

An intensive outpatient treatment program for combat-related PTSD: Trauma Management Therapy

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An estimated 18.5% of veterans returning from Operation Iraqi Freedom, Operation Enduring Freedom, and Operation New Dawn are suffering from posttraumatic stress or posttraumatic stress disorder (PTSD). The number of veterans and service duty personnel requesting VA health care services is increasing, and the VA's ability to handle requests is dwindling. Thus, both the content of interventions and the format by which these services are delivered need to be reconceptualized. The authors present a multicomponent intervention program known as Trauma Management Therapy (TMT), a comprehensive, empirically supported treatment that can be delivered in an intensive, 3-week outpatient format. TMT combines individual exposure therapy with group social and emotional rehabilitation skills training to address specific aspects of the combat-related PTSD syndrome. The authors present the format of this novel intensive outpatient program, describe the components, and address implementation factors such as treatment compliance, dropout rates, and administrative considerations. (Bulletin of the Menninger Clinic, 81[2], 107–122)

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Since September 11, 2001, there has been extensive U.S. troop deployment for Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND). Estimates indicate that between 8% and 18.5% of returning veterans have been diagnosed with posttraumatic stress disorder (PTSD) (Richardson, Frueh, & Acierno, 2010; Smith et al., 2008; Tanielian & Jaycox, 2008). In addition to its core positive symptoms (intrusive thoughts, reexperiencing the event, anxiety, and avoidance), combat-related PTSD is typically a syndrome associated with emotional dysregulation, social maladjustment, poor quality of life, chronic pain, medical problems, and other adjustment difficulties, including social avoidance, memory disruption, guilt, anger, unemployment, impulsive or violent behavior, and family discord. Thus, developing and establishing evidence-based treatments for this syndrome is imperative.

The U.S. Department of Veterans Affairs (VA) has designated prolonged exposure therapy (PE) and cognitive processing therapy (CPT) as empirically supported and first-line treatments for PTSD. Although there is strong evidence for the effectiveness of PE and CPT for the treatment of PTSD in civilians, there is actually far less empirical support among veteran populations, particularly veterans with combat-related PTSD (Bradley, Greene, Russ Dutra, & Westen, 2005; Frueh et al., 2007; Lee et al., 2016; Steenkamp, Litz, Hoge, & Marmar, 2015). In fact, although a number of published studies may include veterans (or veterans with combat-related PTSD) among the study samples (Rauch et al., 2009; Tuerk et al., 2011; Yoder et al., 2012, 2013), these studies represent post hoc effectiveness trials using archival data, and in some instances do not include OIF/OEF/OND veterans.

To our knowledge, there are only three PE (Rauch et al., 2015; Yehuda et al., 2015; Yuen et al., 2015) and three CPT (Monson et al., 2006; Morland et al., 2014; Resick et al., 2015) randomized controlled trials (RCTs) that include U.S. service members and veterans with combat trauma (a fourth RCT for PE consisted of female veterans, and for the vast majority, the index trauma was sexual assault, not combat; Schnurr et al., 2007). The number of participants in the RCTs are small (Steen-

kamp, 2016), effect sizes are small (Yehuda & Hoge, 2016), and approximately half to two thirds of participants in these studies retain their diagnosis of PTSD after treatment is completed (Steenkamp, 2016). Although exposure therapy is the most empirically supported treatment for PTSD, it is clear that when utilized as a singular intervention and presented in its current format (once or twice weekly), it may be insufficient for many individuals with the combat-related PTSD syndrome.

One reason for the attenuated outcome for PE and CPT could be that they do not include specific interventions that address the myriad of “negative” symptoms that accompany PTSD (e.g., social withdrawal, interpersonal difficulties, occupational maladjustment, emotional numbing) or improve emotional regulation such as anger management (Frueh, Turner & Beidel, 1995; Steenkamp, Nash, Lebowitz, & Litz, 2013). In some cases, explanations suggest that these other behaviors are affected by PE and CPT; however, with the exception of depression and general anxiety, the outcome assessment batteries rarely, if ever, included specific assessment of behaviors such as anger, social isolation, guilt, or occupational adjustment. The complex and treatment-refractory nature of this disorder highlights the need for a multicomponent treatment designed specifically to address combat-related PTSD.

