the Korean War. The reports indicate that the RTD rate was 85 percent within the first 3 days, 10 percent return to limited duty in several weeks, and only 5 percent evacuated back to the US.[38] This aligns with statistical reporting in the original volumes of neuropsychiatry from WWII, which assign the successful RTD rate at 80 percent with proper handling.[39] Unfortunately, the data does not align with other Korean War statistical findings as listed in table 7. Furthermore, no studies are available for the post-conflict period when the effects of a PTE can manifest. Table 7 presents a compilation of significant studies into the efficacy of forward psychiatry and the reported RTD rates.

[37] US Department of the Army, Field Manual (FM) 4-02.51, *Combat and Operational Stress Control* (Washington, DC: Government Publishing Office, 2006), 2-6.

[38] US Department of the Army, Field Manual (FM) 8-51, *Combat and Operational Stress Control in a Theater of Operations* (Washington, DC: Government Publishing Office, 1998), 1-11.

[39] Leonard D. Heaton, Robert S. Anderson, Albert J. Glass, and Robert J. Bernucci, *Neuropsychiatry in World War II*, vol. 1, 2 vols. (Washington, DC: Office of the Surgeon General, Department of the Army, 1966), 94.

Table 7. Summary of Main Papers on Forward Psychiatry with Reported Outcomes

Study	War	Findings	Limitations
Bennett Tombleson, 1916	WWI	All returned to combat	No objective measures and small sample
Wiltshire, 1916	WWI	27% of admissions were relapses	No controls
Salmon, 1917	WWI	Recommended PIE treatments	No objective measures
Brown, 1919	WWI	91% to duty	No objective measures
Leri, 1919	WWI	91% to duty	No objective measures
Russel, 1919	WWI	73% to duty	No objective measures and small sample
Strecker, 1919	WWI	40% to 75% to duty	No objective measures
Cooper & Sinclair, 1942	WWII	50% to 63% to duty	No objective measures
Grinker & Spiegel, 1943	WWII	2% to combat duty; 70% to non-combat roles	No objective measures
Craigie, 1944	WWII	61% to active duty	No objective measures and limited follow-up
James, 1945	WWII	90% to duty but only 30% to combat units	No objective measures
Bartmemeier et al., 1946	WWII	40% to combat duty	No objective measures
Hunter, 1946	WWII	30% to combat units	No objective measures
Glass, 1947	WWII	54% to duty but only 30% to combat units	No controls
Ludwig & Ranson, 1947	WWII	68% returned to combat then relapsed	Relied on self-report
Brill & Beebe, 1952	WWII	Follow-up showed few returned to combat	Selection bias in samples
Hausman & Rioch, 1967	Korea	44% of those treated doing well in combat units	Small sample
Jones & Palmer, 2000	Korea	PIE superior to base hospital	No controls
Noy et al., 1984	Lebanon	59% returned to original units	Nonrandom allocation
Solomon & Benbishty, 1986	Lebanon	PIE superior to base hospital	Nonrandom allocation

Source: Adapted by author from Edgar Jones and Simon Wessely, "Forward Psychiatry in the Military: Its Origins and Effectiveness," *Journal of Traumatic Stress* 16, no. 4 (2003): 418.

Two ways to further validate the efficacy of these guiding principles will be first, to compare the findings of studies conducted into PIE and its use in forward psychiatry and second, to compare post-conflict rates of psychological injury with other rates from studies conducted during or at the time of conflict. Concerning the first method, the data in table 7 shows significant variations for each of the principal conflicts listed. In WWI, the RTD success rates range from 40 percent of all reported rates are cases to 100 percent. In WWII, the success is also inconclusive ranging from 2 to 68 percent in combat duty and 90 percent to duty in non-combat roles. The 1967 study of the Korean War showed that 44 percent of psychological injury cases were successfully treated and returned to duty. However, a study conducted in 2000 determined that PIE tenets were indeed superior to the admittance of soldiers for in-patient treatment in base hospitals. When considered as an aggregate, none of the data from these principal conflicts are

congruent with the rates previously published in US Army doctrine. Some duly acknowledged limitations of the data presented in table 7 are the absence of more robust statistical controls such as long-term patient monitoring and small sample sizes.[40]

