

Combat-Related PTSD: Scope of the Current Problem, Understanding Effective Treatment, and Barriers to Care

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Abstract¹

Since 2001, more than 1.9 million United States troops have deployed in support of Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF). While the majority of these troops function well despite repeated and prolonged deployments, approximately 10-20% evidence psychological difficulties significant enough to warrant mental health treatment. Given the overall scale of these military deployments, even conservative estimates of risk translate into hundreds of thousands of troops returning with mental health difficulties, including posttraumatic stress disorder (PTSD). This Article discusses the conceptualization and impact of PTSD, effective treatment for the disorder, barriers to effective treatment, the programmatic responses of the Department of Defense (DoD) and Department of Veterans Affairs (VA), and appropriate future directions to address this ongoing public health crisis.

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I. Introduction

Since 2001, more than 1.9 million United States troops have deployed in support of Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF) (Defense Manpower Data Center, 2009). While the majority of these troops function well despite repeated and prolonged deployments, approximately 10-20% evidence psychological difficulties significant enough to warrant treatment (Hoge et al., 2004; Office of the Surgeon General US Army Mental Health Advisory Team-V, 2008; Tanielian et al., 2008). Posttraumatic stress disorder (PTSD) has received the most publicized attention to date, but service in OIF/OEF is also associated with generalized anxiety, depression (Hoge et al., 2004), substance abuse (Jacobson et al., 2008), physical health problems (Girona, Clark, & Walker, 2005; Hoge et al., 2007), aggression (Jacupcak et al., 2007), risk-taking behavior (Killgore et al., 2008), and suicide (Kuehn, 2009).

Given the overall scale of these military deployments, even the most conservative estimates of risk translate into hundreds of thousands of troops projected to return with mental health difficulties. Such estimates raise concerns that concomitant public health needs may exceed the capacities of the Department of Defense (DoD) and Department of Veterans Affairs (VA) health care systems (Tuerk et al., 2009).

II. Conceptualization and Impact of PTSD

Currently, a diagnosis of PTSD requires exposure to an event that involves actual or threatened death or serious injury, or a threat to the personal integrity of self or others. While somewhat controversial, especially in relation to combat-trauma (see Adler et al., 2008), PTSD criteria currently require that the

response to the event involved fear, helplessness, or horror. Subsequent to such a traumatic event, PTSD symptoms manifest in three clusters: re-experiencing of traumatic events, increased arousal, and avoidance of trauma related cues and potential psychological stressors (American Psychiatric Association, DSM-IV-TR, 2000). Symptoms from each cluster must be present for a diagnosis to be made. Re-experiencing symptoms most often include vivid, uninvited memories of traumatic events and/or nightmares related to traumatic events. Increased arousal can include hypervigilance, sleep difficulties, exaggerated startle response, or other indications of an activated sympathetic nervous system (e.g., increased heart rate, flushing, or sweating). The avoidance symptom cluster includes a set of learned behaviors that act to reduce or avoid uncomfortable emotions (anxiety, anger, sadness, guilt, etc.) that are related to the first two symptom clusters. Of note, these symptom clusters are interrelated such that a difficult nightmare may trigger increased avoidance behaviors or hypervigilance the next day.

Combat-related PTSD already imposes a significant economic and social burden on the United States. With the ongoing operations in Afghanistan and Iraq, this burden promises to continue to grow as more people are deployed and redeployed into combat. In Veteran populations, a diagnosis of PTSD is associated with higher rates of unemployment (Resnick & Rosenheck, 2008) and symptom severity is incrementally predictive of worse employment outcomes (Smith, Schnurr, & Rosenheck, 2005). The negative influence of PTSD on employment status also appears to be independent of physical injury severity, concurrent mental health diagnoses, and Veteran demographics (Shea et al., 2010; Zatzick et al., 2008). Moreover, PTSD in Veterans is also associated with increased levels of alcohol abuse (McDevitt-Murphy et al., 2010), decreased physical health functioning (Hoge et al., 2007, McDevitt-Murphy et al., 2010; Schnurr, Spiro, & Paris, 2000), relationship dissatisfaction (Riggs et

al., 1998), and domestic violence (Jordan et al., 1992; Taft et al., 2005; Taft et al., 2009).

