Psychosocial Therapy for Posttraumatic Stress Disorder

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Immediately after experiencing a traumatic event, many people have symptoms of posttraumatic stress disorder (PTSD). If trauma victims restrict their routine and systematically avoid reminders of the incident, symptoms of PTSD are more likely to become chronic. Several clinical studies have shown that programs of cognitive-behavioral therapy (CBT) can be effective in the management of patients with PTSD. Prolonged exposure (PE) therapy—a specific form of exposure therapy—can provide benefits, as can stress inoculation training (SIT) and cognitive therapy (CT). PE is not enhanced by the addition of SIT or CT. PE therapy is a safe treatment that is accepted by patients, and benefits remain apparent after treatment programs have finished. Nonspecialists can be taught to practice effective CBT. For the treatment of large numbers of patients, or for use in centers where CBT has not been routinely employed previously, appropriate training of mental health professionals should be performed. Methods used for the dissemination of CBT to nonspecialists need to be modified to meet the requirements of countries affected by the Asian tsunami. This will entail the use of culturally sensitive materials and the adaptation of training methods to enable large numbers of mental health professionals to be trained together. *(J Clin Psychiatry 2006;67[suppl 2]:40–45)*

DEVELOPMENT OF POSTTRAUMATIC STRESS DISORDER

Following exposure to a traumatic event, some people come to view the world as dangerous and believe that they are unable to cope with life. If trauma survivors restrict their daily routine and systematically avoid reminders of the incident—including thinking and talking about the event—these beliefs may be maintained and the symptoms of posttraumatic stress disorder (PTSD) become chronic.[1]

Posttraumatic stress disorder may be underpinned by dysfunctional cognition involving negative thoughts about the world (perceiving people to be untrustworthy and no place to be safe), negative thoughts about self (feelings of incompetence and considering PTSD symptoms to be a sign of weakness), and self-blame (guilt and believing that other people would have prevented the trauma).

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TREATMENT OF PTSD

Cognitive-behavioral therapy (CBT) can be used to treat patients with chronic PTSD.[2] Indeed, there is compelling and consistent evidence demonstrating the efficacy of CBT for the treatment of PTSD.[3] By safely confronting reminders of the trauma—with exposure to memories and situations or discussion of the thoughts and beliefs associated with the trauma—the dysfunctional cognition underlying PTSD is modified. A variety of cognitive-behavioral treatments is available[3]; exposure therapy, anxiety management, or cognitive therapy can be used.

Exposure therapy is a set of techniques, such as systematic desensitization and flooding, that help patients to confront their feared objects, situations, memories, or images in safe circumstances. Patients subsequently recognize that their fears are unrealistic. In programs of anxiety management, by using methods such as relaxation training, controlled breathing, positive self-talk and imagery, social skills training, and distraction techniques (such as thought stopping), patients are helped to manage their anxiety. Stress inoculation training (SIT)[4] is a form of anxiety management. Cognitive therapy (CT) aims to help patients change negative, unrealistic cognitions by identifying dysfunctional thoughts and beliefs, challenging these ideas, and replacing them with functional, realistic cognitions.

This article considers how techniques of CBT may be used alone, or in combination, to provide support for patients with PTSD. Particular emphasis is given to prolonged exposure (PE) therapy. This is a specific exposure

therapy program that has been developed and evaluated for the treatment of PTSD.[5–7]

PROLONGED EXPOSURE THERAPY

Therapeutic Programs

In PE therapy, patients attend a series of sessions with a therapist. During these sessions, patients undergo breathing retraining, education about common reactions to trauma, and imaginal exposure to the trauma memory. Between the sessions, in vivo exposure to reminders of trauma is encouraged, together with listening to a tape recording in which the patient describes his/her traumatic event.

Imaginal exposure involves patients recounting traumatic events. By repeatedly doing this, patients eventually organize their memories coherently rather than merely remembering fragments of the situation. Patients may then start to put the event into the past. Negative feelings, such as guilt or shame, that may be associated with the trauma, subsequently diminish when the patient gains new perspective through repeatedly narrating the traumatic event.

In vivo exposure involves patients encountering safe trauma-related situations and objects. Initially, less fearful situations are dealt with; patients subsequently move on to more fearful encounters when they are ready to do so. This helps patients to learn that their avoidance behavior is unnecessary, and they rebuild routine into their daily lives. They may, for instance, initially go to the corner store with their spouse and then gradually progress to going alone into crowded places such as shopping malls.

