

A Clinician's Guide to PTSD Treatments for Returning Veterans

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What options are available to mental health providers helping clients with posttraumatic stress disorder (PTSD)? In this paper we review many of the current pharmacological and psychological interventions available to help prevent and treat PTSD with an emphasis on combat-related traumas and veteran populations. There is strong evidence supporting the use of several therapies including prolonged exposure (PE), eye movement desensitization and reprocessing (EMDR), and cognitive processing therapies (CPT), with PE possessing the most empirical evidence in favor of its efficacy. There have been relatively fewer studies of nonexposure based modalities (e.g., psychodynamic, interpersonal, and dialectical behavior therapy perspectives), but there is no evidence that these treatments are less effective. Pharmacotherapy is promising (especially paroxetine, sertraline, and venlafaxine), but more research comparing the relative merits of medication vs. psychotherapy and the efficacy of combined treatments is needed. Given the recent influx of combat-related traumas due to ongoing conflicts in Iraq and Afghanistan, there is clearly an urgent need to conduct more randomized clinical trials research and effectiveness studies in military and Department of Veterans Affairs PTSD samples. Finally, we provide references to a number of PTSD treatment manuals and propose several recommendations to help guide clinicians' treatment selections.

Keywords: PTSD, posttraumatic stress disorder, post-traumatic stress disorder, psychotherapy, psychopharmacology

Posttraumatic stress disorder (PTSD) is an all-too-common consequence of terrifying occurrences, both natural and manmade, which shock the psychological system and violate core assumptions that life is predictable, safe, and secure. Such events often

Editor's Note. This article was submitted in response to an open call for submissions concerning the provision of Psychological Services by practitioner psychologists to veterans, military service members, and their families. This collection of 12 articles represents psychologists' perspectives on the mental health treatment needs of these individuals along with innovative treatment approaches for meeting these needs.—JEB

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reveal the ultimate fragility of existence, and can eventuate in both immediate distress and long-term interruptions to normal functioning with far-reaching consequences for oneself, one's loved ones, and society.

The cost of PTSD to the individual is significant in at least four ways. First, comorbidity is high, with only 17% of veterans with PTSD diagnosed solely with PTSD (Seal, Bertenthal, Miner, Sen, & Marmar, 2007). Second, PTSD often demonstrates a chronic course, with as many as 40% of individuals exhibiting significant symptoms 10 years after onset (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Third, PTSD is a risk factor for suicide (e.g., Kotler, Iancu, Efroni, & Amir, 2001). Finally, health problems are more common in individuals with PTSD (e.g., Sledesky, Speisman, & Dierker, 2008).

The cost of PTSD to society is also significant and exceeds that of any other anxiety disorder (Marciniak et al., 2005). In the military, the number of veterans reporting PTSD between 1999 and 2004 grew from 120,265 to 215,871 (a 79.5% increase, Rosenheck & Fontana, 2007). During the same time frame, compensation increased from 1.72 to 4.28 billion dollars (Committee on Veteran's Compensation for PTSD, 2007; Institute of Medicine and National Research Council, 2007).

These various costs and the individual suffering involved underscore the importance of effectively treating PTSD. Although it has been noted that society has frequently suffered from bouts of "amnesia" over the importance and prevalence of PTSD (van der Kolk & McFarlane, 1996), there currently appears to be a steady interest in PTSD which has yet to abate. This interest has resulted in the availability of a number of treatment options. However, clinicians and researchers alike may not be aware of the variegated approaches which are currently available, or whether there is evidence in favor of their use. Although combatants and veterans

will likely first seek out help from the Department of Defense (DoD) and the Department of Veterans Affairs (VA), some of these individuals may present to private practitioners for treatment. This may prove challenging. For example, unless one has had experience in a VA setting, civilian clinicians may not be as familiar with the nature and intensity of combat traumas as they are with other types of trauma. These may “feel” somewhat different to treat (even though, functionally, they all may eventuate in PTSD), as returning soldiers not only suffer from more “standard” traumatic events (e.g., witnessing a friend die, being raped), but may also experience PTSD symptoms due to actions they have themselves taken (e.g., killing enemy combatants). Similarly, practitioners may not be aware of treatment as it is typically provided in VA settings.