Trauma Management Therapy—Background and development

Originally developed in the mid 1990s, Trauma Management Therapy (TMT) is a multicomponent behavioral treatment designed to specifically address the complex nature of PTSD. TMT was developed because standard exposure therapy did not produce optimal results for Vietnam veterans, who continued to exhibit anger, social isolation, sleep problems, depression, and guilt. TMT contains two broad treatment components. The first component is intensive individual exposure therapy, addressing the unique characteristics of each individual’s traumatic event. The second component is social and emotional rehabilitation, which uses a skills training approach and is delivered in a group format.

An initial open trial with Vietnam veterans (Frueh, Turner, & Beidel, 1996) revealed significant pretreatment to posttreatment improvement on measures of sleep, nightmares, flashbacks, and social withdrawal. There were also significant improvements on clinician ratings of general anxiety, PTSD symptoms, and overall level functioning. In a follow-up RCT (Beidel, Frueh, Uhde, Wong, & Mentrkoski, 2011), 49 Vietnam-era veterans with combat-related PTSD were randomized to either TMT or a control group consisting of the same individual exposure therapy plus psychoeducation groups (to control for time spent in the social/emotional rehabilitation group therapy that is part of TMT). Each group first received 14 sessions of intensive individual exposure treatment (three times per week for 5 weeks) followed by once-weekly group therapy (either the social and emotional rehabilitation component or psychoeducational group therapy). At posttreatment, both groups reported significant decreases in primary PTSD symptoms as well as general anxiety. However, only veterans who received TMT increased the number of weekly social interactions as well as the amount of time spent in the weekly social interactions. This difference occurred only after the initiation of the group social and emotional rehabilitation component of TMT, suggesting it was specifically a result of the group intervention.

Trauma Management Therapy—An intensive outpatient program

As noted, TMT is a multicomponent behavioral treatment program designed to target the multidimensional nature of combat-related PTSD: reducing emotional and physiological reactivity to traumatic cues, reducing intrusive symptoms and avoidance behavior, improving interpersonal skills and emotion modulation (e.g., anger control), improving sleep, and increasing the range of enjoyable social activities. TMT consists of several interrelated components: education, intensive exposure, social and emotional rehabilitation, homework assignments, flexibility exercises, and programmed practice. Initially conceptualized to be delivered in a traditional outpatient setting, the 30 treatment

sessions were delivered as follows: treatment began with individualized exposure therapy, occurring two to three times a week. After exposure therapy, 15 sessions of group therapy were delivered over 12 weeks, resulting in 44.5 hours of treatment. There are typically between three and five participants in the group, although this phase could be delivered in an individual format if necessary.

Why an intensive outpatient treatment program?

In addition to its efficacy (and preliminary data suggest that the program may be even more efficacious for veterans of more recent conflicts; Beidel, Frueh, Neer, & Lejuez, under review), there are theoretical, therapeutic, cost, and feasibility factors that would suggest that an intensive outpatient program (IOP) may be the treatment delivery method of choice. The potential advantages of an IOP program are detailed here.

Addressing stigma and time needed for treatment

For many individuals such as military personnel and first responders, exposure to stressful and potentially dangerous situations is part of the job, and there is a culture of being the ones who take care of others. There is a belief among veterans, for example, that they should be able to take care of themselves and not need to seek out therapy (Hoge et al., 2014). However, certain events, such as IED explosions and their aftermath or mass civilian shootings with many casualties, are not typical “on the job” events and may lead to acute stress symptoms. From a theoretical perspective, adopting a therapy schedule similar to a course of physical therapy for a bodily injury reframes PTSD as a “stress injury” and may ease the stigma currently associated with posttraumatic stress. An additional challenge for active duty personnel is that most available PTSD programs provide services once per week, which tends to draw out the intervention over a 3- to 5-month period. It is difficult for active duty personnel to be relieved from active duty for that period of time. An IOP would again be more similar to rehabilitation

for a physical injury, requiring a shorter length of time of relief from active duty status.

