

# DSM-5 Criteria and Its Implications for Diagnosing PTSD in Military Service Members and Veterans

Jeffrey Guina<sup>1,2</sup> · Randon S. Welton<sup>2</sup> · Pamela J. Broderick<sup>1,2</sup> · Terry L. Correll<sup>2,3</sup> · Ryan P. Peirson<sup>2,3</sup>

© Springer Science+Business Media New York 2016

**Abstract** This review addresses how changes in the Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 posttraumatic stress disorder (PTSD) criteria has the potential to affect the care and careers of those who have served in the military, where the diagnosis often determines fitness for duty and veterans' benefits. PTSD criteria changes were intended to integrate new knowledge acquired since previous DSM editions. Many believe the changes will improve diagnosis and treatment, but some worry these could have negative clinical, occupational, and legal consequences. We analyze the changes in classification, trauma definition, symptoms, symptom clusters, and subtypes and possible impacts on

the military (e.g., over- and under-diagnosis, "drone" video exposure, subthreshold PTSD, and secondary PTSD). We also discuss critiques and proposals for future changes. Our objectives are to improve the screening, diagnosis, and treatment of those service members who have survived trauma and to improve policies related to the military mental healthcare and disability systems.

**Keywords** PTSD · Stress disorder · DSM-5 · Military · Combat · Occupational psychiatry

This article is part of the Topical Collection on *Military Mental Health*

✉ Jeffrey Guina  
jeffrey.guina@wright.edu

Randon S. Welton  
randon.welton@wright.edu

Pamela J. Broderick  
pamela.broderick@wright.edu

Terry L. Correll  
terry.correll@wright.edu

Ryan P. Peirson  
ryan.peirson@wright.edu

<sup>1</sup> Mental Health Clinic, Wright-Patterson Medical Center, Wright-Patterson Air Force Base, Dayton, OH 45433, USA

<sup>2</sup> Department of Psychiatry, Wright State University Boonshoft School of Medicine, 627 S. Edwin C. Moses Blvd., Dayton, OH 45417, USA

<sup>3</sup> Aeromedical Consultation Service, US Air Force School of Aerospace Medicine, Wright-Patterson Air Force Base, Dayton, OH 45433, USA

## Introduction

While the Diagnostic and Statistical Manual of Mental Disorders (DSM) was not initially intended for determining occupational fitness for duty or disability eligibility, this is typical in the military. Therefore, changes in diagnostic criteria can have significant clinical, occupational, and financial consequences for active duty and veteran service members (SMs). Published in 2013, the DSM-5 [1] introduced changes—both subtle and significant—to the posttraumatic stress disorder (PTSD) diagnostic criteria including several with military implications. These changes were meant to incorporate new research and clinical knowledge learned since the DSM-IV-TR [2] was published in 2000, but many clinicians and patients have worried that changing how PTSD is diagnosed will have non-clinical implications, such as affecting access to care and who gets financial benefits [3].

Some conditions are unfitting for military duty (e.g., psychosis, bipolar disorder, and sometimes PTSD) and can result in medical disability benefits, but others are considered unsuited (e.g., substance use and personality disorders) and require a waiver or can result in administrative separation without benefits [4]. PTSD is the third most common

disability for which veterans receive compensation, behind tinnitus and hearing loss [5•]. Those receiving PTSD-related disability benefits increased 80 % from 1999 to 2004 [6]. Among veterans receiving compensation for mental disorders, 58 % are for PTSD and among Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans, 75 % [5•]. SMs often experience trauma-related distress/dysfunction but do not fit the arguably procrustean DSM-5 criteria. Sometimes, they are denied benefits, such as Veterans Affairs/Department of Defense (VA/DoD) healthcare services or disability compensation. Conversely, some SMs receive PTSD diagnoses and benefits, but malingering, or never attempt, receive or complete adequate treatment (i.e., are deemed disabled without knowing if recovery with treatment is possible) [7•, 8]. Besides fiscal reasons, accurate diagnosis is important because veterans with service-connected disabilities have lower suicide rates than those without [9]. Contrarily, most receiving PTSD-related VA payments report increasing symptoms until given 100 % disability ratings after which mental health visits precipitously decrease, implying that compensation—not treatment—was the primary focus [6]. Clearly, this is a complex issue.

This article reviews diagnostic changes in DSM-5, critiques, and proposals for future changes, aiming to ameliorate the challenge of making sure we capture everyone suffering from trauma-related distress while not over-diagnosing. We also review common problems and (sometimes non-clinical) consequences clinicians evaluating SMs face when diagnosing PTSD. While most clinicians are trained to diagnose in clinical settings, many are unfamiliar with occupational and forensic settings [10], where evaluatees have motivations for dishonesty, under-reporting, and over-reporting.

## History of the PTSD Diagnosis

Seventeenth-century military physicians recognized a syndrome in Swiss combat veterans affecting mood and sleep, dubbed “nostalgia.” In the 1800s, Pierre Janet and Sigmund Freud, respectively, attributed dissociation and hysteria to trauma [11•, 12•]. Freud’s work helped with understanding “shell shock,” “combat fatigue,” “war neurosis,” and “exhaustion” during the World Wars. These PTSD incarnations exhibited somatic *and* affective symptoms, leading Abram Kardinar to refer to what he witnessed in SMs as “physioneuroses” [11•]. Considering how ubiquitous somatization was in early recorded trauma manifestations, it is surprising that it is not included in current PTSD criteria. Perhaps, modern culture has developed less emotionally guarded language prone to parrying psychological distress into physical form, or, perhaps, clinicians are not adequately linking somatization to traumatic etiologies.

