Trauma Management Therapy

B. Christopher Frueh
Medical University of South Carolina

Samuel M. Turner
and Deborah C. Beidel
University of Maryland at College Park

I. Description of Treatment
II. Theoretical Bases
III. Empirical Studies
IV. Summary
Further Reading

GLOSSARY

exposure therapy A well-established behavioral treatment for anxiety disorders, it involves exposing individuals to feared thoughts, images, or other stimuli repeatedly and for prolonged periods in the absence of any actual threat until anxiety is reduced via habituation.

habituation A progressive decrease in the vigor of autonomic responses or behavior that may occur with repeated presentations of the eliciting stimulus.

posttraumatic stress disorder An anxiety disorder that may follow traumatic experiences (e.g., combat, physical and sexual assault), which is characterized by symptoms of re-experiencing the trauma (e.g., nightmares, "flashbacks"), emotional numbing and avoidance, and arousal (e.g., insomnia, hypervigilance, anger).

Trauma Management Therapy (TMT) is a multicomponent behavioral treatment program for chronic PTSD in veterans. It is a comprehensive treatment designed specifically to target various aspects of the clinical syndrome associated with chronic PTSD, particularly reducing emotional and physiological reactivity to traumatic cues, reducing intrusive symptoms and avoidance behavior, improving interpersonal skills and emotion modulation (e.g., anger control), and increasing the range of enjoyable social activities. The program is designed to incorporate exposure therapy, the PTSD psychosocial treatment approach with the most empirical support, with a social skills training component designed specifically for veterans with PTSD. It is a comprehensive treatment designed to address all aspects of the primary clinical syndrome seen in veterans, via a combination of patient education, exposure therapy, social skills training, and relevant homework assignments. It is important to note that this treatment is not merely a combination of exposure and traditional social skills training procedures. Rather, it includes strategies designed to remedy specific difficulties seen in veterans with chronic PTSD, and the particular sequencing and timing of the individual components are
thought to contribute to its overall effectiveness. The major components of TMT are described next.

A. Education

All patients are provided with a general overview of chronic PTSD, including common patterns of expression, issues of diagnosis, comorbidity of other anxiety and Axis I disorders, etiological pathways, and a review of current treatment strategies. This phase is important for ensuring that veterans not only develop a realistic understanding about treatment prognoses, but also an overall positive expectancy regarding the efficacy of behavioral treatment. Finally, this phase is used to educate veterans about the treatment they will be receiving and what will be expected from them regarding their participation in TMT.

B. Exposure Therapy

Individually administered intensive exposure therapy is included as the first active component of TMT, because it has been shown to effectively address the unique features of each patient's fear structure, allowing for a reduction in general anxiety, physiological reactivity, and intrusive symptoms. Patients are exposed imaginarily to feared or anxiety-producing stimuli in a prolonged fashion until there is a decrease in fear and anxiety (i.e., until habituation is obtained) within session. Repeated contact with the feared stimulus hastens the habituation process and, with sufficient pairings, the stimulus loses its ability to elicit the fear response. Typically, most veterans with PTSD escape or avoid feared stimuli, which functions to increase the intensity of the fear response. The goal of exposure therapy is to provide prolonged contact with the feared stimuli of sufficient duration that within session habituation occurs. Repeated pairing across a number of days also is important and hastens the habituation process. Fourteen sessions of exposure therapy are administered early in the sequence so that veterans may experience relatively quick relief from acute symptoms of PTSD, enabling them to then concentrate on developing emotional control and improving their social functioning. All sessions are terminated following a 50% reduction in within session reactivity to the traumatic cues, with reactivity monitored physiologically (i.e., heart rate) and/or by patient ratings of subjective distress. Based on our experience with PTSD, and data on behavioral treatment of other anxiety disorders, exposure sessions usually average about 90 min in duration.

C. Programmed Practice

The programmed practice component of TMT is implemented in the final seven individual exposure sessions and is a form of exposure that does not require therapist accompaniment (i.e., it is "homework"), but requires careful planning on the part of the therapist and patient together. Examples of suitable exercises focusing on traumatic combat fears include self-directed imaginal sessions at home, which may serve as an initial step toward in vivo activities, such as watching movies (e.g., Platoon or Hamburger Hill), visiting war memorials or museums, speaking with other veterans or loved ones about war experiences, and visiting airfields or helicopter pads. Experiences should also be devised that require the veteran to engage in other feared activities, the avoidance of which may interfere with quality of life. Examples of suitable activities include social events, shopping, attending movies, eating in a restaurant, etc.