Massed practice versus spaced practice

From a therapeutic perspective, massed exposure sessions are as effective as spaced sessions (and in some cases, even more effective), and exert that effect in a shorter period of time.

Feasibility

From a cost/feasibility perspective, a shorter intervention time, while retaining efficacy, could reduce medical costs and disability costs and result in improved occupational productivity. Additionally, many facilities still do not have therapists who are trained in and actually use PE or CPT, meaning that many individuals cannot access needed services in their home area. The availability of an intensive option may allow individuals to travel from home to specialty centers for a short period of time in order to receive high-quality, efficacious services. It also makes this intervention approach appealing to and feasible for military personnel still on active duty.

Elements of the TMT program

Exposure therapy

When someone encounters a feared object, event, or situation, the typical response is to become anxious and try to escape. Escape will temporarily eliminate fear but reinforces anxiety and avoidance. The goal of exposure therapy is to eliminate all aspects of the anxiety response by placing the individual in the situation that creates anxiety and remaining there until the emotional distress elicited by the feared object/event/situation has been extinguished. On a neurological level, new learning occurs through the establishment of new neural connections (Davis, Ressler, Rothbaum, & Richardson, 2006). When repeated over a number of days, these neural networks are strengthened to the point that they are stronger than the old fear network. On an emotional level, repeating the exposure across

sessions results in diminishment of the initial anxiety response and a shorter time to return to a nonanxious state, until even immediate contact with the object or event no longer produces an anxious response. This is called *between-session habituation*.

In TMT, the exposure therapy component consists of one session of data gathering/scene construction, followed by 14 individually administered exposure sessions. The sessions average 90 minutes in length (longer in the beginning, shorter at the end) as between-session habituation is achieved. During the initial scene construction session (Session 1), all elements of the traumatic event are reviewed and a scene is constructed. Reconstructing the traumatic event in detail includes attention to the sights, sounds, and smells that were present when the original event occurred. For some individuals, the exposure scene may be one singular event, whereas for other individuals, the scene may encompass a series of events. The description of the imaginal scene rarely exceeds one single-spaced page of text and in many instances is much shorter.

In Sessions 2 through 15, the scene is narrated continuously as changes in anxiety/physiological arousal are measured. If constructed accurately, imagining the scene will elicit significant distress, and the presentation continues until the patient's anxiety returns to baseline, which is when within-session habituation is achieved. The scene is narrated by either the clinician or the patient. In many cases, it is advantageous for the patient to narrate the event because it appears to increase immersion, which in turn increases treatment efficacy. The identical scene is presented at each session until between-session habituation is achieved. If within-session habituation occurs prior to the 14th session, in vivo exposure sessions, relevant to the patient's trauma, are planned and executed. For patients with combat-related PTSD, this might include sitting with one's back to an entrance in a public place, walking through a crowded "big box" store without turning around to monitor surroundings, or driving on roads resembling the road where the IED/ambush occurred. These in vivo exposure sessions are therapist-accompanied to be sure that they are carried out correctly (without any avoidance).

Programmed practice

The programmed practice component is implemented in conjunction with the final seven exposure sessions. It is not accompanied by a therapist (i.e., it is “homework”). Geared toward the individual’s unique trauma, assignments may involve watching movies (e.g., *Black Hawk Down*, *Restrepo*), visiting crowded places, or engaging with others in crowded social settings. Thus, even for individuals who do not achieve between-session habituation and therefore never have formal, therapist-accompanied in vivo sessions, TMT still provides opportunities to engage in feared activities, directly addressing behavioral avoidance.

Social and emotional rehabilitation (SER)

This highly structured group component was developed to target the additional difficulties that are often part of PTSD but are not directly addressed by exposure therapy alone. These difficulties include disturbed sleep, social alienation and withdrawal, excessive anger and hostility, explosive episodes, depression, and guilt/moral injury. Over the 15 group sessions, each of these areas is addressed. These group sessions are not didactic psychoeducation groups. Rather, they are active, skill acquisition sessions, which not only require discussion but also include active participation by all group members.