In 1952, the DSM—created because “the Armed Forces faced an increasing psychiatric caseload” from World War

II—outlined “gross stress reaction” resulting from “combat or civilian catastrophe” [13]. DSM-II removed this diagnosis and only contained one mention of “combat,” a possible cause of “adjustment reaction of adult life” [14]. Trauma-related disorders were largely forgotten by society during peacetime. Even non-combat traumas were under-appreciated as evidenced by the 1970s’ US government reporting that sexual abuse occurred in just one in 1 million people [11•]; this would have meant only about 200 cases nationwide.

While society forgot, patients could not. With lobbying from Vietnam veterans [12•], PTSD was officially recognized in 1980. DSM-III included a relatively restrictive trauma definition and the following three symptom clusters: reexperiencing, avoidance/numbing, and arousal [15]. A decade later, cognitive processing therapy (CPT) stressed how trauma—not just combat-related—can alter cognitions [16]. Prolonged exposure (PE) illuminated avoidance as a poor prognostic factor and treatment target [17]. Increased recognition led to the four PTSD incarnations from DSM-III to DSM-5 broadening the definition of trauma (in some respects), creating a mood/cognitive cluster, and adding attachment disorders to the new category of “trauma- and stressor-related disorders” [1]. Table 1 summarizes changes between DSM-IV-TR and DSM-5. Despite recent advances in understanding and treatments—partly spurred by OEF/OIF—there are still significant limitations. Both Herman [12•] and van der Kolk [11•] elaborate about the developmental, personality, dissociative, and somatic components that are not well outlined by current nosology or targeted by all treatments. We are left to ask what to do with traumatized SMs who do not fit DSM criteria?

## Classification

The DSM-5 recategorized trauma- and stressor-related disorders to recognize the “variable responses” to being exposed to “catastrophic or aversive events” [1]. The corresponding chapter was purposefully placed near chapters for anxiety disorders, obsessive-compulsive and related disorders, and dissociative disorders to recognize “the close relationship between [them]” [1]. The recognition of trauma as being important enough to warrant its own chapter is important for all patients and especially the military. It should be considered another victory for those veterans who had to fight hard in the 1970s to lobby just for the recognition of PTSD.

Despite lobbying from some SMs aiming to reduce stigma and encourage help-seeking, the name of PTSD was not changed to “posttraumatic stress injury” because some in the American Psychiatric Association believe that “it is the military environment that needs to change, not the name of the disorder” [18]. Similarly, “borderline personality disorder” was not changed despite lobbying. Conversely, “mental

**Table 1** Posttraumatic stress disorder (PTSD) criteria changes between DSM-IV-TR and DSM-5

Classification	Moved PTSD from “anxiety disorders” to the newly created “trauma- and stressor-related disorders” category (including reactive attachment disorder, disinhibited social engagement disorder, acute stress disorder, adjustment disorders, other specified trauma- and stressor-related disorders, and unspecified trauma- and stressor-related disorders)
Trauma definition	Expanded definition to no longer require fear, hopelessness, or horror in response to trauma Expanded definition to include work-related exposure by pictures and video Narrowed definition to exclude learning about a trauma that occurred to close family or friends due to natural causes (must be violent or accidental) Explicitly included sexual violence
Included symptoms	Changed the number of symptoms from 17 to 20 Removed a sense of a foreshortened future Added distorted blame Added negative beliefs Added negative emotions Added recklessness Revised emotional numbness to be numbness of only positive emotions
Symptom clusters	Changed the number of clusters from 3 to 4 Removed avoidance/numbing cluster requiring $\geq 3$ symptoms (i.e., internal avoidance, external avoidance, amnesia, anhedonia, detachment, emotional numbness, and sense of a foreshortened future) Added avoidance cluster requiring $\geq 1$ symptom (i.e., internal avoidance and external avoidance) Added mood/cognitive cluster requiring $\geq 2$ symptoms (i.e., amnesia, negative beliefs, distorted blame, negative emotions, anhedonia, detachment, and emotional numbness)
Subtypes	Removed “acute PTSD” Removed “chronic PTSD” Added “PTSD for children 6 years and younger” Added “PTSD with dissociative symptoms” Added “PTSD with panic attacks” Changed “PTSD with delayed onset” to “PTSD with delayed expression”

retardation” was replaced with “intellectual disability” to reduce stigma.

While new trauma- and stressor-related disorders were recognized in DSM-5, many researchers and clinicians have proposed additional disorders. Research suggests that “complex PTSD” is distinct from PTSD [19]. Complex PTSD recognizes how prolonged trauma can result in symptom overlaps between PTSD, borderline personality disorder, and dissociative and somatic disorders [12•]. “Developmental trauma disorder” similarly links prolonged childhood trauma to affective, physiological, attentional, behavioral, self-dysregulation, and relational dysregulation [11•]. These links are especially important for the military, because SMs have high rates of childhood trauma (leading many to theorize that enlistment often serves as an escape) [20], and trauma among SMs is highly associated with somatization, dissociation, and suicide [21–25]. Considering that personality, dissociative, and