Although an accurate estimate of the economic costs of PTSD is unknown, the disorder is associated with increased service utilization (Beckham et al., 1998; Chan et al., 2009; Deykin et al., 2001; Hankin et al., 1999; McCrone, Knapp, & Cawkill, 2003) and associated disability claims, with up to 94% of treatment-seeking Veterans applying for a service-connected PTSD-related disability (Frueh et al., 2003; Frueh et al., 2007).

III. Effective Treatment

While the impact of PTSD for the individual and society is great, effective treatments are available that can reduce or eliminate the symptoms of PTSD (Cahill et al., 2009). A complete review of the PTSD treatment outcomes literature is beyond the scope of this Article; however, Exposure Therapy (ET) and pharmacotherapy with selective serotonin reuptake inhibitors (SSRIs) are the two treatments most commonly supported as first-line interventions for PTSD (Foa et al., 2009).

While pharmacotherapy with SSRIs can reduce symptoms, the most effective treatments involve understanding and overcoming avoidance behaviors (Foa & Rothbaum, 1998; Valentiner et al., 1996). Such behaviors are often related to avoiding distressing internal stimuli, such as trying to push away memories, distracting oneself with substances, or avoiding discussions, events, media, or people that remind (or might remind) one of traumatic memories. Avoidance behaviors also include avoiding normal life events, such as shopping or eating in restaurants, deemed to be too dangerous due to an inflated assessment of potential threat. Avoidance symptoms can also involve more subtle modifications of behavior aimed at ameliorating anxiety or potential threat while in public, for example, choosing seats in restaurants close to or facing the door, shopping late at night to avoid crowds, increased reliance on drive-through services, or staying close to the periphery of public

events. Avoidance behaviors are negatively reinforced and can erode self-esteem, relationships, and core competencies (Foa, Hembree, & Rothbaum, 2007).

Avoidance behaviors maintain PTSD by preventing individuals from re-learning that everyday activities in the external world and their own internal memories are safe to experience. Emotional Processing Theory (Foa & Kozak, 1986) posits that avoidance behaviors also block the processing and organizing of traumatic events. Such emotional and cognitive organization is believed to ameliorate the intrusive nature of traumatic memories by helping individuals to make sense of the traumatic recollections. In essence, once a memory is processed, it becomes well known, tolerable, and placed within the context of a person's life story. When memories are processed or sorted out through exposure-oriented therapy the intensity of emotional reactions is reduced and the meaning of what happened, what did not happen, and what that means for the person become defined. In other words, overcoming avoidance and processing traumatic events transforms frightening and easily-triggered trauma-related memories into memories that are more normal in nature, not intrusive, and, though perhaps still unpleasant, not feared or avoided.

Treatments drawing on this conceptualization of PTSD have gained significant empirical support over the past 20 years (Cloitre, 2009). Exposure-based interventions such as Prolonged Exposure (PE) (Foa, Hembree, & Rothbaum, 2007) and Cognitive Processing Therapy (CPT) (Resick & Schnicke, 1993) foster emotional and cognitive processing of trauma by helping patients systematically overcome their avoidance of trauma-related stimuli and memories. Exposures involve purposely and repeatedly facing memories and activities until the intensity of the negative emotions subside. Originally developed in civilian populations, these treatments have been shown to be more efficacious than supportive therapy and waitlist conditions (e.g., Foa et al., 2005; Foa et al., 1999; Foa et

al., 1991). A meta-analysis comparing these cognitive-behavioral treatments for PTSD to active and waitlist control conditions found that 67% of patients completing exposure-oriented treatment no longer met criteria for PTSD ($d=1.43$), compared to 39% of active controls (e.g., relaxation or supportive counseling; $d=0.59$) and 17% of waitlist controls ($d=0.35$) (Bradley et al., 2005). Although relatively fewer randomized controlled trials have been conducted in military populations (for exceptions, see Schnurr et al., 2007; Schnurr et al., 2003), promising preliminary evidence is emerging that exposure-oriented treatments are effective for OIF/OEF veterans (e.g., Rauch et al., 2009; Tuerk et al., 2009; Tuerk et al., 2010). Notably, the Institute of Medicine recognized exposure therapies as the only treatment approach with sufficient empirical data to be deemed effective for PTSD (Institute of Medicine, 2007).