Concerning the second method, figure 1 shows the expected path of combat and operational stress and delineates that PTSD is not the only outcome of PTEs. Post-traumatic growth (PTG) is also a possible and desirable outcome. Psychological injury is responsible only for a portion of all casualties. According to best estimates in high-intensity conflict, that number is roughly 25 percent based on one CSR for every WIA. If the US Army successfully returns 75-80 percent of psychological injury cases to duty, then the post-conflict rate of psychological injury among all veterans should be roughly 25 percent or less of the overall psychological injuries. This 25 percent should represent the remainder of cases that were not successful RTD cases. A limitation of following this logical thread is the inability to conduct comprehensive long-term psychological injury studies on veterans the further removed they are from conflict. Since PTSD and its diagnostic criteria were officially codified in 1980 in DSM III, data is unavailable for WWI, WWII, and the Korean War.

By direction from the Veterans Administration, the most comprehensive study on post-conflict PTSD was conducted for the Vietnam War by the National Vietnam Veterans Readjustment Study.[41] According to their final report published in 1988, at the time of the report, the current post-conflict rates for PTSD from the Vietnam war was 15.2 percent among male theater veterans and 8.5 percent among female theater veterans, with a lifetime prevalence of 30.6 percent for male veterans and 26.9 percent for female veterans.[42] The post-conflict rates for

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[40] Jones and Wessely, "Forward Psychiatry in the Military," 411–19.

[41] Richard A. Kulka, William E. Schlenger, John A. Fairbank, Richard L. Hough, B. Kathleen Jordan, Charles R. Marmar, and Daniel S. Weiss, "Contractual Report of Findings from the National Vietnam Veterans Readjustment Study" (Research Triangle Park, NC: Research Triangle Institute, November 7, 1988), 1.

[42] Ibid., 5.

PTSD for the Gulf war average about 12 percent of all Gulf War veterans for any given year.[43] In any event, two conclusions can be drawn from the above:

1. Not all cases of psychological injury in combat are reported.

2. The tenets of PIE are occurring too early in the treatment process to discern their utility in reducing post-conflict rates of PTSD.

The proponents of PIE tout the success of its tenets amidst the large numbers reported post-conflict. Opponents of PIE, on the other hand, argue that it seeks to preserve combat power on the battlefield to the detriment of the individual soldiers and, in so doing, aggravates a transient response to psychological injury and turns it into a chronic disorder.[44]

Like the foundational principles, the capacity of psychiatric or psychological care provided in combat today is based on PIE. The concept of placing one psychiatrist in every division was first suggested in WWI, partially implemented in WWII, and fully implemented in the Korean War.[45] In the Korean War, the addition of one psychiatrist to every combat division and newly formed mobile psychiatric detachments provided the proximity and immediacy of care for soldiers requiring psychiatric care. The full implementation and addition undoubtedly helped in reducing the number of psychological injury casualties. Still, they are incorrectly credited as being solely responsible for the reduction in numbers. This error of assigning total causation where only a correlation exists persists to this day. In the Vietnam and Gulf Wars, this policy was re-validated and has since become the standard for manning active divisions during any conflict. At the current US Army force structure, this policy will require the assignment of fewer than fifty psychiatrists per division across the active, reserve, and National Guard components. In all likelihood, the US Army will have minimal issues meeting this requirement as it is highly

[43] National Center for Post Traumatic Disorder, "How Common Is PTSD in Veterans?" US Department of Veterans Affairs, accessed December 21, 2020, https://www.ptsd.va.gov/understand/common/common_veterans.asp.

[44] Jones and Wessely, "Forward Psychiatry in the Military," 417.