Therefore, this paper will first briefly describe the features of many PTSD treatments and their place in current practice guidelines. Second, we summarize the relevant outcome literatures and evaluate the evidence in favor of their effectiveness. When available, we will provide references to more comprehensive empirical reviews of individual therapeutic modalities. Third, we discuss several recommendations for treatment selection and provide the interested reader with a list of published PTSD treatment manuals in the Appendix.

Methods To Prevent PTSD

The best way to lessen the damage caused by PTSD would be to prevent its eventual development following the occurrence of specific traumatic events (i.e., secondary prevention). Both pharmacological and psychological approaches have been evaluated.

Pharmacological Prevention

Several pharmacological approaches to the prevention of PTSD have been assessed (e.g., ketamine, cortisol). Likely the most promising of these is propranolol (Inderal), a beta-adrenergic antagonist (beta-blocker) often used to treat headaches, performance anxiety, and hypertension. Four efficacy studies (reviewed in Stein, Kerridge, Dimsdale, & Hoyt, 2007 and McGhee et al., 2010) have shown mixed results, with only two demonstrating reductions in PTSD symptoms.

Psychological Approaches

Psychological debriefing was developed to prevent long-term negative sequelae in the wake of traumatic events. Common interventions include the elicitation of emotional reactions, normalizing reactions, and preparing for PTSD responses (e.g., Dyregov, 1989). Although it has been widely used, reviews of existing randomized clinical trials (RCTs) found little evidence to support the belief that psychological debriefing prevents PTSD (e.g., Bisson, McFarlane, Rose, Ruzek, & Watson, 2008). In fact, evidence exists that it can be detrimental to asymptomatic individuals, and there appears to be a growing hesitation in the field to employ emotional processing interventions during early posttraumatic stages (VA/DoD, 2010). However, the use of other debriefing techniques (such as support and psychoeducation) has been advocated (e.g., VA/DoD, 2010).

Some inroads have been made towards understanding which clients may benefit from the preventative use of brief (i.e., 4–5 session) CBT. As described below, CBT techniques such as relaxation and exposure to memories and reminders of trauma have received a great deal of empirical scrutiny. With acute trauma, however, current research (reviewed in VA/DoD, 2010) indicates that only symptomatic clients will likely benefit from these early interventions. In fact, consonant with the literature on psychological debriefing, early intervention on nonsymptomatic trauma survivors may not only be ineffective, but could be harmful (VA/DoD, 2010).

In summary, apart from CBT for symptomatic trauma survivors and the utilization of several techniques of psychological debriefing and “psychological first aid” (e.g., safety, education), no other preventative recommendations are included in current practice guidelines.

Methods To Treat PTSD

Psychopharmacology

Psychotropic medications are commonly used for persons with PTSD. Pharmacotherapy is less time-intensive than psychotherapy, can be administered by nonmental health professionals, and is much easier to continue in an active combat theater than talk therapy. However, current guidelines (e.g., National Center for PTSD, 2009) encourage the use of pharmacotherapy with concurrent psychotherapy.

There have been at least 35 RCTs examining pharmacological agents for PTSD. Two selective serotonin reuptake inhibitors (paroxetine [Paxil]; sertraline [Zoloft]) and one serotonin-norepinephrine reuptake inhibitor (venlafaxine [Effexor, Trevilor]) are ranked as first-line treatments in at least four different practice guidelines (American Psychiatric Association, 2004; VA/DoD, 2010; Davidson et al., 2005; National Center for PTSD, 2009). Of these, paroxetine and sertraline have Food and Drug Administration approval to treat PTSD, with the former possessing the strongest level of overall empirical support. Per VA/DoD (2010) guidelines, the following are recommended as second-line agents: two tricyclic antidepressants (amitriptyline [Elavil]; imipramine [Tofranil]), one monoamine oxidase inhibitor (phenelzine [Nardil]), mirtazapine (Remeron), and nefazodone (Serzone). However, it is worth noting that the Institute of Medicine (2007) concluded that there is insufficient evidence for the efficacy of medications for PTSD, although their use is indeed recommended in many current treatment guidelines.