somatic disorders are highly reactive to stress and are significantly associated with trauma [1, 12•, 26], it may be prudent to recategorize them as trauma/stress-related disorders (just as attachment disorders were) if only to increase clinician awareness of the links. On the other hand, they do not universally share common trauma/stress-related etiologies. Currently, the DSM has an inconsistent categorical system, with many chapters divided by predominant symptom (e.g., depressive and anxiety) and others by time of onset (i.e., neurodevelopmental) or etiology (i.e., trauma/stress). However, anxiety is pervasive across almost all psychiatry, all mental disorders are neurodevelopmental and neurocognitive in nature (i.e., have typical brain-related developmental courses and cognitions), and trauma is a risk factor for virtually all disorders. Perhaps, the alternative DSM-5 model for personality disorders should be expanded and applied to trauma/stress-related disorders (e.g., psychoticism,

dissociation, and depressivity are all common in traumatized individuals). Regardless of whether new subtypes/disorders are created, clinicians must recognize the various manifestations of trauma, so that simply managing symptoms does not distract from treating underlying causes.

### Expanding the Trauma Definition

Defining trauma has been controversial since DSM-III. Perhaps, the most significant change in the DSM-5 for the military was the elimination of DSM-IV-TR criterion A2 requiring a response involving “intense fear, helplessness, or horror” [2]. Evidence supporting this requirement was lacking [27]. Human reaction to trauma in the instant and in the postliminary experience is inconsistent. For example, some respond to combat coolly and, despite war’s horrific nature, do not respond with horror. These SMs are still exposed to potentially traumatic stimuli that could be related to future PTSD. Also, some experience a delayed response and, perhaps through training, contain/minimize emotional responses until they reach safety. The authors have evaluated SMs (and police and commercial pilots) who recount life-threatening incidents, noting that they “relied” on their training or that they “had no time to be afraid.” Removing DSM-IV-TR’s fearful response allows for such an experience and acknowledges that not all PTSD presentations are thematically fear-based. While the DSM-5 was careful to highlight variability in presentations, research indicates that limiting trauma to actual or threatened death or injury may be overly restrictive, as severe emotional loss (e.g., sudden abandonment and move or loss of home) is often sufficient for PTSD [28]. Trauma is subjective and is perhaps better defined not by events but by the experience of and reactions to events. A working definition of trauma is a negative event so severe that it changes how one thinks and feels about themselves, others, and/or the world. This corresponds with clinical symptoms and neuroscience (e.g., the amygdala and prefrontal cortex are implicated in trauma-related mood and cognitive alterations) [29]. However, this definition is also less objective, which may complicate occupational/forensic issues with diagnosing.

Many are concerned that more inclusive trauma criteria have potential to increase over-diagnosis, which could impact systems ranging from insurance claims to criminal proceedings [30]. It is important to note that not all traumatic experiences result in PTSD [31]. Additionally, detecting over-reporting is important not only for legal and financial reasons but also clinical (e.g., recommending and monitoring treatment) and ethical (e.g., access to limited treatment resources). As many as 30 % of personal injury claims feign PTSD [32], and 18 % of assault victims applying for compensation are “probable malingerers” [33]. These rates are even higher in SMs reporting PTSD, with 37–75 % exaggerating/

malinger [34, 35]. However, these numbers are controversial and the VA/DoD system has been criticized for over-emphasizing malingering, which has resulted in increased standardization of PTSD evaluations [36]. Nevertheless, over-reporting does occur. Among Vietnam veterans applying for PTSD-related disability in one study, 52 % had no documented combat exposure and 5 % either had never been in the military or never deployed [37]. Clinicians are generally left with the dilemma of diagnosing PTSD or malingering without supporting documentation. Comprehensive evaluations, clinical judgment, and collateral information are essential for accurate diagnoses (although this is not always the case in the VA/DoD disability system).

### Indirect Trauma Exposure

DSM-5 changed DSM-IV-TR’s trauma criteria to allow for indirect exposure, which has several military implications. This includes learning of close friends’ traumas, provided that they were violent or accidental (criterion A3) and “experiencing repeated or extreme exposure to aversive details of the traumatic event(s)” (A4) with a note excluding “exposure through electronic media, television, movies, or pictures, unless this exposure is work-related” [1]. Although the text is not explicit, it is possible to imagine work-related scenarios that could satisfy new criteria, for example, SMs listening to radio communications or observing remote video from a combat zone. Indirect exposure criteria suggest the potential for those in the periphery of combat to develop PTSD. Ongoing involvement with casualties, or exposure to one particularly gruesome event, may meet criteria. For example, rescue, recovery, medical, and mortuary personnel, among others, are regularly exposed to “aversive details.” Furthermore, military communities can be quite tightknit and someone with virtually any job could be affected by the loss of a friend/co-worker to combat. Little guidance is given, and weighing the significance of relationships and traumatic events is left to clinical judgment. While generally discussed in relation to family members of or clinicians treating PTSD patients [38–40], “secondary PTSD” (i.e., PTSD symptoms developed due to exposure to a traumatized individual) warrants research among military personnel. Individuals and leaders should be aware of indirect exposure to monitor resilience and plan preventative programs accordingly, not only for SMs but their spouses and children.