D. Social and Emotional Rehabilitation (SER)

A highly structured group (3–5 people) social skills training component (SER) was developed to target PTSD features that are not improved by exposure therapy only. In other words, interpersonal difficulties, commonly associated with chronic PTSD, such as social anxiety, social withdrawal, excessive anger and hostility, explosive episodes, marital and family conflict are targeted via a number of specific interventions. SER includes instruction, modeling, behavioral rehearsal, feedback, and reinforcement. Following each SER session, veterans are given homework assignments to allow further practice and consolidation of newly acquired skills. A series of symptom-specific strategies were sequenced to build on one another in a cumulative fashion and are designed to serve multiple functions. One purpose is to teach veterans the requisite skill foundation for effective and rewarding social interactions. Patients with PTSD vary widely with respect to basic social skill, but most have room for improvement. In addition to general social skill, the program is divided into four components that target specific areas of dysfunction.

1. Social Environment Awareness

Social environment awareness involves teaching the nuances of when, where, and why to initiate and terminate interpersonal interactions. Veterans are taught the
verbal and nonverbal mechanics of successful social encounters, including identification of appropriate conversation topics, attentional and listening skills, and effective topic transitions.

2. Interpersonal Skills Enhancement
Interpersonal skills enhancement is devoted to teaching how to establish and maintain friendships, appropriate telephone skills, and assertive communication. This component is designed to help patients learn those skills that are necessary to engage in new and diverse social activities to increase their social repertoires and the likelihood that social interactions will become intrinsically rewarding.

3. Anger Management
Anger Management involves teaching veterans how to better manage anger and other intense emotions. It is designed to reduce temper outbursts and the problematic expression of anger. This component is designed to give patients a range of strategies for expressing their anger, problem solving, improving their emotional modulation, communicating assertively with others, so that verbal and physical violence do not continue to disrupt their relationships with others.

4. Veteran’s Issues Management
Veteran’s Issues Management teaches how to improve communication regarding combat trauma and military issues with nonveterans, to increase the understanding of significant others. In addition, veterans are also taught to identify and challenge negative and dichotomous thinking patterns, which limit their quality of life by reducing their involvement with others.

E. Treatment Implementation
TMT consists of 29 treatment sessions ideally administered over a period of about 17 weeks. Sessions initially occur three times a week through the Exposure phase, then twice a week at the start of SER, and then once a week for the final 10 weeks of the program (see Table 1).

II. THEORETICAL BASES

A. The Clinical Syndrome
In 1980 the American Psychiatric Association’s Diagnostic and Statistical Manual (DSM) formally defined and recognized the cluster of acute symptoms often seen in victims of traumatic events (e.g., combat, sexual and physical assault), naming this condition post-traumatic stress disorder (PTSD). It is defined by six basic criteria: (1) the historical antecedent of a traumatic event that involves both actual or threatened death or serious injury, and an intense response of fear, helplessness, or horror; (2) persistently reexperiencing the traumatic event through intrusive memories, dissociative flashbacks, recurrent distressing dreams, and/or psychological or physiological reactivity on exposure to associated cues; (3) the avoidance of stimuli associated with the event, or a numbing of general responsiveness, including efforts to avoid thoughts and feelings related to the trauma, efforts to avoid activities or situations that arouse recollections of the trauma, loss of interest in significant activities, social detachment, and/or reduced affect; (4) the existence of persistent symptoms of increased arousal such as hypervigilance, sleep disturbance, irritability or outbursts of anger, impaired concentration, and/or exaggerated startle response; (5) duration of “the disturbance for at least 1 month; and (6) the pervasive effects of the disturbance causing clinically significant
distress or impairment in social, occupational, or other important areas of functioning.

Posttraumatic Stress Disorder is frequently chronic, and many combat veterans still suffer severe symptoms from wars fought 30 (Vietnam) or 50 (WWII) years ago. Epidemiological estimates of PTSD put the current prevalence at as high as 15% and lifetime prevalence as high as 31% for veterans exposed to war zone trauma. Given that over 3 million American soldiers served in the Vietnam war alone, and many more have served in other foreign conflicts, the potential number of veterans currently with PTSD is well above the half-million mark.

