Empirically supported psychological treatments for adult acute stress disorder and posttraumatic stress disorder: a review

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CRD summary
The authors concluded that trauma-focused cognitive behavioural therapy and eye movement desensitisation and reprocessing were the psychological treatments of choice for post-traumatic stress disorder, but further research in different populations was needed. Given uncertain quality of the studies, potential for bias and paucity of evidence for other treatments, the authors' conclusions regarding treatment choice should be interpreted with caution.

Authors' objectives
To assess the evidence on psychological treatments for acute stress disorder and post-traumatic stress disorder (PTSD) in adults.

Searching
PubMed and PsycINFO were searched to the end of 2008 for English-language publications. Search terms were reported.

Study selection
Randomised controlled trials (RCTs) that compared the effects of psychological treatments with waiting list or an alternative control/treatment in adults with PTSD or acute stress disorder were eligible for inclusion. Eligible trials were required to report change in acute stress disorder or PTSD symptoms and/or diagnosis. Interventions were categorised as cognitive-behaviour therapy (CBT) (individual trauma-focused CBT involving exposure and/or cognitive restructuring, group CBT, stress management involving a mixture of techniques or predominantly relaxation training), eye movement desensitisation and reprocessing (EMDR) or other therapies (such as family therapy, hypnotherapy, psychotherapy, supportive counselling). Studies of treatments that assessed combined outcomes (such as PTSD and panic) were excluded.

Included trials were of patients with different types of trauma, classified as: assault and/or abuse; combat veterans; mixed; natural disaster victims; police officers; political detainees; refugees; road traffic accident victims; and victims of terrorism. The number of treatment sessions ranged between one and 34. Where reported, time since trauma ranged from three months to 58.3 years. Alternative controls/treatments included no treatment monitoring, repeated assessments, minimal attention, psycho-education, treatment as usual, supportive counselling, stress management, trauma counselling, trauma-focused cognitive restructuring alone or in combination with exposure, EMDR, psychodynamic therapy and hypnotherapy.

The authors did not state how many reviewers screened studies for inclusion.

Assessment of study quality
The authors did not state that they assessed study validity, but they reported the number of patient withdrawals.

Data extraction
The authors did not state how data were extracted. It appeared that results were extracted as reported in the primary studies.

Methods of synthesis
Data were presented as a narrative and in tables for all trauma types and separately for each trauma group (mixed trauma patients excluded). Interventions were classified according to Chambless and Hollon's criteria: efficacious and specific (evidence of superiority to a placebo or alternative treatment in two or more independent research settings); efficacious (evidence of superiority to no treatment in two or more settings); possibly efficacious (evidence of efficacy from one study or if all research had been carried out in one setting); and lacking evidence of efficacy.
Results of the review
Fifty-seven RCTs (n=3,947, range 12 to 360) were included in the review. Dropout rates varied between trials and were reported in the review.

Post-traumatic stress disorder: Individual trauma-focused CBT with an emphasis on exposure (25 RCTs) showed greater improvements in PTSD symptoms compared with waiting list (six RCTs), psycho-education (two RCTs) and no treatment monitoring, repeated assessments, minimal attention and treatment as usual (one RCT each). Nine RCTs reported maintenance of treatment gains up to one year of follow-up. One RCT reported maintenance at five-year follow-up.

Individual trauma-focused CBT with cognitive restructuring (four RCTs): Two RCTs showed a reduction in PTSD symptoms. One RCT showed maintenance up to five years.

Trauma-focused CBT with cognitive restructuring plus exposure (25 RCTs) showed significant improvements in PTSD symptoms compared to waiting list (12 RCTs), minimal attention (one RCT) and repeated assessments and a self-help booklet (one RCT). Improvements were generally maintained up to 12 months follow-up (12 RCTs). Reductions in PTSD symptoms were similar for combined trauma-focused CBT and paroxetine (a selective serotonin reuptake inhibitor) in mixed trauma patients (one RCT).