A4 is precisely where the military’s rapidly increasing use of remotely piloted aircraft (RPA)—commonly known as “drones”—may expose SMs to trauma. While many have speculated that PTSD is as common in RPA operators (i.e., pilots and sensor operators) as traditional combat veterans, research demonstrates that 3–6 % of RPA operators have PTSD, compared to 5–18 % of combat veterans and 2 % of non-combatant military [41–44]. Furthermore, RPA pilots

have similar rates of depressive and anxiety disorders (0.9 %) to manned aircraft pilots (0.7 %) [45], both well below the 3.5 % PTSD 12-month prevalence in the general population [1]. Realizing that prior studies only estimated PTSD rates based on self-report, Wood et al. (submitted for publication) assessed RPA operators and, of those that screened positive, performed structured interviewing and psychometric testing. However, none of the participants met full criteria for PTSD from RPA duties, while 4 % had PTSD from other traumas. Two authors are members of the USAF Aeromedical Consultation Service (ACS), which is responsible for following the mental health of over 20,000 aviators. All SMs with disqualifying mental disorders are typically presented to the ACS for evaluation of medical waivers for returning to flying duties. In the many PTSD cases reviewed, as of January 2016, the ACS has only diagnosed PTSD from video exposure on one occasion. This case involved an RPA pilot who was involved in a “friendly fire” incident which killed two American troops in the “fog of war.” Following successful treatment, he received a waiver to return to full flying duties. Multiple studies find lower than expected PTSD rates in RPA operators compared to the general population.

There are several possible reasons for low rates of PTSD related to indirect exposure. This is most likely related to highly resilient individuals being chosen through rigorous screening/selection processes, intensive training, and readily available medical resources [46]. However, another potential reason is a desire to under-report symptoms. While malingering receives significant attention because of the costs of fraudulent disability compensation [47], and patient risks [48] and clinician liability [49, 50] associated with benzodiazepines, reverse malingering (i.e., the intentional under-reporting of symptoms/distress) is under-studied [51]. Contrary to popular

belief, SMs are probably more likely to under-report than malingering. SMs frequently avoid mental health treatment, or “fake good”—verifiable by Minnesota Multiphasic Personality Inventory-2 (MMPI) [52]—once their dysfunction is unconcealable and commanders direct them to treatment. There are many reasons to under-report (Table 2), including trying to avoid legal, administrative, and social consequences that may result from the perception of unfavorable behaviors or labels. Many fear negative career impacts ranging from being limited in duty stations (e.g., more attractive locations or jobs) and positions (e.g., leadership, aircrew, medical, police, special operations, and presidential assignments) [46]. Perhaps the greatest fear is losing one’s career, including the income; benefits (especially for those nearing retirement eligibility at 20 years of service); distraction from problems; and sense of purpose, identity, and self-worth that goes along with being in the military [53]. Clinicians are responsible for determining SMs’ ability to perform their duties because failure to recognize limitations can jeopardize their safety, those around them, and even national security (e.g., deploying and handling firearms, aircraft, nuclear, or biological materials). For these reasons, the military needs to be careful about over-incentivizing or disincentivizing self-disclosure of mental health concerns.

## Symptoms and Subtypes

The DSM-5 increased the number of PTSD symptoms, in part to recognize the heterogenous manifestations of trauma. New symptoms and recategorization also aimed to identify persistent alterations in cognitions and mood that can occur after trauma and to emphasize both the “fight” (e.g., irritability and recklessness) and “flight” (e.g., avoidance) reactions.

**Table 2** Possible reasons for over- and under-reporting symptoms in military populations

Over-reporting		Under-reporting
Desire for care/pity	Help-seeking incentives/ deterrents	Stigma
Decrease legal responsibility/liability		Lack of mental health knowledge
Benzodiazepines	Cultural attitudes	Denial of mental health problems
Belonging to a group of sufferers		Over-valuing self-reliance
Desire to be distinct/important		Stoicism/masculinity
Seeking disability payments	Contextual factors in military	Perceive mental disorders as weakness
Avoid service/deployment		Issues of confidentiality
	Common issues with trauma	Negative career impacts
Fear of not being believed/understood		Perceive clinician conflict of interest
Excessive blame of military/ government		Avoidance of trauma discussion
Excessive self-blame		Embarrassment or shame
Blaming all life problems on trauma		Normalization of trauma
		Belief that nothing can help



Despite the expansion of symptoms, there are many individuals that have trauma-related dysfunction/distress without meeting full DSM criteria. About 16 % of Americans have “subthreshold PTSD,” which can be associated with significant impairment and suicidality [54]. For SMs, moral injury is common with and without full PTSD criteria and can involve severe symptoms (e.g., reexperiencing shooting an armed child assaulting comrades) that can benefit from treatment. Moral injury involves feelings of guilt, shame, or betrayal resulting from transgressions by oneself or others (e.g., in battle) that contradict one’s moral beliefs [55, 56]. Many symptoms are common in PTSD but not included in DSM (e.g., somatization) or truly overlap across clusters (e.g., detachment is both a mood/cognitive and avoidance symptom). While new clusters in DSM-5 may increase recognition of the widespread effects of trauma, it may change the diagnosis. Research indicates that DSM-IV-TR PTSD and DSM-5 PTSD have high percentages of SMs that meet criteria for one but not the other [57]. For example, because one of two avoidance symptoms is required, one could theoretically have 18 of 20 severe PTSD symptoms, but without either avoidance symptom, they do not have DSM-5 PTSD. Previously in DSM-IV-TR, one could meet criteria without either symptom and instead have three of the five other avoidance/numbing symptoms. With this new cluster becoming *the* “rate-limiting step” in diagnosing PTSD, is this new diagnosis better called “posttraumatic avoidance disorder”? What about those without prominent avoidance or for which avoidance manifests differently (e.g., amnesia, dissociation, numbness, and detachment)? Most traumatized individuals dislike talking/thinking about trauma, but many disclose their trauma immediately after reporting avoidance (for some, it is the first thing they say to a clinician). Sometimes, avoidance is so strong and trauma-related cues so avoided that reexperiencing and/or arousal symptoms are not present. For some, instead of avoidance, there are intense repetition compulsions (i.e., frequently revisiting or reenacting trauma, or trying to undo or master the past). The authors have personally treated patients who repeatedly volunteer for deployments, keep trauma-related mementos (including objects they were attacked/abused with), visit sites of assault, watch video portrayals of violent sex (one patient noted, “I hate it, but I love it”), seek out situations where trauma is likely to happen again, and cut genitals or swallow sharp objects in apparent reenactments of rape. What about patients who, rather than avoid, seek out trauma-related cues or seek pleasure in pain? Great harm may be done by excluding those with severe trauma-related dysfunction/distress from the diagnosis of PTSD or deterring those without the “classic” presentation from seeking care.