IV. Barriers to Effective Treatment

Despite a number of expert consensus guidelines advocating the use of empirically-supported treatments (Foa, Davidson, & Frances, 1999; U.S. Department of Veterans Affairs & U.S. Department of Defense, 2004), the pace at which these treatments have been adopted in standard practice has been slow (Katon et al., 2006). Exposure-oriented treatments for PTSD such as PE are only rarely provided to patients, be it in civilian, DoD, or VA settings (Cahill et al., 2009; Rosen et al., 2004). Obstacles slowing the widespread adoption of empirically-supported interventions include lack of therapist training in exposure techniques, myths about the tolerability and safety of exposing people to their fears, and therapist beliefs about the lack of applicability of research outcome trials to real-world settings (Becker, Zayfert, & Anderson, 2004; Feeny, Hembree, & Zoellner, 2003).

Problems with the dissemination of empirically-supported treatments have been a marked concern across the field of psychology, with the majority of

psychotherapy patients, regardless of diagnosis, not receiving interventions of proven efficacy (for a review, see Shafran et al., 2009). Moreover, when evidence-based treatments are available in mental healthcare settings, they often are not implemented in a manner consistent with the validated treatment models (Drake et al., 2001). The gap between science and practice is also not unique to psychology: similar dissemination problems are evident in the medical field, where treatment innovations have historically been slowly adopted and often remain unused by practitioners (Berwick, 2003). The average amount of time for evidence-based medical practices to become integrated into standard clinical practice is estimated at 17 years (Balas & Boren, 2000). Likewise, an estimated 40% of medical patients do not receive care consistent with scientific evidence and guidelines, highlighting the underuse of effective care, the overuse of unhelpful care, and the misuse of otherwise effective care in the health sector (see Grol & Grimshaw, 2003).

When and where empirically-supported psychotherapies are available in military settings, there are often numerous other barriers to care that deter individuals from receiving needed help. Significant stigma remains in military populations surrounding having a mental health problem and receiving psychotherapy (Britt, 2000). Additional obstacles to care include the location of many VA medical centers (VAMCs) that are not easily accessible to veterans (Bauer et al., 2005). In fiscal year 2008, the average distance to the nearest VAMC was 39 miles for Veterans with mental health diagnoses (U.S. Department of Veterans Affairs, 2009), with lack of transportation often a significant barrier to treatment (Hoge et al., 2004). Additionally, because avoidance is inherent to the disorder, simply seeking treatment (i.e., going into a public setting) and talking about the trauma are obstacles to care. Accordingly, OEF/OIF veterans who are most symptomatic are also least likely to seek help, with less than half of those meeting criteria for PTSD or depression seeking mental

healthcare within the year after their return from deployment (Hoge et al., 2004; Tanielian, 2008).

The lack of access to empirically-supported therapies and the multiple barriers to care have resulted in only a minority of returning veterans with PTSD receiving state-of-the-art treatment. A recent VA study of almost 50,000 veterans with PTSD found that only 9.5% received the recommended amount of treatment sessions within a year of diagnosis (Seal et al., 2010).

Given the scale of recent military deployments and the functional impairment associated with untreated PTSD, the current situation merits a well thought out and appropriate set of policies coordinated across government agencies, non-government organizations (NGOs), and private health care settings. New methods of treatment dissemination and cooperation are required within the organizations that serve Veterans and active duty service personnel (Ruzek & Rosen, 2006).

V. Response of the VA

Acting both unilaterally and at times in conjunction with the DoD, the VA has taken meaningful steps toward addressing the current mental health crisis. The Veteran's Health Administration (VHA) has funded a nationwide effort to disseminate the use of evidence-based exposure-oriented treatments for PTSD (U.S. Department of Veterans Affairs, 2007) and has mandated that such treatments be available in each VA medical Center (VAMC) (U.S. Department of Veterans Affairs, 2008).

The VA has also sought to place evidence-based psychotherapy coordinators at every VAMC to help promote the use of effective treatments, has created a PTSD mentoring program to help administrators of PTSD clinics address specific issues related to the design and implementation of these services (U.S. Department of Veterans Affairs, 2007), and has developed a "seamless transition"

program to help recruit OEF/OIF veterans into health care services. Further, the VA has incorporated the use of "telehealth," i.e., real-time clinical videoconferencing, at 300 community-based outpatient clinics (CBOCs) in order to promote equitable access and effective treatment to veterans living in rural areas.