[45] Office of the Inspector General, *Evaluation Report*, 5.

impractical for every division to deploy to an active theater at the same time. The more critical issue lies in the availability of COSC medical detachments, the successors to the original mobile psychiatric detachment. It is here in the medical detachments that the social workers, clinical psychologists, psychiatrists, occupational therapists, psychiatric nurses, behavioral health specialists, and occupational therapy specialists reside.[46] The current basis of allocation is one COSC medical detachment per 48,000 deployed soldiers.[47] At the current US Army strength, twenty-one COSC medical detachments will be required if every soldier deploys to the theater of operations, which like divisions, is impractical. In any event, the required number of COSC medical detachments is available. COSC medical detachments are highly specialized units. Based on available skilled personnel to fully man the detachment, the actual number of manned, deployable detachments fluctuates at numbers slightly less than the total number of COSC medical detachments in inventory. Again, as with psychiatrists, the US Army will only need to deploy enough COSC medical detachments required to account for the total deployed strength.

The psychological injury care capacity annotated above reveals two problems. First, the current capacity accounts for an army strength that is likely to surge in LSCO. Second, the conflicts in which the current capacity planning factor was re-validated as the standard were all low-intensity conflicts. The question of if the existing capacity will meet the future predicted requirement remains unanswered. Per table 4, the combat intensity of both WWI and WWII are about 4-5 times the level that was present in the Korean War. If psychological injury rises at a similar rate as combat intensity, then the available COSC capacity in inventory is about a quarter of what may be required. Another pertinent question that persists is if the US Army can treat all the psychologically injured soldiers. Forward treatment is as much about facilities as it is about care providers. The feasibility of locating, expanding, and securing forward treatment centers as

[46] US Department of the Army, Army Techniques Publication (ATP) 4-02.55, *Army Health System Support Planning* (Washington, DC: Government Publishing Office, 2020), 2-15.

[47] Ibid., F-1.

close to their supported unit as conditions allow, becomes another problem that the operational commander on the battlefield must solve.

The Issue of Preparation

The question of whether psychological preparation can reduce the occurrence of psychological injury is not new. During WWII, the US Army initiated stricter screening measures for initial entry.[48] This was one of the US Army's responses to the staggering numbers of psychological injury cases in WWI and was intended to ensure that persons joining the army had no predispositions to psychological breakdown consistent with the understanding at the time. These measures did not achieve any significant results.[49] However, this exemplified the flawed notion that the deficient entity in the psychological injury equation was the individual soldier. In this construct, the soldier who succumbs to a PTE may simply be one who does not measure up to other soldiers who do not. Fortunately, the study of trauma informs that this notion does not reflect proper understanding. Any individual soldier is susceptible to psychological injury if the trauma is intense enough or if the soldier experiences the trauma for long enough. LSCO presents sufficient levels of both intensity and duration. If the goal of psychological preparation is to act as a reductive tool to buttress anticipated high rates of injury, then more focus is required. Psychological preparation should seek to increase the individual soldiers' threshold of trauma while simultaneously controlling exposure such that there is post-traumatic growth and resilience instead of injury. To this end, the pertinent question is if the US Army is doing enough to prepare soldiers psychologically for combat. There are both physical and mental aspects of psychological preparation, and the US Army has many different approaches to do what it can where it can. Like

[48] Todd C. Helmus and Russell W. Glenn, *Steeling the Mind: Combat Stress Reactions and Their Implications for Urban Warfare* (Santa Monica: RAND, 2004), 94.

[49] Hans Pols and Stephanie Oak, "WAR & Military Mental Health: The US Psychiatric Response in the 20th Century," *American Journal of Public Health* 97, no. 12 (December 2007): 2133, accessed January 22, 2021, https://doi.org/10.2105/AJPH.2006.090910.

any complex problem, it is hard to isolate what is or is not positively contributing to psychological preparation when multiple things are happening simultaneously.