There are a number of reasons SMs may not meet full criteria for PTSD but still have trauma-related distress/dysfunction, including reverse malingering, subthreshold PTSD, and minimization. Minimizing symptoms may be more

common in the military than the general population. A military culture of stoicism/masculinity can lead to avoiding/rejecting help and under-reporting [46, 58]. Concerns about clinician conflicts of interest can be particularly off-putting in military medicine where there are more exceptions for confidentiality, including being unfit for duty to perform a mission/assignment, violation of military standards/laws, and substance use [59]. Among those with PTSD, it is common to have shame and normalization of trauma. When trauma is “just part of the job,” it can be particularly embarrassing to believe one is not coping as well as co-workers, and easy to dismissively think that “everyone gets a little PTSD from war,” to paraphrase several of the authors’ patients.

As opposed to under-reporting symptoms, over-reporting may include fabricating symptoms and possibly trauma (i.e., pure malingering), exaggerating symptoms from an actual trauma (i.e., partial malingering), or misattribution of symptoms to PTSD, which actually come from another source such as major depressive disorder (MDD) or alcohol use disorder [60–62]. The spectrum of over-reporting hints at several causes (Table 2), including both primary and secondary gains. For some, trauma becomes their single dominant life event to which all subsequent problems with relationships, substances, and career are blamed [63]. For others, the label of “PTSD” makes them an object of concern and may result in the psychosocial benefits of belonging to a self-identified group of sufferers [64]. Clinicians should consider all of these factors before assuming “true PTSD” or malingering. Rather than having patients acknowledge symptoms proffered by interviewers or allowing patients to recite memorized criteria, interviewers may want to use open-ended questions, have patients spontaneously report symptoms, inquire into personal PTSD manifestations, and focus on evidence of dysfunction rather than symptom self-report alone. Interviewers should attend to the described course of illness and observe for constricted affect, inattention, agitation, and increased startle. Inconsistencies should be explored thoroughly, including within self-report, between self-report and collateral information (e.g., military, police and medical records, and interviews with significant others), and between individual and typical presentations [64]. Diagnosis is improved with structured interviewing techniques such as the Clinician-Assessed PTSD Scale and Structured Clinical Interview for DSM [10]. Several psychometric tests include subscales for exaggeration, the MMPI, the Structured Interview of Reported Symptoms, the Miller Forensic Assessment of Symptoms Test (which can be taken and scored in 15 min), and the Traumatic Stress Subscale of the Anxiety-Related Disorders Scale of the Personality Assessment Inventory [34, 60]. Distinguishing between those who are honestly reporting symptoms/distress from those who inflate them is important to clinicians, the military, and taxpayers.

Having 20 symptoms but requiring only 6 for diagnosis makes PTSD a very heterogeneous syndrome and has led to

many proposed subtypes. DSM-5 added a dissociative subtype, supported by research finding that 15–32 % of PTSD patients have predominant dissociation, although some argue that a degree of dissociation is featured across all PTSD [65]. While DSM-5 highlighted the possibility of predominating dissociative, fear-based, and dysphoric symptoms [1], others have proposed internalizing and externalizing subtypes [66], and dysphoric and anxious subtypes, noting high comorbidities with MDD, generalized, and social anxiety disorders [67, 68]. These patients may have multiple conditions with distinct pathophysiology requiring different treatments or may simply have different manifestations of similar pathophysiology. Neuroscience has supported a depressive phenotype/subtype [67] and a dissociative subtype, the latter of which has a brain pattern of global hypoactivity when recalling trauma as opposed to the hyperactive amygdala and hypoactive prefrontal cortex classic to most PTSD [11•]. Do different manifestations/subtypes respond to different treatments? We can theorize that a predominantly avoidant subtype may benefit more from PE, while a predominantly cognitive subtype may benefit more from CPT; an arousal subtype from medication; a self-harm/reckless subtype from DBT; and a dissociative/somatic subtype from EMDR, biofeedback, exercise, and/or breathing techniques targeting the dorsal vagal complex [11•]. However, this is speculation as there have yet to be studies determining which types of PTSD patients respond best to which treatments. This research is much needed to understand etiologies, pathophysiology, and to provide personalized, precision diagnosis/treatment for the varying manifestations of trauma.