Adjunctive pharmacological agents for treating PTSD. In addition to use of single drugs, there have been several advances made in augmenting the effects of medication (and psychotherapy) with other psychotropic drugs. The most widely used are prazosin (Minipress), D-cyloserine (Seromycin), and atypical antipsychotics. Prazosin, often used to treat hypertension, may be very useful in reducing nightmares and other sleep disturbances commonly associated with PTSD (e.g., Raskind et al. 2007). A large scale (i.e., 13 site) VA study of prazosin is currently underway (personal communication, Murray Raskind, 5/12/2010), and given its relatively mild side effect profile and utility for nightmares, it appears to be very promising. D-cyloserine is a broad spectrum antibiotic which has also been utilized as a cognitive enhancer as well as a

facilitator of extinction learning in anxiety disorders (Cukor, Spitalnick, DiFede, Rizzo, & Rothbaum, 2009). However, more data are needed in PTSD samples using D-cycloserine. Further, the atypical antipsychotics (e.g., risperidone [Risperdal]) also hold promise, and are recommended as adjunctive treatments by VA/DoD (2010).

International psychopharmacology algorithm project: PTSD algorithm. In spite of some research gains, little guidance is available to prescribers when medications fail to engender significant change. Work has begun to address this all-too-common treatment problem through use of a very detailed treatment algorithm that provides explicit recommendations for sequencing medications in order to maximize response when a first-line agent does not achieve treatment goals (Davidson et al., 2005). Although constructed using the best available evidence and seemingly face valid, it has yet to be empirically supported.

In concluding this section, it is important to note that some PTSD clients may be hesitant to take medications for a number of reasons (e.g., some fear that symptoms will merely be masked [Cochran, Pruitt, Fukuda, Zoellner, & Feeny, 2008]), and may be more comfortable with talk therapy. No such data on a reticence to take medications are yet available for military personnel or male samples. Regardless, psychotherapy remains an important treatment option.

Psychotherapies

Many forms of psychotherapy have been used for PTSD. Approaches derived from the CBT traditions have undergone the most extensive evaluation thus far, and are currently widely disseminated throughout the VA system. As will be presented in subsequent sections, other approaches hold promise and warrant additional consideration and testing.

Prolonged exposure (PE). PE is an approach intended to reduce PTSD through a modification of the memory structures underlying emotions such as the ubiquitous fear found in PTSD (e.g., Foa & Kozak, 1986). It is a manualized treatment typically consisting of 8-15 weekly 90-minute sessions. The main components of PE include the imaginal revisiting of the clients' traumatic memories (i.e., imaginal exposure), recounting them aloud and discussing the experience immediately after the recounting (termed "processing") and *in vivo* exposure to safe, but trauma-related situations that the client fears and avoids. PE also includes psychoeducation and training in slowed breathing techniques.

Exposure therapy in general, and PE in particular, has been found to be highly effective in reducing PTSD symptoms (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010; Institute of Medicine, 2007), and of all the PTSD treatments heretofore described (both pharmacological and psychological) likely possesses the most evidence in favor of its efficacy. Further, PE was one of only two psychotherapies selected by the VA and military for widespread dissemination. Evidence in military and VA samples is beginning to emerge, and there have been two small studies in VA settings (e.g., Rauch et al. 2009). Preliminary data also indicate that PE can be readily transported out of academic settings and into the community (e.g., Schnurr et al., 2007). Thus, extensive support exists for PE in civilian populations and preliminary support is available that suggests PE can be effectively utilized in military settings and with female veterans.

Cognitive processing therapy (CPT). CPT (Resick & Schnicke, 1992) shares many of the emblematic components of CBT (e.g., challenging automatic thoughts) and is typically administered in a 12-session format. Self-blame is a particular treatment focus. CPT also contains an exposure component, but one quite different from PE. Specifically, clients are instructed to *write* about their traumatic events in detail (sensory memories, thoughts, and feelings), read their accounts to themselves daily, and read them aloud during sessions. Clinicians assist clients in labeling feelings and working through "stuck points" in the narratives.