Trauma as an event can be thought of in three distinct stages: pre-trauma, intra-trauma, and post-trauma. Preparation can and should occur pre-trauma and intra-trauma. Treatment, awareness, and rehabilitation occur post-trauma. This is another area where PTSD as an accurate descriptor misses the mark. The education and awareness of PTSD diagnosis and treatment are not especially helpful in psychologically preparing soldiers in the pre-trauma and intra-trauma space. Using this categorization, it becomes easier to assess which programs are correctly oriented towards success. The proper psychological preparation for combat should be physical and mental and should be occurring sufficiently pre-trauma to affect intra-trauma. In LSCO and possible protracted conflict, tailored intra-trauma programs should exist to account for both intensity and duration.

It is in this light that both defunct and current programs must be assessed for overall effectiveness. At its inception, the US Army *Battlemind* program targeted veterans returning from combat and eventually expanded to include pre-deployment training.[50] Unfortunately, post-combat is the realm of identification and treatment. Therefore, Battlemind was insufficient for those veterans diagnosed with PTSD and not very applicable to the lucky ones who had escaped sufficient PTEs. CSF, and the updated version CSF2, are the most comprehensive of all the past and present programs. It covers overall soldier and family fitness in emotional, social, spiritual, family, and physical domains providing personalized assessments for each soldier or family member.[51] The program is broad and acutely data-driven, and its educational material is mostly web-based. The program purports to prepare soldiers holistically for life and combat; however,

[50] Institute of Medicine of the National Academies, *Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations: Initial Assessment* (Washington, DC: National Academies Press, 2012), 179.

[51] US Department of the Army, Army Regulation 350-53, *Comprehensive Soldier and Family Fitness* (Washington, DC: Government Publishing Office, 2014), 1.

little if any of its materials do in fact target combat. MRT is a component of CSF2 and provides tools that can improve stress management and maximize performance during stressful events.

The MRT program can be useful, but the concept of training one to train others robs the program of its effectiveness. The knowledge and skills gained through the MRT program need to be institutionalized, broadly disseminated, and utilized by the entire army. Combat-focused psychological preparation is not comparable to an ordinary soldier skill taught by a more experienced soldier to a small squad of soldiers. The program should be more than an additional duty assigned to an individual soldier in a given unit. PHA, PDHA, and PDHRA are also data-driven models that baseline a soldier's readiness and risk factors. As it relates to combat, they occur pre-trauma and post-trauma.[52] Although these assessments are an excellent tool for medical providers, their utility to the individual soldier is questionable, especially in protracted combat. While not related to psychological preparation, the assessments offered some utility. According to a congressionally mandated study on the effectiveness of these health assessments, the assessments increased service member access to providers and proved helpful in screening cases requiring behavioral health referrals.[53]

This list of programs is not all-inclusive, but it tells a story of right intentions amid slight misalignments. Besides, none of these programs happen during and in conjunction with a physically demanding or intense grit-building activity. This is the reason no one program can genuinely suffice. Psychological preparation for combat must be inculcated as a guiding philosophy for the soldier, and even this approach may not be enough. The preparation must be about prevention or reduction of injury and not just identification for treatment after the fact. One

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[52] "Periodic Health Assessment," Military Health System, 2019, accessed January 26, 2021, https://health.mil/Military-Health-Topics/Health-Readiness/Reserve-Health-Readiness-Program/Our-Services/PHA.

[53] Len Bickman, Melanie W. Leslie, Ana R. Vides de Andrade, Ryan P. Hargraves, Warren E. Lambert, Carolyn S. Breda, Tommaso Tempesti, Lisa L. Demoret, Cori E. Lapare, and Blake Tenore, *Program Evaluation of Post-Deployment Health Assessment (PDHA) and Reassessment Process (PDHRA)* (Nashville: Vanderbilt University, 2009), 78.

could argue that war traumatizes all who experience it, and even the bravest of soldiers are not immune. However, the US Army should seek to increase every soldier's stress aperture, thereby expanding their spectrum of normalcy to include the arduous, the extreme, and, where possible, the dangerous. The terror of combat may never become familiar to every soldier, but it must not be foreign.