Are new subtypes or disorders needed? Does it matter? Not if just about categorization/labeling, but it does if about guiding treatment; understanding etiopathophysiology; and which patients respond to, recover from, decompensate from, or have no effect from which treatments. This is under-studied and unfortunately clinicians have a tendency for one-size-fits-all treatment (e.g., only a specific cognitive behavioral or psychodynamic therapy, or medications alone). The VA/DoD (and others treating SMs) should work to improve military cultural competency, improve trauma and PTSD screening, expand their treatment armamentarium (currently, the military only provides CPT and PE trainings), and address the needs of those who do not respond to first-line treatments [7•, 9] or do not fit in the current procrustean DSM bed.

## Conclusions

Treating active duty and veteran military personnel can involve complex clinical and occupational decisions. Because of the unique nature of PTSD, DSM criteria—requiring both certain traumas and certain symptoms—can often have shortcomings. It can be difficult to determine when what is reported

is true (or feigned, over-reported, or minimized); when symptoms are attributable to trauma; and when there is sufficient distress/dysfunction to warrant changes in diagnosis, treatment, and occupational status. More research is needed to best understand and care for service members with possible trauma-related disorders, both their mental health and their careers.

## Compliance with Ethical Standards

**Conflict of Interest** Jeffrey Guina, Randon S. Welton, Pamela J. Broderick, Terry L. Correll, and Ryan P. Peirson declare that they have no conflict of interest.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

## References

Papers of particular interest, published recently, have been highlighted as:

- Of importance

1. APA. Diagnostic and statistical manual of mental disorders. 5th ed. Washington, DC: American Psychiatric Association; 2013.
2. APA. Diagnostic and statistical manual of mental disorders. 4th ed., text revision. Washington, DC: American Psychiatric Association; 2000.
3. McFarlane A. PTSD and DSM-5: unintended consequences of change. *Lancet Psychiatry*. 2014;1(4):246–7.
4. AFI 48-123. Department of the Air Force instruction on medical examinations and standards. 2014.
5. McNally RJ, Frueh BC. Why are Iraq and Afghanistan War veterans seeking PTSD disability compensation at unprecedented rates? *J Anxiety Disord*. 2013;27(5):520–6. **This is a significant paper as it reviews military PTSD rates, malingering and economic issues, and is written by two well-published authors in the field.**
6. Frueh BC, Grubaugh AL, Elhai JD, Buckley TC. US Department of Veterans Affairs disability policies for posttraumatic stress disorder: administrative trends and implications for treatment, rehabilitation, and research. *Am J Public Health*. 2007;97(12):2143–5.
7. Hoge CW, Grossman SA, Auchterlonie JL. PTSD treatment for soldiers after combat deployment: low utilization for mental health care and reasons for dropout. *Psychiatr Serv*. 2014;65(8):997–1004. **This is a significant paper as it studies minimally adequate care and dropout among service members with PTSD.**
8. Goetter EM, Ojserkis RA, Zakarian RJ. A systematic review of dropout from psychotherapy for posttraumatic stress disorder among Iraq and Afghanistan combat veterans. *J Trauma Stress*. 2015;28:401–9.
9. Veterans Affairs and Department of Defense clinical practice guideline for management of post-traumatic stress. 2010. [http://www.healthquality.va.gov/guidelines/MH/ptsd/cpg\\_PSTD-FULL-201011612.pdf](http://www.healthquality.va.gov/guidelines/MH/ptsd/cpg_PSTD-FULL-201011612.pdf). Accessed 14 Jan 2016.