Six studies (four RCTs) have found CPT effective in both military and civilian samples (Cahill, Rothbaum, Resick, & Follette, 2008). A recent dismantling study (Resick et al., 2008) demonstrated that, while both are efficacious, the cognitive components of CPT are more effective than written exposure techniques. In summary, CPT has very good data supporting its use in PTSD, and it was chosen as the other psychological treatment to be extensively "rolled out" through the VA system.

Eye movement desensitization and reprocessing (EMDR). EMDR is a structured and manualized treatment that combines elements of CBT, mindfulness, body-based approaches, and person-centered therapies. It is clinically guided by the Adaptive Information Processing Model (Shapiro & Maxfield, 2002) which proposes that traumatic memories in PTSD are unprocessed and are not stored as memories, but are treated as if they were new sensory inputs. There are eight phases of treatment in EMDR, of which the most unique are termed desensitization and reprocessing (when clients hold distressing images in mind while tracking rhythmic finger movements of the clinician), the installation of positive cognitions (during which fingers are tracked while holding positive cognitions in mind), and journaling.

Metaanalyses (reviewed in Spates, Koch, Cusack, Pagoto, & Waller, 2008) indicate that EMDR is an efficacious treatment with outcomes not significantly different from exposure-based therapies in both civilian and military populations. Interestingly, reviews of the available dismantling studies (e.g., Davidson & Parker, 2001) indicate that finger tracking and other forms of kinesthetic stimulation do not incrementally add to outcome. EMDR has been deemed efficacious by the International Society for Traumatic Stress (as reviewed in Shapiro & Maxfield, 2002), and is recommended in VA/DoD (2010) treatment guidelines. However, these same guidelines question the theoretical and empirical grounding of some of the more novel components of EMDR.

Stress inoculation training (SIT). SIT is a package of techniques (relaxation, thought stopping, *in vivo* exposure to feared situations) initially developed to manage anxious symptoms that has been subsequently adapted to PTSD and other specific disorders (e.g., Foa, Rothbaum, Riggs, & Murdock, 1991). SIT has been shown to be effective in eight studies (four RCTs) with groups of male veterans and female sexual assault victims (Cahill et al., 2008). Thus, SIT appears very promising. However, more RCTs assessing the full treatment package (including exposure components which are sometimes omitted when SIT is used as a control condition) are needed.

Exposure therapy using virtual reality (VR). Exposure need not take place imaginally or *in vivo*, as it is possible to expose PTSD clients to traumatic situations via VR. VR may include convincing visual stimuli, 3D sound, smells, and a general feeling of immersion in traumatic situations (Rizzo, Reger, Gahm, Difede,

& Rothbaum, 2009). The efficacy of VR for anxiety disorders is well supported, and several non-RCT studies (reviewed in Rothbaum, 2009) involving veterans and world trade center disaster victims are encouraging. The “Virtual Iraq” scenario is currently being implemented in at least 19 military sites (Rizzo et al., 2009). From a clinical standpoint, VR may be useful for individuals who have difficulties vividly imagining their traumas or those resistant to talk therapy. In one study of Army personnel, 20% of those unwilling to seek traditional psychotherapy were amenable to using a VR-based treatment (Wilson, Onorati, Mishkind, Reger, & Gahm, 2008). However, the current cost of VR systems (~\$1,500) may be prohibitive for some practitioners, especially since it is unknown if the results of VR exposure would justify the expense. Thus, RCTs are needed, as are studies comparing the efficacy of VR exposure to more traditional modes of exposure.

Relaxation training. Relaxation training may be the earliest behavioral treatment for PTSD, and consists of using various techniques (e.g., successive tension and relaxation of muscles) in order to reduce the fear and anxiety associated with traumatic responses. It has been used as a standalone treatment (often as a control) and as a component of broader PTSD treatments. Relaxation training has been used in four RCTs, and while certainly effective, it is not as effective as more comprehensive treatment packages (Cahill et al., 2008).

Cognitive behavioral group therapies. There have been at least 14 studies (four RCTs) of group CBT for PTSD (Shea, McDevitt-Murphy, Ready, & Schnurr, 2008), including one large study of Vietnam War veterans (Schnurr et al, 2003). In this study, 360 male veterans were randomized to either Trauma Focused Group Therapy or a nonspecific treatment control. Clients improved significantly, but no differences between groups were found. Subsequent analyses suggested that numbing and avoidance symptoms were reduced more in the Trauma Focused Group Therapy than in the nonspecific treatment control. After reviewing the literature, Shea and colleagues (2008) concluded that there is significant support for group CBT approaches for PTSD, with similar pre-post mean effect sizes between veteran and sexual abuse samples.

