

Interventions for War-Related Posttraumatic Stress Disorder

Meeting Veterans Where They Are

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A DECADE OF CONFLICT IN AFGHANISTAN AND IRAQ has caused a substantial mental health burden for war veterans and their families, particularly post-traumatic stress disorder (PTSD). (The term *veterans* in this article includes personnel still remaining in service.) The postdeployment PTSD prevalence in US infantry personnel has averaged 10% to 20%, often coexisting with depression, substance misuse, and other concerns.¹

In response, the US Departments of Defense and Veterans Affairs (VA) have implemented numerous programs in the areas of population screening, education (eg, stigma reduction), and clinical care. The VA has mandated that all veterans treated for PTSD have access to either prolonged exposure therapy or cognitive processing therapy (CPT).²

However, veterans remain reluctant to seek care, with half of those in need not utilizing mental health services.^{3,4} Among veterans who begin PTSD treatment with psychotherapy or medication, a high percentage drop out, commonly 20% to 40% in randomized clinical trials (RCTs)^{5,6} but considerably higher in routine practice.³ The rate of recovery of 60% to 80% among treatment completers declines to around 40% when noncompleters are accounted for (using intention-to-treat analyses).⁵⁻⁷

With only 50% of veterans seeking care and a 40% recovery rate, current strategies will effectively reach no more than 20% of all veterans needing PTSD treatment. Thus, interventions that will have the greatest potential for improving care on a population level are those focused on enhancing the reach of treatment (eg, engagement, adherence, and acceptability).

Enhancing treatment reach requires moving beyond screening and other stigma-reduction approaches. Postdeployment screening has never been demonstrated to be effective in improving mental health (one program evaluation found paradoxical opposite associations),⁴ and new research among veterans found negative perceptions of mental health care more important than stigma in predicting low service utilization.⁸ Examples of such perceptions include lack of trust in mental health professionals, thinking less

of others who seek care, or considering treatment ineffective, unhealthy, or a “last resort.” Therefore, a high priority is to understand the reasons for these perceptions and meet veterans where they are.

Veterans frequently report dissatisfaction with care and disconnect between their experiences as warriors and perspectives they encounter trying to obtain the help they need. Conceptualizing PTSD within an occupational context that is much broader than the clinical definition can help bridge the gap.^{9,10} Military personnel are members of professional workgroups, similar to police and other first responders, trained to respond to multiple traumatic events; they do not normally perceive themselves as victims, nor their reactions as pathological. The paradox of war-related PTSD is that reactions labeled “symptoms” upon return home can be highly adaptive in combat, fostered through rigorous training and experience. For example, hyperarousal; hypervigilance; and the ability to channel anger, shut down (numb) other emotions even in the face of casualties, replay or rehearse responses to dangerous scenarios, and function on limited sleep are adaptive in war.¹⁰

Improving evidence-based treatments, therefore, must be paired with education in military cultural competency to help clinicians foster rapport and continued engagement with professional warriors. This includes sensitivity and knowledge in attending to difficult topics, such as grief and survivor's guilt stemming from loss of team members, ethical dilemmas in combat, or situations associated with feelings of betrayal (eg, poor leadership, rape by fellow team member).¹⁰ Strict fidelity to treatment protocols may not always support these goals, and clinicians must know how to apply evidence-based techniques in a patient-centered manner.

Fundamentally, all psychotherapies with an A-level recommendation for PTSD (good evidence that benefits outweigh harm by US Preventive Services Task Force criteria) involve 5 core components: (1) narration, (2) cognitive restructuring, (3) in vivo exposure, (4) stress inoculation (eg, relaxation) skills, and (5) psychoeducation.⁷ Evidence indicates that as long as these components are applied, how

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they are packaged is not important.^{7,11} Eye movement desensitization and reprocessing, stress inoculation training, brief eclectic psychotherapy, written narration, and oral narrative exposure have all been found to have comparable effect sizes to more widely accepted protocols, such as CPT or prolonged exposure.^{7,11} Narration, probably the most therapeutic component, can be written, oral past tense, “imaginal” present tense, or combined with eye movements, as long as patients remain willing to complete a sufficient number of sessions.⁷ For example, one trial found no significant differences in 6-month outcomes comparing written narration with 2 CPT conditions (full CPT and the cognitive restructuring component of CPT).¹² The elegantly simple narrative technique consisted of patients writing alone about their worst traumatic experience for five 1-hour periods, followed on each occasion by reading their narrative to a therapist who provided supportive nondirective feedback.

There is also substantial evidence that lay counselors can deliver effective narrative treatment. In this issue of *JAMA*, Ertl and colleagues¹³ continue their landmark work with war-devastated populations, in this case former child soldiers in Northern Uganda, demonstrating that narrative exposure therapy conducted by lay counselors with 6 weeks of training is effective in treating PTSD; effect sizes were comparable to those in trials of other trauma-focused therapies in western countries. Narrative exposure therapy is down-to-earth and specifically designed for multiple traumatic events (a potential advantage for veterans and first responders), consisting of helping participants construct a biographical life account from birth to present, including organizing fragmented traumatic memories chronologically. The results of this study confirm the value of narration in the presence of an empathetic nonjudgmental lay facilitator and provide a basis for recommending further exploration of narrative biographical techniques for veterans, including peer-to-peer programs.