Other notions exist as narratives, even though extensive research fails to reveal any credible scientific studies on which they are based. One such notion is that unit morale and cohesion are factors in reducing psychological injury.[54] This notion predates contemporary understanding of psychological injury, but it permeates in iterations and revisions of psychological injury lore. With no baseline to measure trauma, it is difficult to ascertain if any particular unit experienced more intense trauma than another similarly exposed unit and the overall reductive impact of either unit's morale or cohesion. The following logic attempts to offer a contrarian perspective to this notion. If units with low morale tend to have a more rampant rate of occurrence, it follows that excessive instances of diagnosed PTSD should become a reliable indicator of low morale in units. Also, if this were the case, most reported psychological injury cases would originate from specific units where low morale and cohesion were present. Consequently, the rampant rate of PTSD reported post-conflict would suggest that the US Army has not only a psychological injury problem but also a rampant problem of low morale in its units. This is not the case as low morale issues that necessitate an overhaul of leadership continue to be the exception, not the rule.

While unit cohesion and a supportive environment are beneficial to any unit, it is unlikely that a soldier who has experienced a PTE is better protected from its injurious effect because of the cohesion and morale present in his or her unit. Research does support the notion that

[54] Zajtchuk and Bellamy, eds., *War Psychiatry*, 104.

psychological injuries are consistently lower in elite units in the US Army.[55] However, like unit morale and cohesion, several other variables are present as part of the overall psychological preparation, so attributing a cause to effect is imprecise. As part of psychological preparation, elite units have psychological screening, standardized unit debriefings that help to normalize PTE, a more physically demanding training regimen, and, in some cases, access to live tissue training.[56] All these elements of psychological preparation do not happen in a vacuum. These US Army elite units also tend to participate in operations with higher intensity but much shorter durations. Also, elite forces are a small fraction of the US Army forces expected to execute LSCO. Moreover, these aspects of elite units' psychological preparation are only possible because of their small but specialized unit types. It is wholly impractical to imagine scaling up these aspects of psychological preparation to the entire force, especially one that can increase dramatically in LSCO.

The insurmountable hurdle that psychological injury preparation has always faced is the absence of a direct correlation with outcomes on the battlefield. The US Army was victorious in WWI, WWII, and the Korean War despite the staggering amounts of psychological injury cases. Furthermore, since the rate of psychological injury from recent conflict has reduced, preparation will continue to compete unfavorably for relevance. Also, care for veterans suffering from psychological injury eventually becomes the responsibility of the Veterans Administration. This is not to insinuate that the US Army is intentionally oblivious to the need for psychological preparation; it merely acknowledges that even with an absence of focused, direct preparation that targets the intra-traumatic period of combat, the US Army has performed satisfactorily.

[55] Helmus and Glenn, "Steeling the Mind," 30.

[56] Ibid., 57.

Overall Impact

A gap is an area of significant lag between adversaries, and in this case, psychological injury is a gap that remains unresolved. Solving the psychological injury problem will be challenging because of the infrequency of high-intensity LSCO; furthermore, the current approach has not resulted in a defeat. The US Army is in a familiar place today as one protracted conflict draws down. The interwar years have always provided a precious opportunity to learn lessons from recent conflict, re-write doctrine, and prepare for future conflict. However, psychological injury presents a unique challenge. The lessons required in this case are not lessons learned from recent conflict. Some prevailing wisdom suggests that there is more to learn from losses than victories. After any victory, there is a propensity to continue with the familiar, especially if the results are favorable.