In summary, of the psychotherapies outlined above (i.e., those which have undergone the most empirical testing), PE, CPT, and EMDR possess the most evidence in favor of their efficacy and utility with veterans. Nevertheless, there is a need for larger comparative trial studies involving combat veterans. We should note that we have omitted Acceptance and Commitment Therapy (ACT) and individual mindfulness techniques from this review, as there are currently no empirical studies of these approaches with PTSD samples (see Cukar et al., 2009). There have, however, been studies for the other treatment modalities below.

Psychodynamic psychotherapy. The psychodynamic therapies encompass myriad treatment approaches which share common assumptions that symptoms are meaningful, there are multiple levels of mental life (i.e., conscious, unconscious), psychopathology is situated in prior developmental events, and aspects of the therapeutic relationship (e.g., transference, countertransference, the alliance) are important agents of change (e.g., Summers & Barber, 2009; Boswell et al., in press). One RCT conducted for PTSD (Brom, Kleber, & Defares, 1989) found that trauma desensitization, hypnotherapy, and psychodynamic therapy were more effective than a waitlist control group. Other, less controlled trials (e.g., Lindy, 1988) as well as both insight- and process-oriented

dynamic groups, have demonstrated efficacy (Shea et al., 2008). Taken together, the available empirical base of psychodynamic therapy, while often lacking in empirical controls, appears compelling enough to warrant its use. This may especially be the case with PTSD clients who are unwilling to undergo exposure techniques early in treatment, clients with Axis-II pathology, or in other complex cases where interpersonal themes predominate.

Interpersonal psychotherapy (IPT). IPT, a time-limited therapy initially formalized to treat major depression, has subsequently been adapted to PTSD. The central tenet of IPT for PTSD is that “Trauma impairs the individual’s ability to use the social environment to process environmental trauma, shattering perceived environmental safety and poisoning trust in interpersonal relationships (Markowitz, Milrod, Bleiberg, & Marshall, 2009, p. 136).” Thus, IPT for PTSD is intended to increase social skills, reduce feelings of helplessness and demoralization, increase agency, facilitate corrective emotional experiences, and assist in generating adaptive coping strategies.

Bleiberg and Markowitz (2005) conducted an open trial of IPT for 14 clients. Of those who completed the protocol, 69% were “responders,” and 36% remitted. Anger and depressive symptoms improved as well. These preliminary results await replication with random assignment and controls. Such a study (comparing IPT to PE) is currently underway at Columbia University, and its results may help to provide clients with another option for nonexposure-based treatment.

Dialectical behavior therapy (DBT). DBT is a blend of CBT and mindfulness training developed for the treatment of borderline personality disorder. A PTSD-focused version has been recently developed, as this population often shares difficulties with affect regulation and interpersonal relationships. DBT psychotherapists oscillate between acceptance/tolerance of the client and attempting to change the client’s behaviors. Behaviors which interfere with therapy (e.g., parasuicidal acts) are prime treatment targets, and individual therapy sessions are supplemented with DBT skill groups. In addition, a peer supervision/support group for clinicians is built into this treatment model (Linehan, 1993). DBT has been evaluated as either a standalone treatment or as an adjunctive treatment (by using the skills groups) with exposure-based therapies in four studies, but none included veterans (Cahill et al., 2008). In summary, DBT appears to be a promising treatment for PTSD. Although it has been empirically tested in limited types of PTSD clients, DBT’s emphasis on suicidal/parasuicidal behaviors may make it particularly well suited for use with veterans, a population with an elevated suicide risk (Kotler et al. 2001).