Complicating the syndrome is the fact that PTSD is typically accompanied by multiple co-occurring mental disorders, including substance abuse (73–84%), major depression (26–68%), psychotic symptoms (15–40%), and panic attacks (21–34%), among others. Furthermore, chronic PTSD is also associated with a diverse set of symptoms associated with social maladjustment, poor quality of life, sleep disturbance, medical illnesses, and general symptom severity. This includes social avoidance, memory disruption, guilt, anger, social phobia, suicide attempts, and other debilitating behavioral features, such as unemployment, impulsive or violent behavior, and family discord. In fact, it is notable that a majority (69%) of veterans seeking treatment for PTSD within VA specialty clinics seek disability payments for the debilitating occupational impairment they experience. It recently has been documented that the costs associated with PTSD are extremely high and make PTSD one of the costliest mental disorders to society.

Although PTSD symptoms currently are grouped into three primary clusters, symptoms of reexperiencing (nightmares, intrusive memories, “flashbacks”) and associated physiological reactivity, are what best distinguish PTSD from other affective or anxiety disorders. Supporting the prominence of autonomic symptoms are data from studies examining physiological responding in people with PTSD. Most notable is the finding of heightened reactivity. In these studies, combat veterans with PTSD have significantly larger blood pressure and heart rate responses during fear-relevant cue exposure than do combat veterans without PTSD.

B. Rationale for Exposure Therapy

Exposure therapy is a well-established behavioral treatment for a wide range of anxiety disorders (e.g., phobias, obsessive–compulsive disorder), which involves exposing individuals to feared thoughts, images, or other stimuli repeatedly and for prolonged periods of time. The rationale for this treatment is based on two-factor theory. As applied to the condition of PTSD, first, stimuli (e.g., combat images or sounds) that were once paired with actual danger and horror in combat now elicit a similar autonomic response (e.g., increased heart rate) and fear. Second, as a result of this fear response, those with PTSD tend to avoid or escape from such stimuli as much as possible. Thus, habituation to the stimuli never occurs, and the maladaptive condition is maintained. Exposure therapy involves exposing individuals to feared stimuli (e.g., combat images or sounds) repeatedly and for prolonged periods in the absence of any actual threat until habituation allows for a progressive decrease in the vigor of autonomic responses (e.g., heart rate). Therefore, anxiety and fear are reduced via habituation. In the case of individuals with PTSD, such exposure is usually accomplished, at least initially, via imaginal procedures, and is often then complimented later by in vivo, or “live,” exposure experiences.

III. EMPIRICAL STUDIES

A. Treatment of PTSD

There are surprisingly few data available regarding treatment outcome for veterans or civilians with PTSD. To date only a relatively small number of randomized clinical trials of pharmacological and psychotherapeutic treatments have been published. Although a range of psychotherapeutic strategies for chronic PTSD have been suggested, cognitive-behavioral treatments, usually emphasizing various methods of exposure therapy, have been the most carefully studied and show the most promise.

1. Exposure Therapy for PTSD

Among civilians with PTSD, exposure has been found to be efficacious in a number of randomized, controlled trials. Exposure therapy has been found to be superior to stress inoculation training, progressive relaxation, supportive counseling, and wait-list control groups; and it is equally effective as cognitive therapy.

Among veteran samples, intensive exposure has proven partially efficacious for chronic PTSD, although the data are not as strong as for civilians. In an early trial, exposure therapy was compared to a wait-list control group using Vietnam veterans (N = 24). At post-treatment, the exposure group scored significantly lower than the control group on some clinical measures and received lower therapist ratings of startle responses,
memory disturbance, depression, anxiety, irritability, and legal problems. These improvements were maintained at 6-month follow-up. Significant differences were not found for emotional numbing, sleep disturbance, or any measure of social adjustment. In another study, veterans who received both “imaginal flooding” and “standard” treatment were compared to a group of yoked patients who received “standard” treatment only (N = 14). The exposure group showed superior outcome on patient ratings of sleep, nightmares, and intrusive thoughts, but no differences were found for heart rate, and only minimal differences were found for measures of trait anxiety, depression, and violent tendencies. Again, the treatment appears to have been only partially efficacious. Another study included the use of physiological recordings (e.g., heart rate) and self-report inventories to assess outcome in inpatient veterans treated with exposure or individual counseling. Participants receiving exposure showed modestly superior improvement across most psychological and behavioral rating measures, but no significant differences were found between the groups on physiological parameters. Further, regardless of treatment condition, those participants who showed decreased physiological responding were improved on psychological inventories at 3-month follow-up. This suggests that reductions in physiological responding was a critical element of efficacious therapy and might be a predictor of long-term treatment success. Finally, results from two uncontrolled studies support the partial efficacy of exposure for treating PTSD symptoms in veterans.