Stress management (six RCTs): Two RCTs showed significantly greater improvements in PTSD symptoms in assault survivors who received stress inoculation training compared to waiting list; this was maintained at 12-month follow-up in one RCT. Relaxation training was significantly less beneficial compared to trauma-focused CBT with exposure (two RCTs), cognitive restructuring of maladaptive trauma-related beliefs (one RCT) or a combination of both (two RCTs) in assault or abuse and mixed trauma patients.

Group CBT (three RCTs): CBT alone or in combination with individual trauma-focused CBT showed significantly greater reductions in PTSD symptoms compared to waiting list (one RCT) or a minimal attention waiting list condition (one RCT) in survivors of childhood abuse. One RCT showed improved outcomes in refugees who received group CBT plus selective serotonin reuptake inhibitor sertraline.

EMDR (13 RCTs): EMDR showed greater reduction in PTSD symptoms compared to waiting list (four RCTs), standard care (two RCTs) and pill placebo (one RCT) in assault survivors, combat veterans and mixed trauma patients. At six months follow-up EMDR showed greater reduction in PTSD symptoms compared to fluoxetine (one RCT). Conflicting findings were reported for EMDR compared to stress management involving relaxation (two RCTs) and mixed findings were reported for EMDR compared to trauma-focused CBT (seven RCTs).

Other psychological treatments: No statistically significant differences in PTSD symptoms were reported for family therapy in patients with combat-related PTSD (one RCT). One RCT showed significant improvements in survivors of assault or abuse who received group interpersonal therapy compared to waiting list; this was no longer significant at four months follow-up. Mixed findings were reported for supportive counselling (eight RCTs).

Acute stress disorder: Trauma-focused CBT alone or in combination with hypnosis was significantly more effective in preventing PTSD in mixed trauma patients with acute stress disorder compared to supportive counselling (one RCT). This remained up to three-year follow-up. Another RCT showed greater benefit with imaginal and in vivo exposure compared to waiting list and cognitive restructuring in a similar population.

The number of patients no longer meeting diagnostic criteria for PTSD was reported in the review.

Authors' conclusions
Trauma-focused CBT and to a lesser extent EMDR (due to less evidence) were the psychological treatments of choice for PTSD. Further research on therapies for PTSD in different populations are needed.

CRD commentary
The review question was clear and supported by appropriate inclusion criteria. The literature search was limited to two databases and was restricted to English-language publications, so potentially relevant studies may have been missed. The...
authors did not state that they formally assessed study validity, so the quality of the included RCTs was unclear. The authors did not state whether each stage of the review process was undertaken in duplicate, so reviewer error and bias could not be ruled out. A narrative synthesis was appropriate given the variability among study populations and methods. It was difficult to interpret the findings as significance levels were not reported. Only a small number of studies were included in a number of treatment comparisons; trauma-focused CBT and EMDR provided the most evidence. Given these limitations, the authors’ conclusions should be interpreted with caution, although their recommendation for further research seems appropriate.

**Implications of the review for practice and research**

**Practice**: The authors did not state any implications for practice.

**Research**: The authors stated that further research was needed to determine the relative efficacy of different psychological treatments in different populations and establish the efficacy of trauma-focused CBT and EMDR in different trauma groups.

**Funding**
Josiah Macy Jr Foundation (Grant 1003551); National Institute of Mental Health (Independent Scientist Award MH01697).

**Bibliographic details**
Ponniah K, Hollon SD. Empirically supported psychological treatments for adult acute stress disorder and posttraumatic stress disorder: a review. Depression and Anxiety 2009; 26(12): 1086-1109

**PubMedID**
19957280

**DOI**
10.1002/da.20635

**Original Paper URL**

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Cognitive Therapy /methods; Empiricism; Evidence-Based Medicine; Eye Movement Desensitization Reprocessing /methods; Humans; Psychotherapy /methods; Randomized Controlled Trials as Topic; Research; Stress Disorders, Post-Traumatic /diagnosis /psychology /therapy; Stress Disorders, Traumatic, Acute /diagnosis /psychology /therapy; Treatment Outcome

**AccessionNumber**
12010001587

**Date bibliographic record published**
22/09/2010

**Date abstract record published**
19/01/2011

**Record Status**
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.