10. Morgan CA, Feuerstein S, Fortunati F, Coric V, Temporini H, Southwick S. Posttraumatic stress disorder within the forensic arena. *Psychiatry*. 2005;2(10):21–4.
11. van der Kolk B. The body keeps the score: brain, mind, and body in the healing of trauma. New York: Penguin; 2014. **This is a significant book as it summarizes neuroimaging, biomedical and psychotherapeutic concepts regarding trauma, and seeks to enhance and supplement current conceptualizations and treatments.**
12. Herman J. Trauma and recovery: the aftermath of violence—from domestic abuse to political terror. 2nd ed. New York: Basic Books; 2015. **This is a significant book as it revolutionized the conceptualization of trauma, connecting the various manifestations of trauma-related disorders with underlying psychopathology and proposing a unifying model for successful recovery.**
13. APA. Diagnostic and statistical manual: mental disorders. Washington, DC: American Psychiatric Association Mental Hospital Service; 1952.
14. APA. Diagnostic and statistical manual of mental disorders. 2nd ed. Washington, DC: American Psychiatric Association; 1968.
15. APA. Diagnostic and statistical manual of mental disorders. 3rd ed. Washington, DC: American Psychiatric Association; 1980.
16. Resick PA, Schnicke MK. Cognitive processing for rape victims: a treatment manual. Newbury Park: Sage; 1996.
17. Foa EB, Hembree EA, Rothbaum BO. Prolonged exposure therapy for PTSD. New York, NY: Oxford; 2007.
18. American Psychiatric Association. Posttraumatic stress disorder fact sheet. 2013. <http://www.dsm5.org/Documents/PTSD%20Fact%20Sheet.pdf>. Accessed 1 Feb 2016.
19. Perkonig A, Hofler M, Cloitre M, Wittchen HU, Trautmann S, Maercker A. Evidence for two different ICD-11 posttraumatic stress disorders in community sample of adolescents and young adults. *Eur Arch Psychiatry Clin Neurosci*. 2015. doi:10.1007/s00406-015-0639-4.
20. Blossich JR, Dichter ME, Cerulli C, Batten SV, Bossarte RM. Disparities in adverse childhood experiences among individuals with a history of military service. *JAMA Psychiatry*. 2014;71(9):1041–8.
21. Dimoulas E, Steffian L, Steffian G, Doran AP, Rasmussen AM, Morgan C. Dissociation during intense military stress is related to subsequent somatic symptoms in women. *Psychiatry*. 2007;4(2):66–73.
22. Gradus JL, Shepherd JC, Suvak MK, Giasson HL, Miller M. Suicide attempts and suicide among Marines: a decade of follow-up. *Suicide Life Threat Behav*. 2013;43(1):39–49.
23. Hoge CW, Terhakopian A, Castro CA, Messer SC, Engel CC. Association of posttraumatic stress disorder with somatic symptoms, health care visits, and absenteeism among Iraq war veterans. *Am J Psychiatry*. 2007;164(1):150–3.
24. Perales R, Gallaway MS, Forsyth-Donahue KL, Spiess A, Millikan AM. Prevalence of childhood trauma among U.S. Army soldiers with suicidal behavior. *Mil Med*. 2012;177(9):1034–40.
25. Youssef NA, Green KT, Dedert EA, Hertzberg JS, Calhoun PS, Dennis MF, et al. Exploration of the influence of childhood trauma, combat exposure, and the resilience construct on depression and suicidal ideation among U.S. Iraq/Afghanistan era military personnel and veterans. *Arch Suicide Res*. 2013;17(2):106–22.
26. Mellelidal L, Gjestad R, Johnsen E, Jorgensen HA, Oedegaard KJ, Kroken RA, et al. Borderline personality disorder and posttraumatic stress disorder at psychiatric discharge predict general hospital admission for self-harm. *J Trauma Stress*. 2015;28(6):556–62.
27. Friedman MJ, Resick PA, Bryant RA, Brewin CR. Considering PTSD for DSM-5. *Depress Anxiety*. 2011;28(9):750–69.
28. Carlson EB, Smith SR, Dalenborg CJ. Can sudden, severe emotional loss be a traumatic stressor? *J Trauma Dissociation*. 2013;14:519–28.
29. Hayes JP, Hayes SM, Mikesis AM. Quantitative meta-analysis of neural activity in posttraumatic stress disorder. *Biol Mood Anxiety Disord*. 2012;2(1):9. doi:10.1186/2045-5380-2-9.
30. Levin AP, Kleinman SB, Adler JS. DSM-5 and posttraumatic stress disorder. *J Am Acad Psychiatry Law*. 2014;42(2):146–58.
31. Bryant RA, O'Donnell ML, Creamer M, McFarlane AC, Clark CR, Silove D. The psychiatric sequelae of traumatic injury. *Am J Psychiatry*. 2010;167:312–20.
32. Fremouw GJ. Assessing malingering posttraumatic stress disorder: a critical review. *Clin Psychol Rev*. 2003;23(7):881–904.
33. Kunst M, Winkel FW, Bogaerts S. Recalled peritraumatic reactions, self-reported PTSD, and the impact of malingering and fantasy proneness in victims of interpersonal violence who have applied for state compensation. *J Interpers Violence*. 2011;26(11):2186–210.
34. Smith DW, Frueh BC. Compensation seeking, comorbidity, and apparent exaggeration of PTSD symptoms among Vietnam combat veterans. *Psychol Assess*. 1996;8(1):3–6.
35. McNally RJ. Can we solve the mysteries of the National Vietnam Veterans Readjustment Study? *J Anxiety Disord*. 2007;21(2):192–200.
36. Vergun D. Army standardizes PTSD diagnosis, treatment. *Army News Service*. 2012. <http://www.army.mil/article/84928>. Accessed 4 Feb 2016.
37. Frueh BC, Elhai JD, Grubaugh AL, Monnier J, Kashdan TB, Sauvageot JA, et al. Documented combat exposure of US veterans seeking treatment for combat-related post-traumatic stress disorder. *Br J Psychiatry*. 2005;186:467–475.
38. Arzi NB, Solomon Z, Dekel R. Secondary traumatization among wives of PTSD and post-concussion casualties: distress, caregiver burden and psychological separation. *Brain Inj*. 2000;14(8):725–36.
39. Baranowsky AB, Young M, Johnson-Douglas S, Williams-Keeler L, McCarrey M. PTSD transmission: a review of secondary traumatization in Holocaust survivor families. *Can Psychol*. 1998;39(4):247–56.
40. Bride B. Prevalence of secondary traumatic stress among social workers. *Soc Work*. 2007;52(1):63–70.
41. Chappelle W, McDonald K, Thompson B, Swearingen J. Prevalence of high emotional distress and symptoms of post-traumatic stress disorder in U.S. Air Force active duty remotely piloted aircraft operators. USAF Technical Report # AFRL-SA-WP-TR-2013-0002. 2013.
42. Chappelle W, McDonald K, Prince L, Goodman T, Ray-Sannerud B, Thompson W. Symptoms of psychological distress and post-traumatic stress disorder in United States Air Force “drone” operators. *Mil Med*. 2014;179(8):63–70.
43. Chappelle W, Goodman T, Reardon L, Thompson W. An analysis of post-traumatic stress symptoms in United States Air Force drone operators. *J Anxiety Disord*. 2014;28:480–7.
44. Hoge CW, Castro CA, Messer SC, McGurk D, Cotting DI, Koffman RL. Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *N Engl J Med*. 2004;351:13–22.
45. Otto JL, Webber BJ. Mental health diagnoses and counseling among pilots of remotely piloted aircraft in the United States Air Force. *MSMR*. 2013;20:3–8.
46. Lollis BD, Marsh RW, Sowin TW, Thompson WT. Major depressive disorder in military aviators: a retrospective study of prevalence. *Aviat Space Environ Med*. 2009;80(5):734–7.
47. Zarembo A. As disability awards grow so do concerns with veracity of PTSD claims. *LA Times*. 2014. <http://www.latimes.com/local/la-me-ptsd-disability-20140804-story.html>. Accessed 24 Dec 2015.
48. Guina J, Rossetter SR, DeRhodes BJ, Nahhas RW, Welton RS. Benzodiazepines for PTSD: a systematic review and meta-analysis. *J Psychiatr Pract*. 2015;21(4):281–303.
49. Laskowski v. VA. No. 3:2010cv00600 (M.D. Pa. 2011).