Brief behavioral activation. In brief behavioral activation (Lejuez, Hopko, Acierno, Daughters, & Pagoto, 2011), veterans learn skills to deal with depression and guilt. Treatment involves identifying areas of functioning where the individual would like to make changes and examining the values held within those areas. Across two sessions, 10 life areas are examined: family relationships, social relationships, employment/career, physical and psychological health issues, responsibilities, romantic relationships, education/training, hobbies/recreation, volunteer work/charities/political activities, and spirituality. After identifying areas where change is desired, the patient identifies and plans daily activities that are consistent with the values identified as important. Accomplishing activities that are closely

linked to core values results in more positive and enjoyable experiences, which in turn improves perceptions and cognitions about life. Behavioral activation for depression was not included in the first iteration of TMT (Beidel et al., 2011), but it is now an integral component of social and emotional rehabilitation as a result of the depression and guilt so often expressed by OIF/OEF/OND veterans (Strachan, Gros, Ruggiero, Lejuez, & Acierno, 2012).

Sleep hygiene. Sleep difficulties are a common complaint by people with PTSD. In SER, three sessions are devoted to sleep hygiene. The content includes learning various aspects of the sleep–wake cycle, concepts such as sleep efficiency, and how behaviors such as inconsistent sleep times, napping, and drinking alcohol can interfere with sleep and affect sleep efficiency. Patients are instructed in the use of a sleep tracking/monitoring form, which is used in the next session as the basis for the instruction in better sleep hygiene, including sleep scheduling, avoiding foods and drink that increase wakefulness, creating a bedtime ritual, setting up an environment conducive to sleeping, limiting daytime naps, exercising, and managing stress.

Anger management. In the three anger management sessions, the focus is on teaching the patient how to better manage anger and other intense emotions. It is designed to reduce temper outbursts and the problematic expression of anger. This component gives veterans a range of strategies for emotional expression. One topic (anger management, problem solving, and guilt) is introduced at each session, and a short didactic presentation is followed by practice in the implementation of skills using role playing, worksheets, and group discussion. With respect to anger management, the skills are broken down into specific components, which include identifying high-risk situations and planning ahead, taking a break during a heated moment, reevaluating the situation, problem solving (which is expanded upon in a subsequent anger management session), and using assertive communication. Problem solving skills include defining the problem, brainstorming, evaluating solutions, and selecting/implementing a solution. One exercise

uses a “responsibility pie” to address guilt related to certain traumatic events, and steps include assessing the seriousness of the actions, weighing personal responsibility, breaking the “guilty silence,” self-forgiveness, and making reparations.

Social reintegration. These sessions teach how to establish/reestablish and maintain friendships, skills necessary to engage in and maintain new and diverse social activities or to reestablish strained interpersonal relationships with family, friends, and coworkers. Specific attention is given to assertiveness skills, teaching appropriate methods of expressing anger or requesting behavior change. Skills are taught using a traditional social skills format using modeling, behavior rehearsal, and feedback.

Integration session. This session allows patients to pull together the material from the various sessions, allowing integration of problem solving, assertiveness training, and social reintegration, for example. Therapists sometimes use this session to provide additional practice in a specific skill or area that appeared problematic for a particular group.

Relapse prevention. In this session, situations/events/people that might serve as triggers for a return to behaving inappropriately in formerly problematic situations are discussed and alternative responses are discussed. Efforts to decrease general levels of arousal that might be unrelated to PTSD are presented (e.g., relaxation training, exercise) are discussed, depending on the needs of the individual group.

Structure of the group treatment component

The order in which the group interventions are presented is depicted in Table 1. The ordering of the sessions was deliberate in order to allow sufficient time for completion of the homework assignments associated with some of the interventions. For example, behavioral activation requires the individual to engage in activities outside of the therapeutic session; these activities could not be completed successfully in a 24-hour period.

Table 1. Order of treatment delivery for the group component of the intensive outpatient program

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	Behavioral Activation	Sleep Hygiene	Anger Management	Social Reintegration	Behavioral Activation
2	Sleep Hygiene	Anger Management	Social Reintegration	Behavioral Activation	Sleep Hygiene
3	Anger Management - Guilt	Social Reintegration	Behavioral Activation	Integration Session	Relapse Prevention

Therefore, beginning with behavioral activation allows time for implementation consistent with the original treatment format.