Data from these studies indicate that exposure therapy helps reduce the hallmark features of chronic PTSD and much of the general anxiety that accompanies it. In fact, according to the consensus statement on PTSD by the International Consensus Group on Depression and Anxiety exposure therapy is the psychotherapy of choice for the disorder. However, exposure does not have a significant effect on the “negative” symptoms of PTSD (e.g., avoidance, social withdrawal, interpersonal difficulties, occupational maladjustment, emotional numbing), nor on certain aspects of emotion management (e.g., anger control). This is because exposure is narrowly focused on anxiety and fear reduction and hence does not address other features of the disorder. Specifically, exposure does not address basic skill deficits, impaired social functioning, unemployment, or anger control problems. In essence, exposure therapy does not address the many problems often associated with any chronic mental disorder. Thus, many scientists have suggested that a behavioral treatment program, targeting specific areas of dysfunction via different behavioral strategies is necessary to address the complex symptoms associated with this condition—hence, the development of Trauma Management Therapy.

2. Trauma Management Therapy

The efficacy of TMT was examined in an open trial with 15 male Vietnam combat veterans with PTSD. The veterans participating in this study had a mean severity rating of 6.09 on the 7-point rating scale of the Clinical Global Impressions scale, indicating that the sample was severely ill. Demographics were as follows: six were African American (40%) and nine were Caucasian (60%). The mean age of the sample was 47.9 (SD = 2.1; range = 44 to 52 years), mean education level was 12.7 (SD = 1.2), 8 (53%) were married, 6 (40%) were employed full-time, 5 (33%) had a prior history of arrests, 7 (47%) had a prior history of psychiatric hospitalization, 7 (47%) received some level of VA disability payments for PTSD prior to treatment, and 11 (73%) currently were seeking disability payments or increases in existing disability payments. Acute psychiatric diagnoses other than PTSD included major depression, panic disorder, social phobia, and obsessive-compulsive disorder. Personality disorder diagnoses included borderline, avoidant, and schizoid. Overall, 15 (100%) were diagnosed with a co-occurring acute psychiatric disorder, and 11 (73%) with a co-occurring personality disorder. The combination of the multiple psychiatric disorders and extreme severity ratings indicate this was a severely ill sample.

Eleven patients were included in the analyses because 4 of the 15 (27%) dropped out during the course of treatment. One veteran discontinued after a few sessions of exposure treatment without giving a reason. The remaining three dropped out after successfully completing the exposure phase and all reported benefiting from the treatment; two of these veterans dropped out because their employment took them to another city, and the other cited transportation problems for not being able to participate in the SER phase.

To summarize the results, significant pre- to post-treatment improvement on most of the outcome variables was noted (see Table 2), suggesting that TMT is a promising treatment for the chronic and multifaceted symptoms associated with combat-related PTSD. Over the course of 4 months significant improvements were made on most critical features of PTSD. Symptom reductions occurred across problematic features of sleep disturbance, nightmares, flashbacks, social withdrawal, heart rate reactivity; significant improvements were
TABLE 2
Pre- and Posttreatment Data for Outcome Variables (N = 11)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Pre-</th>
<th>Post-</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinician ratings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamilton Anxiety</td>
<td>33.91 (9.38)</td>
<td>23.26 (4.20)</td>
<td>4.88</td>
<td>.0003***</td>
</tr>
<tr>
<td>Clinical Global Impression</td>
<td>6.09 (.70)</td>
<td>4.00 (.78)</td>
<td>6.10</td>
<td>.0001***</td>
</tr>
<tr>
<td>Clinician PTSD Scale</td>
<td>82.46 (19.23)</td>
<td>65.55 (8.51)</td>
<td>2.77</td>
<td>.0099**</td>
</tr>
<tr>
<td>Patient symptom ratings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep (hours/wk)</td>
<td>30.55 (8.64)</td>
<td>36.09 (8.85)</td>
<td>4.45</td>
<td>.0006***</td>
</tr>
<tr>
<td>Nightmares (freq/wk)</td>
<td>9.73 (5.12)</td>
<td>5.55 (3.14)</td>
<td>4.44</td>
<td>.0007***</td>
</tr>
<tr>
<td>Flashbacks (freq/wk)</td>
<td>9.00 (5.53)</td>
<td>6.27 (4.65)</td>
<td>2.93</td>
<td>.0073**</td>
</tr>
<tr>
<td>Social activities (freq/wk)</td>
<td>.55 (.69)</td>
<td>2.55 (.93)</td>
<td>8.56</td>
<td>.0001***</td>
</tr>
<tr>
<td>Physiological reactivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate</td>
<td>89.73 (9.81)</td>
<td>77.00 (8.65)</td>
<td>5.34</td>
<td>.0002***</td>
</tr>
<tr>
<td>Self-report inventories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Phobia Difference</td>
<td>94.67 (21.62)</td>
<td>85.00 (20.28)</td>
<td>1.97</td>
<td>.0423*</td>
</tr>
<tr>
<td>Beck Depression</td>
<td>28.91 (9.66)</td>
<td>28.64 (8.70)</td>
<td>.14</td>
<td>.4441</td>
</tr>
<tr>
<td>Spielberger Anger Scale</td>
<td>34.82 (13.64)</td>
<td>35.82 (10.38)</td>
<td>.40</td>
<td>.3480</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001.