Program Format

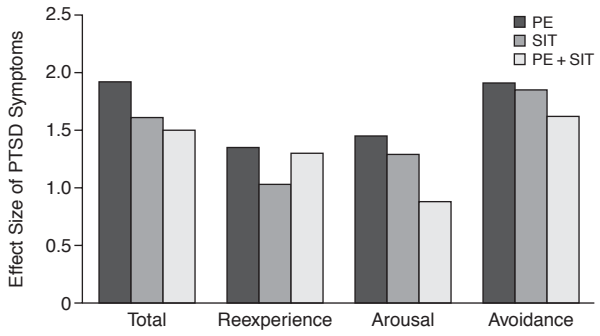
Programs of PE therapy follow a structured format. In the first session, the program is described to the patient, trauma history is discussed, and breathing retraining is introduced. The second session involves a discussion of common reactions to trauma; the rationale for in vivo exposure is introduced, a list of situations avoided by the patient is compiled, and in vivo exposure exercises are assigned. Subsequent sessions introduce the rationale for imaginal exposure, guide the patient through this, and discuss thoughts and feelings related to the traumatic memory. Further in vivo and imaginal exposure exercises are also assigned.

Patients generally receive around 10 to 15 sessions in a program, with the final session further guiding the imaginal exposure, discussing the benefit that has been received from the therapy, and considering the need for any additional treatment relating to other issues.

Effects of PE Therapy

Several clinical studies have analyzed the effects of PE therapy, both alone and in combination with other treatments, for the management of a variety of patients with PTSD.

Figure 1. Posttreatment Effect Sizes[a] of Prolonged Exposure (PE), Stress Inoculation Training (SIT), and PE and SIT Combined in Patients With PTSD[b]

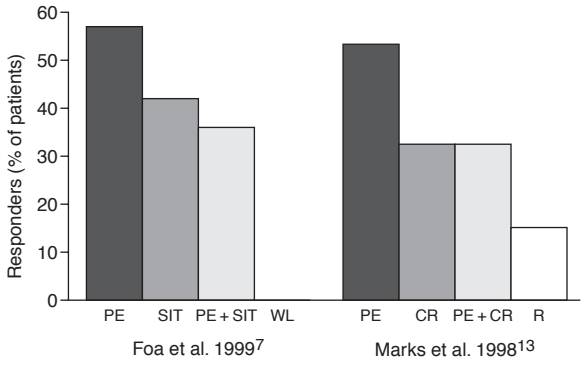


[a]Effect size compared to wait-list group at posttreatment.
[b]Data from Foa et al.[7] and E.B.F., unpublished data, September 1992.
Abbreviation: PTSD = posttraumatic stress disorder.

Foa et al.[7] described a study of 96 female assault victims with a primary diagnosis of chronic PTSD (DSM-III-R criteria[8]). According to these criteria, PTSD symptoms are divided into 3 classes: reexperiencing the trauma, increased emotional arousal, and avoidance of trauma-related stimuli. For a diagnosis of PTSD, patients should have at least 1 symptom of reexperience, 2 symptoms of increased emotional arousal, and 3 symptoms of avoidance. The symptoms should persist for at least 1 month. The women in the study were randomly assigned to be wait-list controls (N = 15) or to receive active treatment with PE (N = 25), SIT (based on a program adapted from Veronen and Kilpatrick,[9] but omitting explicit instructions for in vivo homework; N = 26), or combined treatment (SIT + PE; N = 30). Active treatment comprised 9 twice-weekly individual sessions. Outcome measures included the PTSD Symptom Scale (PSS-I),[10] the Beck Depression Inventory[11] and the State-Trait Anxiety Inventory.[12] The diagnostic status of the patients after treatment was also used as a measure of end-state functioning. It was found that all 3 active treatments reduced the percentage of patients with PTSD compared with wait-list controls.[7]

Another way to assess how well a treatment works is to calculate the degree of symptom reduction occurring from pretreatment to posttreatment (within session effect size) or to calculate the difference between the posttreatment mean symptoms of the treatment of interest (e.g., PE) and the mean of a control group (e.g., wait-list). This calculation produces a posttreatment effect size that indicates how effective the active treatment is compared with nontreatment or a weaker treatment. Posttreatment effect sizes demonstrated that the benefit of treatment with PE therapy alone was greater compared with the other treatment regimens (Figure 1).[7] However, combining PE

Figure 2. Posttreatment End-State Functioning of Patients With PTSD Who Received Prolonged Exposure (PE), Stress Inoculation Training (SIT), Cognitive Restructuring (CR), Relaxation Training (R), or a Combination of These[a]



[a]Data from Foa et al.[7] and Marks et al.[13] Results for wait-list patients (WL; 0%) are also shown.
Abbreviation: PTSD = posttraumatic stress disorder.

therapy with other treatments did not produce any additional benefit. The positive effects of therapy remained apparent at follow-up.