Maintaining and regenerating combat power will be of utmost importance in large-scale combat operations, and this gap will cost manpower issues. This is especially true when considering the US Army has fixed troop numbers and an all-volunteer force contrasted with the enormous troop strengths of peer and near-peer adversaries. Psychological preparation has mattered in the past and will absolutely matter again in the future. If psychological injury is indeed a gap, then the absence of comprehensive solutions cedes an undue advantage to adversaries. The rates of psychological injury from past high-intensity LSCO are staggering, but the astounding US troop levels in those conflicts buttressed the impact. If this grand troop strength is unavailable for any reason in the future, outcomes may differ from those of the past. There are current solutions in place, but most are inadequate, and others still await validation in high-intensity conflict. The problem is complex, and therefore the US Army must not do only one thing. The right solutions for psychological injury must holistically address their true prevalence while rethinking strategies for treatment and preparation. The absence of psychological

preparation is a lost opportunity to implement strategies that can aid the US Army in maintaining the combat power needed for sustained large-scale operations.

Recommendations

The recommendations offered below are targeted solutions for psychological injury, specifically in the event of high-intensity LSCO.

1. Training the force to understand the nature and effect of trauma. Misunderstanding of psychological injury persists as evidenced by existing notions that still linger in doctrine and lore. In this unique case, where a litany of iterations surrounding psychological injury continues to compete with the contemporary understanding, the unbroken history must be part of the education. All other recommendations concerning psychological injury or psychological preparation are contingent on re-educating the force.

2. Institutionalize the knowledge without creating new programs. Psychological injury and preparation are not the purviews of any rank or occupation specialty. It is the nature of programs with targeted reach to have more impact than those with broad and generalized reach. While experience is vital in developing a broader spectrum that can help normalize potential traumatic events in combat, no soldier is immune to trauma. It is common for combat-focused psychological preparation to be a part of regular training events where able. However, to be effective, all preparation must be grounded on the contemporary understanding of psychological injury.

3. Non-standard combat tour length based on the expected intensity of combat. Some studies suggest optimal lengths for intense combat to reduce the likelihood of psychological injury. While a medically correct length of a duty tour can never be known or codified, medical personnel must be at the forefront of the data provided to theater commanders. It is as much a medical decision as it is an administrative or logistical problem to solve. Psychological injury is not universally applicable to all soldiers in combat. Therefore, the data must delineate expected

rates based on the intensity of conflict and exposure duration while continually monitoring baseline assumptions. These non-standard duty tours are not a new concept for the US Army. Currently, the duty tour lengths for elite units differ from the duty tour lengths for conventional forces. Amongst conventional forces in high-intensity conflict, combat operations will be dissimilar, so duty tours should not be unilateral.

4. Adopt a more accurate method to categorize psychological injury in combat. According to current US Army casualty reporting standards, combat and operational stress reactions are categorized as nonhostile casualties, while hostile casualties are related to hostile action.[57] Unfortunately, this fails to account for the true nature of trauma, whether it is attributable to a hostile activity or not, and not just an adverse reaction to the stresses of combat. Trauma is the constant emergent property of all the variables in combat, and its ownership is ambiguous. This need for accurate reporting during combat matters because the post-conflict rates of psychological injury suggest that while in combat, psychological injury is still under-reported.

5. One hundred percent attendance at training centers before deployment. Just as Soldier Readiness Processing (SRP) is mandatory, participation at training centers must be mandatory for all soldiers deploying to combat and scheduled as close as possible to the deployment. The training centers are the most essential of all the gateways to a combat tour. When viewed in this light, soldiers who cannot go to training centers with their respective units must deploy separately to the training center to experience a training rotation with other units. The training centers are much more than a venue for unit cohesion and doctrine validation. They are the prime venue for psychological inundation. It is particularly inattentive to deny any soldier this familiarization opportunity before combat. While attendance does not equate to adequately trained, attendance will amount to experience gained.

[57] US Army, ATP 4-02.55, 4-1.