noted on clinician ratings of general anxiety, PTSD symptoms, and overall level of functioning.

Because TMT significantly improved patients’ social functioning across a number of dimensions, the outcome generally appears to be superior to findings reported for combat veterans in treatment studies using exposure therapy only or other nonexposure treatments. Furthermore, the patients’ overall ratings of their treatment indicate that they considered it a credible and positive therapeutic experience, and all but one said that they would encourage other veterans with PTSD to participate in TMT. Although significant improvement was found on many measures, the clinical syndrome was not remediated entirely, which is usually the case even for most “successful” treatments of anxiety disorders and most other severe psychiatric conditions. Nevertheless, overall the new treatment strategy appears to have resulted in broad improvement across the wide symptom spectrum of PTSD in a sample of veterans typical of those in most VA settings.

For purposes of examining component efficacy, assessments were administered after completion of exposure therapy at midtreatment (Session 15), but prior to the commencement of SER. These data indicate that veterans responded with significant improvement after completion of the exposure therapy phase, but only on certain symptoms (e.g., nightmares, flashbacks, physiological reactivity, sleep, and general anxiety). Significant improvement in the frequency of social activities occurred only after the implementation of social skills training, suggesting that this deficiency improved only after specific intervention with the SER component. This validates the need for a broad-based intervention to address the entire PTSD syndrome. Research is pending to extend these results for TMT in randomized, controlled efficacy research.

**IV. SUMMARY**

Posttraumatic stress disorder (PTSD) is a severe and chronic anxiety disorder that may follow traumatic experiences (e.g., combat, physical and sexual assault). The clinical syndrome is characterized by symptoms of reexperiencing the trauma (e.g., nightmares, “flashbacks”), emotional numbing and avoidance, and arousal (e.g., insomnia, hypervigilance, anger), as well as severe impairment of social functioning. Research shows that intensive exposure therapy helps reduce the hallmark features of chronic PTSD (e.g., symptoms of intrusion, physiological reactivity) and much of the general anxiety that accompanies it and is considered to be the psychosocial treatment of choice. However, exposure therapy does not have a significant effect on the “negative” symptoms of PTSD (e.g., avoidance, social withdrawal, interpersonal difficulties), nor on certain aspects of emotion management (e.g., anger control). Although exposure may reduce maladaptive arousal and fear, it does not address basic skill deficits, impaired relationships, or anger control problems. Trauma Management Therapy
(TMT) is a multicomponent behavioral treatment program for chronic combat-related PTSD designed to address all aspects of the clinical syndrome in veterans. It utilizes a combination of patient education, exposure therapy, social skills training, and relevant homework assignments. Preliminary evidence from an open trial shows that overall TMT appears to result in broad improvement across the wide symptom spectrum of PTSD, including social functioning, in veterans treated within the VA. Research is pending to extend these results for TMT in randomized, controlled efficacy research.

See Also the Following Articles

Exposure in Vivo Therapy ■ Grief Therapy ■ Post-Traumatic Stress Disorder ■ Self-Control Therapy

Further Reading


