
Efficacy of EMDR in children: a meta-analysis

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CRD summary

The authors concluded that eye movement desensitization and reprocessing was efficacious in treating post-traumatic stress disorder symptoms in children. The review had methodological and reporting flaws and used limited evidence from diverse small studies of unknown quality. The authors' conclusions should be interpreted with caution.

Authors' objectives

To assess the efficacy of eye movement desensitization and reprocessing in children with post-traumatic stress symptoms.

Searching

PsycINFO, MEDLINE, ERIC and Social Sciences Citation Index databases and Google Scholar were searched. Search terms were reported, but dates were not. References lists of relevant studies and reviews were searched. Authors of some included studies were contacted to enquire about any unpublished studies.

Study selection

Randomised controlled trials (RCTs) of children (up to 18 years old) with post-traumatic stress reactions that compared eye movement desensitization and reprocessing versus an established treatment, usual care or waiting-list control and reported post-treatment trauma scores were eligible for inclusion.

Several different scales were used to measure symptoms in children aged between four and 18 years who experienced various types of traumatic event; only two studies reported that they used DSM-IV diagnosis. The number of treatment sessions ranged between three and eight. The only established treatment used for control groups was cognitive behavioural therapy (other control groups received treatment as usual or waiting list care).

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

Assessment of study quality

The authors did not state that they assessed study quality.

Data extraction

Data were extracted in order to calculate effect sizes (Cohen's *d*) and 95% confidence intervals (CI) for studies' last assessments. Authors of studies were contacted for further data when necessary.

The authors did not state how many reviewers extracted data.

Methods of synthesis

Effect sizes were combined using fixed-effect model meta-analysis. Heterogeneity was assessed using the *Q* statistic. Sensitivity analyses were performed to examine the effect of year of publication, percentage of completers, gender, age, number of sessions, type of control, follow-up, flexibility sessions and type of informant. Publication bias was assessed by calculating the fail-safe number.

Results of the review

Seven RCTs were included in the review (*n*=209). Sample sizes ranged from 14 to 39 participants.

The overall mean effect size for the effect of eye movement desensitization and reprocessing on post-test trauma status was medium and significant (*d*=0.56, 95% CI 0.42 to 0.70; seven studies). This result was found to be significantly heterogeneous (*p*<0.001), although there was no evidence of publication bias (fail-safe number=145).

Sensitivity analyses indicated effect sizes were lower in more recent studies and in trials with more completers. Studies that used fewer sessions or used both parent and children reporting (rather than children alone) were associated with larger effect sizes.

Further results (including exploration of the influence of other variables) were reported.

Authors' conclusions

Eye movement desensitization and reprocessing was efficacious in treating post-traumatic stress disorder symptoms in children.

CRD commentary

The review addressed a clear question supported by appropriate eligibility criteria. Several electronic databases were searched and authors were contacted about any relevant unpublished studies. However, it was not stated whether the search was restricted by language or date, so it was possible that some relevant trials may have been missed. No details were provided on whether any methods (such as independent, duplicate procedures) were used to reduce risks of reviewer error and bias throughout the review process. Study quality was not assessed, which made it difficult to evaluate the reliability of the RCTs. Use of a fixed-effect model to pool results appeared questionable as there was significant statistical and clinical heterogeneity. Various methods were used to explore potential sources of this heterogeneity. The review had methodological flaws and conclusions were based on small diverse studies of unknown quality. The authors' conclusions should be interpreted with caution.

Implications of the review for practice and research

The authors did not state any implications for practice.

Research: The authors made several recommendations, which included stating that more multicentre RCTs with larger sample sizes were needed. Research was also needed on the mechanisms of eye movement desensitization and reprocessing and on procedural differences when compared to cognitive behavioural therapy.

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