Intensive outpatient program implementation

Veterans and active duty personnel from across the nation have sought IOP services. In order to assure suitability for the program and prevent unnecessary travel to Orlando, participants who are referred are screened by telephone with the Clinician-Administered PTSD Scale (CAPS; Weathers et al., 2013) to confirm the diagnosis of PTSD. Once confirmed, a welcome packet is sent to the participant containing information about the program, accommodations, and local transportation options. Monitoring forms are also included in the packet so that baseline PTSD symptomatology (e.g., weekly nightmares, flashbacks) can be obtained in the home environment. The therapist maintains contact with the participant until the IOP begins.

Participants must arrive in Orlando and check into the hotel the Sunday before treatment begins. Treatment begins on Monday morning at 8:00 am with an orientation meeting designed to introduce treatment staff and provide a program overview. Expectations of attendance and compliance are reviewed and all questions are answered prior to starting the treatment. All additional baseline assessment measures are also completed on Day 1. The treatment lasts for 3 weeks, Monday through Friday, with individual exposure therapy in the morning and group therapy in the afternoon. Each individual session is scheduled for 2 hours with the expectation that the average session will

last 90 minutes. The group therapy sessions are scheduled for 90 minutes in the afternoon, allowing all participants time for a noon meal. This break also allows time for the participant to consolidate the new learning that occurs in exposure therapy.

Each participant has an assigned therapist for exposure therapy, and the group therapy is provided by two members of the treatment team. Daily treatment is concluded by 3:30 pm, and participants are reminded to complete their programmed practice or homework assignments before meeting again the next day. They also have free time in the evening to relax and socialize. Again, consolidation of new learning requires some down time. Participants are encouraged to interact with each other (e.g., eat evening meal together) because this cohesiveness appears to promote compliance and act as a deterrent for treatment dropout. Specifically, participants form a type of “unit” where each member is encouraged to stay with the treatment and others provide support and encouragement.

At the end of the 3-week IOP, all participants are given a packet of posttreatment assessment measures to complete in their home environment. The therapist schedules a 1-hour phone assessment 1 week after treatment to complete the CAPS. The other assessment measures are completed at that time and mailed back to the therapist. If there is a desire for follow-up, this same procedure is completed at 3 months and 6 months after treatment as well.

Dropouts and negative effects

The dropout rate for the IOP was 2%, which is substantially lower than the dropout rates for the two standard VA treatments: 23.50% for CPT and 28.20% for PE (Steenkamp et al., 2015). Typically, PE and CPT are delivered over a 12- or 16-week format, although the total number of hours for completers is probably similar to that found in this IOP. Furthermore, there were no suicide attempts or completed suicides during the time of treatment or in the 6-month follow-up period.

Discussion and future directions

There are many approaches to treating PTSD, and they can be broadly categorized as pharmacological or psychological. Medications such as antidepressants, anti-anxiety agents, sleep medications, and even a medication to decrease nightmares treat some of the symptoms of PTSD, but none have been approved specifically for PTSD or recommended by the Institute of Medicine. With respect to psychological interventions, although some data suggest that PE or CPT reduces symptoms, extant data also reveal that a high percentage of treated individuals retain their PTSD diagnosis at posttreatment. Thus, there is a need for alternative or combination treatments that would provide greater efficacy.

Most programs for treatment of combat PTSD are structured for a typical outpatient setting with treatment sessions scheduled once or twice weekly. There are other residential treatment programs, but our IOP remains unique, with its emphasis on daily exposure therapy, followed by structured group treatment. The dropout rate is low and the intervention does not produce negative side effects despite its intensive nature. Data indicate that TMT is efficacious for a very chronic and severe group of Vietnam veterans, and the results of the recently completed trial with OIF/OEF veterans will be available soon. Further investigations will examine the efficacy of TMT with military sexual trauma and civilian first responders and also implement the IOP at military installations.

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