Critics might argue that only CPT and prolonged exposure psychotherapies have been proven effective in veteran populations. However, the vast majority of RCTs informative in guiding PTSD treatment have not involved veterans. Those that have included veterans predominantly represented the most chronic specialty-care group, not the population needing care (and not being reached) shortly after return from deployment.^{5,6} For example, in a frequently cited CPT trial of veterans, 80% of participants were taking a psychotropic agent, including 40% taking 3 or more medications and 40% taking a benzodiazepine or barbiturate.⁵

Among a wide range of medications used in veterans with PTSD, only selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) have A-level evidence (2 SSRIs are approved for this indication).⁷ Effect sizes in RCTs of SSRIs or SNRIs have generally been lower than those in psychotherapy trials, but this is likely due to the higher efficacy of placebo controls in double-blind studies than wait-list conditions in psychotherapy trials. Although head-to-head comparisons of medi-

cations vs psychotherapy are lacking (and much needed), RCTs that led to licensure of SSRIs showed within-group reductions in PTSD scores virtually identical to those seen in psychotherapy trials, and psychotherapy trials that included nonspecific supportive control conditions showed effect sizes comparable to those in medication trials.^{6,7} Thus, SSRIs or SNRIs have a role, along with psychotherapy options, with patient preference the most salient consideration.

Studies of other medication categories used to augment SSRI treatment have generally been disappointing, with the exception of prazosin, an α_1 -adrenergic receptor antagonist, that has shown benefit in improving sleep through reduction of physiological reactivity associated with nightmares.⁷ Although benzodiazepines are widely prescribed, they are relatively contraindicated and should be discouraged. Any short-term alleviation of anxiety symptoms (which reinforces the perception of benefit) is offset by evidence that they can interfere with extinction of fear conditioning and worsen recovery.⁷ Benzodiazepines are associated with tolerance and dependence and can become almost impossible to discontinue in combat veterans due to rebound exacerbation of symptoms (particularly sleep disturbance and anger).⁷

The off-label use of second-generation (atypical) antipsychotics has gained wide popularity, particularly quetiapine and risperidone. However, there are numerous concerns with long-term adverse health effects (eg, weight gain, glucose dysregulation, cardiac effects, or extrapyramidal effects). This issue of *JAMA* presents the largest RCT to date evaluating adjunctive risperidone in veterans with PTSD.¹⁴ No clinically meaningful benefits were found in the risperidone group compared with the placebo group, and risperidone-treated patients more often reported weight gain, somnolence, fatigue, and hypersalivation. The results seriously call into question the use of atypical antipsychotics in PTSD treatment. Studies are needed to identify more effective treatments.

One area that should be given high priority, with broad clinical implications for veterans, is to better understand the relationship between PTSD and the normal physiology of combat. PTSD is associated with dysregulation of the autonomic nervous system and hypothalamic-pituitary-adrenal axis, compounded in the combat environment by prolonged extreme stress and chronic sleep restriction (infantry troops routinely report <6 hours of sleep per 24 hours, with reversed circadian cycles).¹⁰ The expectation that this level of dysregulation will reset easily upon return home is unrealistic. The pathophysiology of combat and PTSD is strongly associated with generalized physical health problems, including chronic pain, postconcussive symptoms, neurocognitive impairment, self-medication with alcohol and substances, and related problems (eg, polypharmacy).^{1,15,16}

The treatment of PTSD in veterans, therefore, must involve coordinated postdeployment care that addresses physiological hyperarousal and physical health concerns. Stepped collaborative care models with mental health and case management support within primary care offer the most evidence-

based approaches for chronic interrelated health problems, and also considerable promise for increasing treatment reach among veterans with mild to moderate symptoms or reluctance to accept specialty mental health services.^{7,17-22} Augmenting treatments with complementary and integrative modalities, such as acupuncture, mindfulness, or yoga, likely also have a role (eg, to help produce a relaxation response, improve pain or sleep, or facilitate continued engagement).⁷ Clinical research is needed to refine and validate these strategies.

In summary, significant improvements in population care for war veterans will require innovative approaches to increase treatment reach. Attention to the occupational context, combat physiology, and mental and physical comorbidities is essential. Validating and implementing collaborative care models based in primary care should be a high priority. Matching evidence-based components of therapy to patient preferences and reinforcing narrative processes and social connections through peer-to-peer programs are encouraged. Family members, who have their own unique perspectives, are essential participants in the veteran's healing process and also need their own support. Research is required to better understand the perceptions war veterans have concerning mental health care, acceptability of care, willingness to continue with treatment, and ways to communicate with veterans that validate their experiences as warriors.

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Disclaimer: The views expressed are those of the author and do not reflect an official position of the US Army or Department of Defense.

Online-Only Material: The author interview is available at <http://www.jama.com>.

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