Hypnosis. Hypnosis has been utilized as both an adjunctive technique and a stand-alone therapy. Metaanalyses indicate that hypnosis is an effective adjunct for psychodynamic and CBT therapies (e.g., Cardeña, Maldonado, van der Hart, & Spiegel, 2008). Similarly, a recent RCT of combat veterans (Abramowitz, Barak, Ben-Avi, & Knobler, 2008) found that adjunctive hypnotherapy reduced PTSD and insomnia symptoms more than adjunctive zolpidem (Ambien). Taken together, these findings indicate that hypnosis may be useful.

Treatment Recommendations

As is clear from above, there is no paucity of treatments or treatment guidelines available for use with clients suffering from

PTSD (e.g., VA/DoD, 2010), and we encourage readers to be familiar with both sets of resources. However, as is often the case in clinical psychology, there is much less empirical evidence with which to rationally guide one's ultimate treatment selection than clinicians may hope for. Thus, an ability to empirically make nuanced and prescriptive treatment decisions using preexisting client variables (e.g., type of trauma, gender) is currently only in the beginning stages. If one relies solely upon empirical evidence (which we believe should be a prime, if not the prime, consideration), then PE, CPT, and EMDR are the psychotherapies of choice (with priority given to PE), and paroxetine, sertraline, and venlafaxine the most promising medications.

However, there are other practical realities to contend with, such as the facts that individual practitioners are unlikely to have access to many of the resources available at VAs and that no psychotherapist possesses competence in all modalities. These facts may limit the ability to follow treatment guidelines. Therefore, these guidelines will realistically be only one of many considerations used when determining the best means of intervening with PTSD clients. Given this state of affairs, we encourage clinicians to supplement these guidelines with consideration of relevant resources, therapy goals, and the degree of client suffering.

Relevant *client* resources to consider include such factors as the time and money available for treatment, readiness for change, motivation to deal actively with the trauma, openness to particular treatment modalities, and psychological mindedness. For example, a client who is open to exposure would be well-suited to PE or CPT. If this same client was averse to exposure, other time-limited alternatives are available (e.g., IPT). In the case of clients who are resistant to the "opening up" required for talk therapies, and initial forays into the reasons for their hesitancy are unsuccessful (i.e., the client remains adamantly opposed to therapy), referral to a competent psychiatrist for medication management would be appropriate.

Psychotherapist resources to consider primarily include the range of their competent therapeutic intervention. Clinicians do not receive uniform training, and some may not have direct experience with manualized, empirically supported approaches. Lacking either competence in a PTSD treatment or ongoing consultation/supervision, practicing in an unfamiliar modality may be a violation of the American Psychological Association's (2002) Ethics Codes. Fortunately, as our review demonstrates, most orientations have received some degree of empirical support, albeit limited. If one has a practice where PTSD clients are likely to be seen, and in the absence of additional training and supervision (see below), we recommend choosing the supported modality most closely within the range of one's competence and then taking steps to learn the empirically supported adaptation for PTSD. Providing appropriate referrals for clients that one does not feel confident to treat is another (and perhaps the best) solution.

Client preferences and goals for treatment also affect treatment choice and length. Goals may range from pure symptom relief to broader wishes to improve relationships and understand themselves better. These wishes are clearly relevant, and may imply one modality over another. However, lacking data, we could imagine clients for whom a more exploratory treatment (e.g., psychodynamic therapy) would be indicated, but could just as easily envision scenarios in which this would be a poor match for goals, and

that PE would be a better option. Nevertheless, preferences, especially when very strong, are something to carefully consider.

Finally, a thorough assessment and thoughtful consideration of a client's degree of suffering is another key element of treatment choice. Relevant variables include, but are not limited to, comorbid psychopathology (e.g., personality disorders, other anxiety disorders) and the presence of cognitive limitations (preexisting or due to traumatic brain injuries). As one example, a client with significant Axis-II pathology who regularly engages in parasuicidal behaviors may benefit from a longer-term treatment approach such as DBT or psychodynamic therapy. In contrast, a client with comorbid agoraphobia may be helped by an exposure-based protocol modified to address both sets of problems. In contrast to this type of minor modification to treatment, working with traumatic brain injury clients with serious cognitive deficits may require a more extensive adaptation of treatment manuals (e.g., using multiple memory aids or involving family members in order to facilitate the completion of homework). Further, it may be appropriate to recommend that clients seek out a medication consult, as there are a number of options which may augment psychotherapy (e.g., referring a client with disabling nightmares to a psychiatrist for prazosin).