In a study of patients with PTSD resulting from a variety of different traumas,[13] the effects of treatment with PE, cognitive restructuring (CR), CR + PE, or relaxation training were compared. Eighty-seven patients who had been experiencing PTSD (DSM-III-R criteria[8]) for at least 6 months were randomly assigned to receive 10 sessions of exposure therapy (N = 23), CR (based on a program described by Thrasher et al.[14]; N = 19), CR + exposure therapy (N = 24), or relaxation training (N = 21). The treatment program differs from PE in that the first session is devoted to imaginal exposure and the last 5 sessions to in vivo exposure; in PE, imaginal and in vivo exposure are conducted concurrently. The sessions generally took place on a weekly basis. PTSD was assessed using the Clinician-Administered PTSD Scale (CAPS 2),[15] together with the Impact of Event Scale[16] and the self-rated PSS-I. Other self-rated measures used to assess patients' psychological well-being included the Beck Depression Inventory and the State-Trait Anxiety Inventory. The authors reported that PE and CR were both effective when used alone, improving PTSD markedly on a broad front. Both treatments were superior to relaxation training, but they were not mutually enhancing when combined.[13]

In the above studies,[7,13] more patients treated with PE showed good end-state functioning than those who were treated with SIT or CR alone or in combination with exposure therapy (Figure 2). Foa et al.[17] have subsequently described another study that showed similar results. The effects of treating female assault victims with PE alone or PE in combination with CR were analyzed, and both active treatments provided benefit compared to wait-list controls. There was, however, no advantage accrued from providing patients with the more complex treatment regimen. Benefits from treatment remained unchanged at the end of the follow-up period.

Refugees with PTSD have been treated with PE or PE + CR.[18] Sixteen outpatients who fulfilled DSM-IV criteria[19] for PTSD were randomly assigned to receive treatment on an individual basis for 16 to 20 weekly sessions. Patients' PTSD symptoms were assessed with the Clinician-Administered PTSD Scale for DSM-IV[20] together with the self-administered version of the PSS-I and the Impact of Event Scale, Revised.[21] Patients were assessed before and after treatment and at a 6-month follow-up. Large improvements in the symptoms of PTSD were apparent after therapy, and improvements were still evident at the 6-month follow-up. There was no difference between the 2 treatment regimens.

Eye movement desensitization and reprocessing (EMDR) has also been used for the treatment of patients with PTSD.[22] A controlled clinical study has shown PE + SIT to be clinically more effective than EMDR in reducing pathology related to PTSD.[23] The superiority was more evident after a 3-month follow-up period. Rothbaum et al.[24] compared EMDR with PE and wait-list patients whose treatment was delayed for 10 weeks. Both active treatments produced similar improvement in PTSD, depression, and anxiety at a posttreatment assessment, but at a 6-month follow-up, PE was found to be superior to EMDR on several measures.

The results of studies such as those described above[7,13,17,18,23] show that programs of CBT can be effective in the management of patients with PTSD. PE therapy, SIT, and CT can all provide benefits to PTSD patients. Therapy that includes both in vivo and imaginal exposure produces excellent outcomes. However, PE therapy is not enhanced by the addition of SIT or CT. PE is a safe treatment that is accepted by patients, and its benefits remain apparent after programs of therapy have finished.

TRAINING IN THE USE OF CBT

Training Nonspecialists to Use CBT

Nonspecialists can be taught to practice effective CBT. For the treatment of large numbers of patients, or for use in centers where CBT has not been routinely employed previously, appropriate training of mental health professionals should be performed.

After a car bomb exploded in Omagh, Northern Ireland, in 1998, killing 29 people and 2 unborn twins and injuring over 370 other people, National Health Service Staff with modest prior training in CBT received brief training for specialist procedures in PTSD.[25] Ninety-one patients with PTSD (DSM-IV criteria[19]) were subsequently treated with CT, based on a model proposed by

Ehlers and Clark.[26] There were no major exclusion criteria, and patients with comorbidities were included. Patients received a median of 8 sessions of treatment. After therapy, patients showed improvements with regard to PTSD severity, as measured using the Posttraumatic Diagnostic Scale.[27] The authors stated that the degree of improvement observed was comparable to that from a randomized controlled trial, which has recently been reported by Ehlers et al.[28] Consequently, it was concluded that the positive findings obtained in research settings could be obtained in a frontline, nonselective service.

