Comparing the efficacy of EMDR and trauma-focused cognitive-behavioral therapy in the treatment of PTSD: a meta-analytic study

Seidler G H, Wagner F E

CRD summary

The authors concluded that review findings suggest that eye movement desensitisation and reprocessing and trauma-focused cognitive-behavioral therapy are equally effective for the treatment of post-traumatic stress disorder. Incomplete reporting of review methods and unexplained differences between the results from individual studies mean that the reliability of the authors' conclusions is unclear.

Authors' objectives

To compare eye movement desensitisation and reprocessing (EMDR) and trauma-focused cognitive-behavioral therapy (CBT) for the treatment of post-traumatic stress disorder (PTSD).

Searching

PSYNDEX, PsycINFO, MEDLINE and PILOTS were searched using the reported keywords.

Study selection

Study designs of evaluations included in the review

Randomised controlled trials (RCTs) were eligible for inclusion in the review. The duration of follow-up in the included studies ranged from 3 to 15 months.

Specific interventions included in the review

Studies that compared EMDR (based on Shapiro's 1995 standard protocol) with a 'manualised' CBT method that predominantly used 'exposure' were eligible for inclusion. The included studies used between three and nine treatment sessions.

Participants included in the review

Studies of adults (aged 18 years or more) with PTSD diagnosed using the American Psychiatric Association's DSM-III-R, DSM-IV or DSM-IV-TR criteria were eligible for inclusion. Over all of the included studies, the mean age was 35.4 years and 65% of the participants were women.

Outcomes assessed in the review

Studies that reported the number of patients per treatment group, sufficient data to permit the calculation of an effect size (ES), and used a valid and reliable measure of post-traumatic symptoms were eligible for inclusion. The review assessed PTSD symptoms and depression. The included studies used three different clinician-rated outcome measures and six different self-rated outcome measures (details were reported).

How were decisions on the relevance of primary studies made?

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality

Validity was assessed using the following criteria described by Foa and Meadows (1997): clear definition of target symptoms; reliable and valid measures; blind outcome assessment; assessor reliability; and treatment fidelity. Drop-outs were also recorded. The authors did not state how the validity assessment was performed.

Data extraction

The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

For each study, two ESs (Hedges' d) were calculated: the post-treatment effect size adjusted for baseline differences and the treatment effect size at follow-up adjusted for baseline differences. ESs were calculated separately for self-

rated PTSD, clinician–rated PTSD and depression. Where studies reported more than one measure of the same outcome, an average ES was calculated. It appears that one global PTSD measure was also calculated for each study. For some studies, authors were contacted for the required data. Data were extracted for patients who completed treatment (completers).

Methods of synthesis

How were the studies combined?

The Hedges and Olkin method, weighting studies by the inverse of the variance, was used to calculate a pooled ES for global PTSD symptoms and 'depression'.

How were differences between studies investigated?

Statistical heterogeneity was assessed using the chi-squared statistic.

Results of the review

Eight eligible studies were identified. One eligible study was subsequently excluded; the authors stated that it primarily examined the process and did not assess long-term efficacy.

Seven studies (209 completers) were included in the meta-analysis.

Four studies reported some blinding of the outcome assessor. Six studies were considered to have treatment fidelity. Two studies reported assessor reliability. The authors noted that some studies had high drop-out rates.

There were no statistically significant differences between EMDR and CBT in PTSD symptoms either at post-treatment (ES 0.28, 95% confidence interval, CI: -0.06, 0.63; based on 209 patients) or follow-up (ES 0.13, 95% CI: -0.28, 0.55; based on 163 patients). Statistically significant heterogeneity was detected for both analyses (p=0.03 and p=0.04, respectively).

EMDR was associated with a significant improvement in depression compared with CBT at post-treatment (ES 0.40, 95% CI: 0.05, 0.76; based on 209 patients), but there was no significant difference between treatments at follow-up (ES 0.12, 95% CI: -0.24, 0.48; based on 193 patients). No sstatistically significant heterogeneity was detected for either analysis (p=0.17 and p=0.33, respectively).

Authors' conclusions

Review findings suggest that EMDR and CBT are equally effective for the treatment of PTSD.

CRD commentary

The review addressed a clear question that was defined in terms of the participants, intervention, outcomes and study design. Several relevant sources were searched, but no specific attempts to locate unpublished studies were reported and it was unclear whether any language restrictions had been applied. The methods used to select studies, assess validity and extract the data were not described, so it is not known whether any efforts were made to reduce reviewer error and bias. Validity was assessed using specified criteria and the results of this assessment reported. Adequate information about the included studies was given. Statistical heterogeneity was assessed but where significant heterogeneity was found for PTSD symptoms, potential reasons were not examined. The review found that there were no significant differences between treatments, but this is not the same as evidence that both treatments were equally effective. Incomplete reporting of review methods and differences between the studies mean that the reliability of the authors' conclusions is unclear.

Implications of the review for practice and research

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

Research: The authors stated that future research should, in addition to comparing the effectiveness of EMDR with manualised trauma-focused CBT in adequately powered RCTs, seek to identify which patients may benefit from EMDR or CBT.

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