Perhaps the most meaningful of these initiatives is the effort to disseminate evidence-based treatments beginning in 2007 by the VA Office of Mental Health Services (OMHS). The dissemination effort provides VA clinicians with multiple-day workshops in Prolonged Exposure therapy (PE) and Cognitive Processing Therapy (CPT). The workshops were designed by the treatment creators and include materials, role plays, and in-depth discussions and problem solving regarding barriers to implementation. The dissemination effort also includes support for follow-up supervision so that clinicians learning treatments have a chance to hone their skills while also benefitting from coaching, suggestions, and support from experts in the modalities. As of March 31, 2009, close to 1,300 VA clinicians had attended clinical workshops that were part of the dissemination effort and 94% of VAMC facilities reported having at least one PE or CPT provider (Karlin, 2009).

The extent to which these training efforts will impact the routine mental health treatment of veterans with PTSD is still unclear. In many VAMCs, evidence-based psychotherapy represents a culture change that is a difficult fit with the existing organizational ecology. Variables such as length of appointments, frequency of appointments, therapy materials, access to electronic resources, clinician workload credit, the termination of ineffective treatments, and ability to discharge PTSD patients after effective treatment are among a few of the institutional norms that are being challenged. However, the political will within VA leadership to support evidence-based treatments in a meaningful way has been resolute and implementation of exposure-

oriented treatments for PTSD is gaining popularity among VA clinicians on the ground.

VI. Response of the DOD

The DOD's response begins with efforts to reduce the psychological toll of deployment and the stigma of seeking mental health treatment via Resiliency Training (U.S. Department of Defense, 2010). Formerly known as Battlemind, the pre- and post-deployment training curricula uses strength-based psychoeducation to encourage positive coping strategies. The program includes training modules over the entire cycle of deployment that integrate the use of the buddy system, seven core resiliency skills, leadership training, and stigma reduction training.

Efforts are also underway in the DOD to address the stigma of mental health treatment through public health campaigns (such as the Real Warriors Campaign; www.realwarriors.net). The program encourages use of mental health services and stigma reduction via community outreach, partnerships with military organizations and NGOs, printed materials, media outlets, an interactive website, and social networking.

Peer support programs for unit members have also been developed to encourage watchful waiting for those troops who are experiencing stress or possible mental health problems upon return from deployment. Peer support programs include an emphasis on early intervention for mental health problems and assistance in gaining access to care. These programs have been established in various National Guard Units, including Michigan and California. The efficacy of these programs is currently unknown.

In another effort to combat stigma and promote mental health service utilization, both DOD and VA have established integrated mental health and primary care programs. In these programs, individuals are able to access care for mental health issues without going to specialty care programs or getting a referral.

These programs have the benefit of increasing access to mental health care, but are limited in what interventions can be provided in the primary care setting. While most of these programs focus on medication management as the primary intervention, studies examining modifications of established PTSD psychotherapies are currently underway with promising results (see Cigrang, Rauch et al. 2010; Engel, 2008; Prins, Cimpan, & Schnurr, 2009).

As in the VA, dissemination of effective practice models to improve mental health care is also underway in military treatment facilities. The Center for Deployment Psychology (CDP) was developed with a mission “to train military and civilian psychologists and other mental health professionals to provide high quality deployment-related behavioral health services to military personnel and their families” (Center for Deployment Psychology, 2010). This mission includes dissemination of trainings on military culture and deployment as well as trainings in evidence-based interventions for PTSD (PE and CPT). To date the CDP has trained hundreds of civilian and military mental health providers in effective treatments for PTSD, including interventions that are used stateside and in deployed settings.

VII. Future Directions

Despite these positive developments, the sheer scale of Veterans in need of mental health services presents a public health problem that is difficult to address fully. It will likely be years before the effectiveness of the therapy dissemination efforts, soldier training initiatives, and public outreach programs will be fully understood. Even then, there will be questions remaining regarding the appropriate size and scale for these interventions to be optimally effective. In addition to expanding the number of mental health clinicians able to provide effective treatments, any appropriately scaled programmatic solution would also include an expansion of effective Veteran outreach programs across federal government and other public and private health care

domains, as well as a large-scale coordinated effort within and between military branches and civilian agencies to make the identification and treatment of active service members with PTSD easily achievable and palatable to individuals and institutional cultures.

Kudler and Straits-Troster (2009) present such an integrated public health model of care for returning veterans and their families that is currently underway in North Carolina. In this model, federal government, state government, and community organizations coordinate efforts to provide convenient and high quality care to returnees.

Such coordinated and sustained efforts are necessary to ensure that this generation of war veterans receives the care they deserve. Moreover, if effective and appropriately scaled, such coordinated programs will exponentially ease the long-term burden to society of war-related mental health pathology.

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