Models for the Dissemination of PE Programs

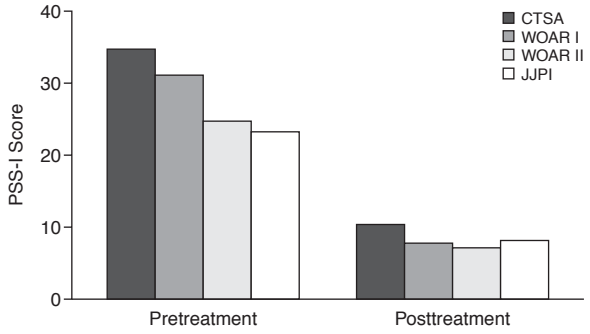
Two models for the dissemination of PE programs have been advanced.[29] In the first of these, therapists who will be administering the treatment receive intensive training followed by direct, ongoing supervision from experts in PE therapy.

This method of training has been assessed in a 6-year study, involving community therapists working with patients from a community rape center in Philadelphia, Pa.: Women Organized Against Rape (WOAR).[17] Prior to the training that was given using the model, these clinics had been providing supportive counseling intended to help recovery from sexual assault. Group therapy aimed to promote recovery through social support and normalization of the reactions to assault. Exercises designed to heal and empower the victims were also being performed.

For dissemination of the PE program, the therapists received initial training given by experts from the Center for the Treatment and Study of Anxiety (CTSA), Philadelphia, Pa., in the form of a 5-day intensive workshop. In a second week of intensive training, the community therapists were taught about CR. The counselors also learned about assessment tools used to measure PTSD, as use of these would enable an evaluation of treatment efficacy to be performed. Each therapist then received supervision from a CTSA expert while completing at least 2 training cases. The therapists subsequently treated patients with PTSD (adult female rape victims and victims of child sexual abuse). Patients received 9 to 12 sessions of PE alone, received PE + CR, or were assigned to a wait list before being given 1 of the 2 active treatments. Throughout the course of the study, the therapists received weekly supervision from a CTSA expert. In addition, 2-day "booster workshops" were held every 6 months for the first 2 years.

In parallel, a similar cohort of patients received treatment from CTSA therapists with expertise in the use of CBT for PTSD.[17] In these patients, it was found that both PE and PE + CR were very effective in reducing the symptoms of PTSD compared with wait-list controls. PE + CR did not produce better results than PE alone.[17] A comparison of the patients receiving therapy at the CTSA with those being treated by the community-based therapists showed no difference in treatment outcome between the 2 sites, thereby demonstrating the effectiveness of the dissemination model.

Figure 3. Effects of PE Treatment on PTSD Assessed Using the PSS-I by Recently Trained Community Counselors Treating Assault Victims in Philadelphia, Pa.[a,b]



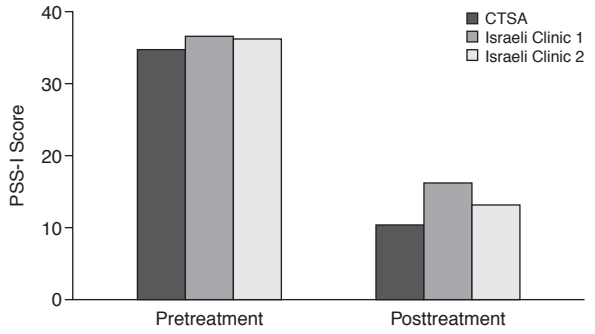
[a]Data from Foa et al.[17] and E. A. Hembree, Ph.D.; E.B.F., unpublished data, September 2001. Results for newly trained counselors at 2 centers (WOAR and JJPI) are compared with results obtained by experienced therapists at the CTSA.
[b]The WOAR I and JJPI results were obtained with the newly trained therapists receiving weekly supervision from a CTSA expert. The WOAR II results show the effects of withdrawing this weekly supervision.
Abbreviations: CTSA = Center for the Treatment and Study of Anxiety, JJPI = Joseph J. Peters Institute, PE = prolonged exposure, PSS-I = PTSD Symptom Scale Interview, PTSD = posttraumatic stress disorder, WOAR = Women Organized Against Rape.

