Evidence-based psychosocial treatments for children and adolescents exposed to traumatic events

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CRD summary
This review evaluated psychosocial treatments for children and adolescents who had been exposed to traumatic events and concluded that there was modest support for cognitive behaviour therapy-related interventions. In light of uncertainty over the methods used in the synthesis this conclusion should be treated with caution.

Authors’ objectives
To review the evidence base for psychosocial treatments for children and adolescents exposed to traumatic events.

Searching
MEDLINE, PsycINFO and PILOTS were searched between 1993 and 2007. Manual searches of six journals were undertaken. Reference lists of retrieved articles and reviews were searched for additional studies. Search terms were reported. It was unclear whether language restrictions were applied.

Study selection
Randomised controlled trials (RCTs) that evaluated psychosocial treatments for use with children and adolescents who had been exposed to traumatic events were eligible for inclusion. Studies that evaluated pharmacotherapy and massage therapy were excluded. A broad range of psychosocial treatments were included, such as various types of cognitive-behavioural therapy (CBT) and group therapy. Some interventions involved parents as well as children. The type of trauma in included studies comprised violence, sexual abuse, physical abuse/neglect, marital violence, motor vehicle accidents and a hurricane. The age of participants ranged from two to 18 years. The proportion of girls ranged from 0% to 100%. The number of sessions, of differing durations, ranged from one to 50. The most frequently reported outcomes were post-traumatic stress disorder and post-traumatic stress symptoms (PTSS), depressive symptoms, anxiety symptoms and internalising and externalising behaviour problems. Additional outcomes were reported.

Three reviewers assessed studies for inclusion in the review and any disagreements were resolved through consensus with the research group.

Assessment of study quality
Methodological rigour was assessed using Nathan and Gorman’s (2002) criteria, which ranged from Type 1 (most methodologically rigorous) to Type 6 (least methodologically rigorous). Included studies comprised Type 1 (those with adequate randomisation, blinding, clear inclusion and exclusion criteria, state-of-the-art diagnostic methods, sufficient study power and description of statistical methods) and Type 2 (some aspects missing, but not considered fatally flawed). Levels of evidence were assessed according to criteria by Chambless et al. (1998).

The authors stated neither how the validity assessment was performed nor how many reviewers were involved.

Data extraction
Pre- and post-treatment means, pre- and post-treatment standard deviations and sample sizes for all treatment groups were extracted into a database and effect sizes (ES) calculated.

Three reviewers extracted the data; any disagreements were resolved through consensus with the research group.

Methods of synthesis
Effect sizes weighted by sample size, and 95% confidence intervals (CIs) were combined in meta-analyses for each outcome compared with waiting list and active control conditions combined. Heterogeneity between studies was
assessed using the Q statistic. Risk of publication bias was assessed by calculating a fail-safe N (number of studies with null results needed to reduce the effect size to a non-significant level). The influence of type of treatment (CBT or other), type of trauma and parental involvement was investigated.

**Results of the review**

Twenty-three studies (n=1,813) were included in the review, 16 of which were Type 1 studies and seven were Type 2 studies.

Average effect sizes for treatment versus controls were 0.43 (PTSS), 0.24 (depression), 0.09 (anxiety) and 0.22 (externalising behaviour problems), which suggested moderate clinical effects for these outcomes. Significant treatment effects were found for PTSS for cognitive behavioural therapy (CBT) interventions (ES 0.50, 95% CI 0.03 to 0.98; n=1,320) and sexual abuse interventions (ES 0.46, 95% CI 0.14 to 0.79; n=1,052). Non-significant results for other outcomes were reported.

Moderating influences were assessed: use of CBT interventions were superior to non-CBT interventions (ES 0.24 versus 0.02); for externalising behaviour problems sexual abuse treatments were found to be less effective than treatments for other trauma types (ES 0.19 versus 0.28); and including parents in their children's treatment improved treatment effects for anxiety and depression. The only well-established treatment that was superior to psychosocial placebo or another treatment was trauma-focused CBT; school-based CBT was also considered to meet probably efficacious criteria.

Fail-safe N ranged from 5 to 83.

**Authors’ conclusions**

There was modest support for psychosocial treatments for child and adolescent trauma and its common sequela, most evidently for CBT-related interventions.

**CRD commentary**

The objective and inclusion criteria were clear. The authors searched a number of relevant databases and other sources, although it was unclear whether language restrictions were applied and unpublished material was not sought. The fail-safe N statistic was used to investigate publication bias, but the authors did not provide any interpretation and the significance of the results was unclear. More than one reviewer was involved in study selection and data extraction. An appropriate assessment of between-study heterogeneity was undertaken. An assessment of the methodological quality of the included studies was undertaken, but it was unclear how many authors were involved in the process. Given the heterogeneity between studies the decision to employ a narrative synthesis of the psychosocial treatment studies was appropriate. The process for synthesising the results through a meta-analysis was not fully reported and given the significant levels of heterogeneity across analyses pooling of effect sizes may not have been appropriate. This, in conjunction with uncertainty over publication bias and over the validity assessment, suggests that the authors’ conclusions should be treated with caution.

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

**Practice:** The authors stated that CBT had the best evidence for efficacy in young people who had been exposed to traumatic events.

**Research:** Nine recommendations detailed in full in the report included: improving measurement; enhancing statistical power; handling treatment non-completers, missing data and outliers; conducting follow-up assessments; tailoring treatment for minority representation; evaluating treatment integrity; predictor, moderator and mediator analyses; identifying which treatment components are essential; and replication and adaptation research.

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