

Unique Aspects of Traumatic Brain Injury in Military and Veteran Populations



Patrick Armistead-Jehle, PhD, ABPP-CN^{a,*},
Jason R. Soble, PhD, ABPP-CN^b, Douglas B. Cooper, PhD, ABPP-CN^{c,d},
Heather G. Belanger, PhD, ABPP-CN^{e,f,g,h}

KEYWORDS

- Blast injury • Military • Veteran • Concussion • Posttraumatic stress disorder
- Polytrauma • Postconcussive syndrome

KEY POINTS

- Traumatic brain injury (TBI), in particular mild TBI, is a relatively common injury experienced by service members across both deployed and nondeployed environments.
- Several unique aspects of the military environment render the identification and treatment of service members and Veterans who experience a TBI dissimilar from their civilian counterparts.
- The Departments of Defense and Veterans Affairs have developed specific protocols and systems of care for addressing TBI-related care in deployed and nondeployed environments.
- Comorbidities are a frequent occurrence with service members and Veterans with history of TBI that represent for care and must be considered in treatment planning.

Disclosure Statement: The views, opinions, and/or findings contained in this article are those of the authors and should not be construed as an official Department of the Army, Department of Veterans Affairs, Defense and Veterans Brain Injury Center, or US Government position, policy, or decision unless so designated by other official documentation.

^a Concussion Clinic, Munson Army Health Center, 550 Pope Avenue, Fort Leavenworth, KS 66027, USA; ^b Psychology Service, South Texas Veterans Healthcare System, 7400 Merton Minter, San Antonio, TX 78229, USA; ^c Defense and Veterans Brain Injury Center, Department of Neurology, San Antonio Military Medical Center, Joint Base San Antonio, MCHE-ZDM-N, 3551 Roger Brooke Drive, Fort Sam Houston, TX 78234-4504, USA; ^d Department of Psychiatry, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78229-3900, USA; ^e HSR&D, Tampa VA TBI/Polytrauma Rehabilitation Center, Center of Innovation on Disability and Rehabilitation Research (CINDRR), James A. Haley Veterans' Hospital, 13000 Bruce B. Downs Boulevard - 116A, Tampa, FL 33612, USA; ^f Department of Mental Health and Behavioral Sciences, James A. Haley Veterans' Hospital, 13000 Bruce B Downs Boulevard (116B), Tampa, FL 33612, USA; ^g Department of Psychiatry and Behavioral Neurosciences, University of South Florida, 4202 E Fowler Avenue, Tampa, FL 33612, USA; ^h Defense and Veterans Brain Injury Center, 13000 Bruce B Downs Boulevard (116B), Tampa, FL 33612, USA

* Corresponding author.

E-mail address: Patrick.j.armistead-jehle.civ@mail.mil

Phys Med Rehabil Clin N Am 28 (2017) 323–337

<http://dx.doi.org/10.1016/j.pmr.2016.12.008>

1047-9651/17/Published by Elsevier Inc.

pmr.theclinics.com

INTRODUCTION/EPIDEMIOLOGY OF TRAUMATIC BRAIN INJURY IN THE MILITARY

Prompted by the protracted nature of the conflicts in Afghanistan and Iraq and by enemy combatants' frequent use of explosive devices, traumatic brain injuries (TBI) have become the focus of notable clinical and research attention in the military and Veteran health care environments. Although many of the medical principles and treatment protocols used in the civilian sector to evaluate and treat TBI are applicable to care in the military, there are several unique factors specific to this injury in military and Veteran populations. These factors, which include sustainment of injuries within combat zones, distinct mechanisms of TBI, psychiatric comorbidities, and influences of the military culture on health care utilization, are the focus of this review.

According to the Defense and Veterans Brain Injury Center, between 2000 and the first quarter of 2016, there have been approximately 348,000 active duty military service members (SMs) who have experienced a TBI.¹ These injuries increased from 10,958 in 2000 to a peak of 32,907 in 2011. The annual number of SMs diagnosed with a TBI then steadily declined to 22,594 in 2015. The vast majority of these injuries (82%) have been categorized as mild in severity, and as such, mild traumatic brain injury (mTBI) is the primary focus of this review.¹ As SMs separate from active duty status, their treatment transitions to the Veterans Health Administration (VHA), which also tracks epidemiologic data. In fiscal year 2014, 7% of Iraq and Afghanistan War Veterans seen in the VHA system carried a diagnosis of TBI.² According to Taylor and colleagues,² in 2014 the average cost of health care services in those with a diagnosis of TBI (mean = \$15,161 [SD = \$33,460]) was consistently higher than those without such a diagnosis (mean = \$5058 [SD = \$12,368]); this difference represents a moderate effect size (Cohen's $d = .40$). Moreover, in 2014, 6% of Veterans were service connected for TBIs.²

Despite the attention given to injuries sustained in the combat theater, most recorded concussions occur in garrison (nondeployed) environments.¹ Outside of deployment to a combat zone, SMs routinely engage in operational and training activities that are physically demanding and can increase the risk for TBIs. Furthermore, as most SMs are men between 18 and 24 years of age, there is a higher demographic risk for concussion via events like motor vehicle crashes and sporting and recreational activities. Consequently, even with the relatively recent reduction of SMs deployed in support of direct combat operations, TBI will continue to be a condition of interest in the military and Veteran populations. Several factors reviewed in later discussion are unique to the military and Veteran populations and should be considered in evaluating and treating TBI within these populations.

MILITARY CULTURE

Over the past 25 years, there has been a growing appreciation that individual factors, such as one's cultural identification, can influence medical treatment, development of a therapeutic alliance, and health care outcomes. Although cultural competence in modern health care has frequently focused on the influence of various ethnic and religious backgrounds, individuals who have served in the US military identify with a military culture that has its own set of unique values, traditions, language, and customs.³ Military values such as selfless service, mission focus, and decreased focus on personal needs over the good of the group are entrenched through military service and training. High levels of acculturation often remain following the end of a military career, as can be exemplified by the clothing and hats worn by Veterans in the community. Although some military personnel and Veterans receive their care in the Military Healthcare System and Veterans Healthcare System, nearly 66% of Veterans access

Download English Version:

<https://daneshyari.com/en/article/5711497>

Download Persian Version:

<https://daneshyari.com/article/5711497>

[Daneshyari.com](https://daneshyari.com)