Two additional, and related, dissemination studies are currently being performed (E. A. Hembree, Ph.D.; E.B.F., unpublished data, September 2001 [both studies]). One of these, which is attempting to repeat the success of the initial 6-year study, involves the Joseph J. Peters Institute. This is another center in Philadelphia that provides outpatient treatment for victims of sexual abuse. Members of staff at the institute are receiving similar basic training and intensive supervision to that previously given to the WOAR counselors. In the other study, the weekly supervision of the WOAR therapists by CTSA experts has been withdrawn and replaced by supervision from a WOAR senior clinical staff member. It has been found that the WOAR counselors are still able to provide beneficial therapy. Results from these studies are summarized in Figure 3.

Although these results illustrate that it is possible to disseminate PE programs, the method described above is both labor-intensive and costly, requiring experts to be on-site. Consequently, such training may be limited to regions where experts are readily available.

An alternative model for disseminating PE programs has also been developed.[29] This aims to reduce the involvement of experts and is therefore less expensive. It can also enable training to take place in regions of the world that did not previously have access to local expertise in PE therapy. Community clinicians travel to expert clinics to learn how to use CBT treatments. They subsequently return to their

Figure 4. Effects of PE Treatment on PTSD Assessed Using the PSS-I by Recently Trained Therapists Treating Combat Veterans or Attack Victims in Israel[a]



[a]Data from Foa et al.[17] and N. Nacasch, M.D.; E.B.F.; L. Fostick, M.A.; et al., unpublished data, June 2002. Results from newly trained therapists in 2 clinics in Israel are compared with results obtained by CTSA experts.
Abbreviations: CTSA = Center for the Treatment and Study of Anxiety, PE = prolonged exposure, PSS-I = PTSD Symptom Scale Interview, PTSD = posttraumatic stress disorder.

communities to train and supervise local health professionals in the delivery of these techniques. Although experience with this second model is currently more limited than with the first method of dissemination, initial evidence suggests that it can be successful. Community supervisors from Israel given 2 weeks of training at an expert clinic have subsequently assisted CBT experts in training community therapists in Israel (N. Nacasch, M.D.; E.B.F.; L. Fostick, M.A.; et al., unpublished data, June 2002). The newly trained therapists then treated PTSD patients (combat veterans or victims of attacks) while receiving guidance from the community supervisors. Results from 2 clinics have confirmed that patients treated by the newly trained therapists have received effective therapy for treatment of both PTSD (Figure 4) and depression. Such results validate the efficacy of this training model and illustrate that training over long distances can be successfully accomplished. By creating a local culture of expertise, patients with PTSD can be treated with PE programs without the extensive involvement of outside experts.

The models described above demonstrate that clinicians who are not experts in CBT can, within a short period of time, be taught to successfully implement programs of PE. Furthermore, clinicians can be trained to pass on these techniques such that the consequent reduction of expert involvement in supervision and/or training does not decrease treatment efficacy.

CHALLENGES FACED AFTER THE ASIAN TSUNAMI

Studies have shown CBT, particularly PE, to be effective for the treatment of PTSD.[7,13,17,18,23] The use of CBT may therefore prove valuable in treating patients who have PTSD as a consequence of the Asian tsunami. In this respect, treatment should be directed appropriately, being given to people who do not recover from the trauma of the event on their own. One to 2 weeks should elapse before therapy is commenced, so that patients are given time to have some stabilization of their environment before they receive treatment. If after 2 weeks the symptoms are still quite severe and there is no evidence of symptom reduction and/or there is an increase in symptom severity, treatment should be offered to the person.

Through the implementation of successful dissemination methods, techniques of CBT suitable for the treatment of PTSD can be successfully adopted by nonexperts.[26] Of interest, PE has been successfully delivered not only in western countries, such as the United States and Israel, but also to patients in both Japan and Korea without medication after their therapists participated in a 4-day training session in the United States and Israel. However, the therapists in both countries were psychiatrists, psychologists, and social workers who are familiar with Western psychology and psychiatry, and several have studied in the United States. Additionally, most of the patients were educated and belonged to the middle class. However, given the huge number of individuals affected by the Asian tsunami, treatment will have to be delivered not only by mental health professionals but also by community leaders, such as teachers, who will need to be trained by them. Also, the patients are likely to have different educational levels and diverse cultural backgrounds. Thus, the methods that have been used in the United States and Israel, and even in Japan and Korea, may need to be modified to meet the requirements of countries affected by the Asian tsunami. This will entail the use of culturally sensitive materials and the adaptation of training methods to enable large numbers of mental health professionals to be trained together and to enable the training of paraprofessionals.

Disclosure of off-label usage: The author has determined that, to the best of her knowledge, no investigational information about pharmaceutical agents that is outside U.S. Food and Drug Administration–approved labeling has been presented in this article.

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