6. Expand the role and type of training provided at the training centers. There is room to make the training provided at the training center more robust. Unfortunately, the experience at the training centers is not universally challenging for all who attend. The focus of the training at the training centers during any training rotation is the combat unit that will undoubtedly experience the most intense combat operations. Other combat support and non-combat units routinely fail to experience the chaos and calamity that offer an opportunity for growth. The training centers do well in replicating the austerity and persistent friction of combat. Still, they distinctly fall short of further psychological preparation with the creative use of props, film, other media, and first-hand experiences that can introduce controlled stress into the overall training event.

Opportunities for Further Research

The narrow scope presented in this argument leaves many pertinent questions raised but unanswered. These questions all warrant further exploration. Specifically, further study into allied partners' approaches regarding psychological injury can inform the US Army direction in the future. The integration of fighting forces in any theater of operations means that an allied force will possibly provide medical sustainment for another allied partner in any of the echelons of care available. It is beneficial to understand how the US Army philosophy and approach to treatment differ from other partners. The same is true for the preparation that occurs pre-combat. It bears finding out if the same absence of a comprehensive approach to preparation is common to all allies.

The nature of PTSD is that the disorder or adverse reaction to the underlying trauma may show up long after the conflict is over or even after separation from military service. Although the US Army screens soldiers upon return from combat, there is a possibility that psychologically injured soldiers are slipping into society in numbers not previously understood. Considering the high rates of psychological injury reported post-conflict, there is value in understanding the efficacy of available programs for assimilating psychologically injured soldiers back into society

upon return from combat both in the US Army and in allied nations. As the efficacy of psychological preparation is studied, there is the logistical challenge of scaling up psychological training currently offered to some elite soldiers to provide some measure of preparation to every soldier in the US Army. Here too, much can be learned from allies regarding the right strategies to employ for the broad implementation of psychological preparation.

Conclusion

All current doctrine is valid and assumed to be correct until, inevitably, new doctrine invalidates or supersedes the former. That phenomena have been studied and codified into doctrine does not negate the need for continued study as understanding increases. In this case, it is especially true if the environment continues to provide indicators that do not comport with the prevailing doctrine as written. In this case, a century's worth of misunderstanding concerning psychological injury masked the prevalence of its occurrence, shaped the narrative concerning care and treatment of sufferers, and explains the corresponding absence of psychological preparation.

The early missteps in understanding psychological injury created errors in its accounting and masked its prevalence. The imprecise language shaped the US Army's approach to psychological injury, and the pejorative terms used as descriptors misdirected efforts to solve it. To this end, the pedantic nature of psychological injury and its language have not been helpful and continue to distract. PTSD and combat stress dominate the information space surrounding psychological injury but detract from the causative trauma that does not always injure. These medical and academic terms like PTSD speak to a post-combat period, while military terms like combat stress are too universal and seemingly non-descript. Intra-traumatic stress more aptly describes the period of sustained trauma that soldiers are subject to, and it is here where current efforts are mostly insufficient.

Psychological injury is prevalent, but not any more prevalent than previously understood as historical planning factors continue to prove valid and accurate. The real problem surrounding its prevalence is the infrequent nature of high-intensity conflict and the tendency to use planning factors that are more suitable for low-intensity conflict instead. Unfortunately, the current treatment philosophy is best suited for these low-intensity conflicts and may not be easily scalable in high-intensity conflicts. Also, the entire posture towards care appears to be a vestige of early understanding. This misalignment continues into the realm of preparation, where multiple past and present programs continue to miss the mark.

Psychological injury is a gap that will be especially important in LSCO if that intra-combat period remains protracted and soldiers must deploy back to the theater for multiple duty tours. Soldiers can indeed prepare psychologically to deal with the certainty of trauma in combat, but it is not always an internal deficiency that causes a soldier to succumb to trauma. There are opportunities to rethink psychological injury holistically and how best to implement its contemporary understanding broadly. As the US Army enters what may turn out to be an interwar period, it is the right time to revisit psychological injury in combat.

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