All of the decisions above would be ideally governed by data. Unfortunately, it is difficult to imagine a time period when this level of empirical support would be available (e.g., Barber, 2009) given the number of treatments, trauma types, and potentially relevant client variables (e.g., comorbidities). The number of RCTs required for this would be staggering. Therefore, clinical judgment, knowledge of idiosyncratic client contexts, and intervention competence are all required supplements to empirical data (e.g., Sharpless & Barber, 2009).

However, we recommend that clinicians follow lines of empirical evidence when appropriate and possible. As exposure-based therapies currently have the most support, an ideal scenario we envision would be for all psychotherapists to enlarge their clinical repertoire with at least one of these approaches. As the pace of dissemination increases, this should become easier to accomplish, and there may be novel ways to more seamlessly integrate these techniques into other modalities. At the present time, however, relatively little is known about the long-term impact of such training on the ongoing practice of clinicians. In the absence of such data, we recommend a fairly long ongoing supervision (i.e., six months to a year) subsequent to didactic training as well as studies to examine the effect of such training on clinicians' practices.

Discussion

In conclusion, exposure therapies (notably PE and CPT) and EMDR have been widely adopted in practice guidelines, and existing research suggests that they are effective treatments for PTSD. However, given the heterogeneity of PTSD clients, there are few data supporting the use of one specific treatment modality over others. More importantly, there is no evidence that a particular intervention is better suited for a specific trauma type (i.e., rape) or that one treatment is more effective in military populations. There is also not much evidence that one form of therapy is effective for all types of traumas, and there is a clear need for more studies examining the efficacy of these treatments for military

personnel and veterans. This may be particularly the case for veterans with substance abuse issues, but this awaits additional research. As studies become more fine-grained and numerous, it could become increasingly possible to answer these more specific efficacy questions. It is also important to note that there is a paucity of research devoted to evaluating the relative merits of psychotherapy versus medication (and their combination) in veteran samples, and more work in this area is needed. We recommend an increased use of effectiveness research (perhaps through the adoption of standardized treatments and uniform assessment batteries in VAs) in addition to traditional RCTs, and believe that both will help to facilitate these goals.

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Appendix

We have compiled major published manuals should the reader wish to delve more deeply into the respective techniques of these approaches. Many were constructed for use in RCTs, but in our experience therapy manuals can be readily adapted to more naturalistic settings. We should also note that some of the manuals discussed above (e.g., interpersonal therapy for PTSD) have yet to be published, and in lieu of these we have listed their more general manuals. Further, the requirements of some approaches (e.g., PE's standard session length of 90 minutes to order allow time for activation of fear structures or DBT's use of skills groups) may require varying degrees of modification to a practitioner's standard operating procedures. However, these are the exceptions to the rule, and creativity and an adherence to the underlying principles encapsulated within the treatment manuals will likely be beneficial for clients (as they are benefiting from tested therapeutic approaches) and clinicians (as they are learning new approaches for specific disorders and being active consumers of research) alike.

We should note that the APA (2002) Ethics code, Standard 2.01, which discusses the boundaries of professional competence, states that it is an ethical obligation to ensure that psychologists have an appropriate level of training and experience before providing treatments. Further, when expanding the range of their competence, psychologists should receive relevant education, supervised experience, consultation, or study. As many of the PTSD treatments are very specific and time-limited, augmenting previous clinical experience with expert supervision is strongly recommended.

PTSD Treatment Manuals

- Foa, E. B., Hembree, E. A., & Rothbaum, B. O. (2007). *Prolonged exposure therapy for PTSD: Emotional processing of traumatic experiences: Therapist guide*. New York: Oxford University Press.
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Weissman, M. M., Markowitz, J. C., & Klerman, G. L. (2007). *Clinician's quick guide to interpersonal psychotherapy*. New York: Oxford University Press.

General Therapy Manuals Adaptable to PTSD

Bernstein, D. A., Borkovec, T. D., & Hazlett-Stevens, H. (2000). *New directions in progressive relaxation training: A guidebook for helping professionals*. Westport, CT: Praeger.

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