50. Shankar S. California doctor Hsiu-Ying 'Lisa' Tseng convicted of murder for prescribing drugs that killed 3 patients. International Business Times. 2015. <http://www.ibtimes.com/california-doctor-hsiu-ying-lisa-tseng-convicted-murder-prescribing-drugs-killed-3-2163779>. Accessed 24 Dec 2015
51. Lurati AR. Reverse malingering—staying on the job at any cost. *Workplace Health Saf.* 2013;61(7):297–8.
52. Elhai JD, Gold PB, Rue BC, Gold SN. Cross-validation of the MMPI-2 in detecting malingered posttraumatic stress disorder. *J Personality Assessment.* 2000;75(3):449–63.
53. Lurati AR. Identifying reverse malingering in the civilian occupational setting. *Workplace Health Saf.* 2015
54. Marshall RD, Olsson M, Hellman F, Blanco C, Guardino M, Stuening EL. Comorbidity, impairment, and suicidality in sub-threshold PTSD. *Am J Psychiatry.* 2001;158(9):1467–73.
55. Bryan CJ, Bryan AO, Anestis MD, Anestis JC, Green BA, Etienne N, Morrow CE, Ray-Sannerud B. Assessment. 2015.
56. Nazarov A, Jetly R, McNeely H, Kiang M, Lanius R, McKinnon MC. Role of morality in the experience of guilt and shame within the armed forces. *Acta Psychiatr Scand.* 2015;132(1):4–19.
57. Hoge CW, Riviere LA, Wilk JE, Herrell RK, Weathers FW. The prevalence of post-traumatic stress disorder (PTSD) in US combat soldiers: a head-to-head comparison of DSM-5 versus DSM-IV-TR symptom criteria with the PTSD checklist. *Lancet Psychiatry.* 2014;1(4):269–77. **This is a significant paper as it studies the impact of changes in the PTSD criteria on diagnosis.**
58. Tolin DF, Foa EB. Sex differences in trauma and posttraumatic stress disorder: a quantitative review of 25 years of research. *Psychol Trauma.* 2008;S(1):37–85
59. DODI 6025.18-R. Department of Defense instruction on health information privacy regulation. 2003.
60. Freeman T, Powell M, Kimbrell T. Measuring symptom exaggeration in veterans with chronic posttraumatic stress disorder. *Psychiatry Res.* 2008;158(3):374–80.
61. Resnick PJ. Malingering of posttraumatic disorders. In: Rogers R, editor. *Clinical assessment of malingering and deception*. 2nd ed. New York: Guilford Press; 1997. p. 84–103.
62. Wooley CN, Rogers R. The effectiveness of the personality assessment inventory with feigned PTSD: an initial investigation of Resnick's model of malingering. *Assessment.* 2015;22(4):449–58.
63. Frueh BC, Hamner MB, Cahill SP, Gold PB, Hamlin KL. Apparent symptom overreporting in combat veterans evaluated for PTSD. *Clin Psychol Rev.* 2000;20(7):853–85.
64. Ali S, Jabeen S, Alam F. Multimodal approach to identifying malingered posttraumatic stress disorder: a review. *Innov Clin Neurosci.* 2015;12(1-2):12–20. **This is a significant paper as it reviews motivations for, manifestations of, and an approach for detecting the over-reporting of PTSD.**
65. Wolf EJ, Lunney CA, Miller MW, Resick PA, Friedman MJ, Schnurr PP. The dissociative subtype of PTSD: a replication and extension. *Depress Anxiety.* 2012;29:679–88.
66. Miller MW, Resick PA. Internalizing and externalizing subtypes in female sexual assault survivors: implications for the understanding of complex PTSD. *Behav Ther.* 2007;38(1):58–71.
67. Flory JD, Yehuda R. Comorbidity between post-traumatic stress disorder and major depressive disorder: alternative explanations and treatment considerations. *Dialogues Clin Neurosci.* 2015;17: 141–50.
68. Pietrzak RH, El-Gabalawy R, Tsai J, Sareen J, Neumeister A, Southwick SM. Typologies of posttraumatic stress disorder in the U.S. adult population. *J Affect Disord.* 2014;162:102–6. doi:10.1016/j.jad.2014.03.024.

## Disclaimer

The views and opinions expressed in this article are those of the authors and do not reflect official policy or position of the United States Air Force, Department of Defense, or US Government. The 88th Air Base Wing reviewed this manuscript (Case Number 88ABW-2016-0185). The material was assigned a clearance of CLEARED on 20 January 2016.