A meta-analytic investigation of therapy modality outcomes for sexually abused children and adolescents: an exploratory study
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CRD summary
This review assessed the effects of psychological therapies on secondary problems in sexually abused children. There was great variability between the studies, but the results indicated that treatment was more effective than no treatment, and certain forms of therapy are more likely to address given secondary problems than others. Long-term effects were uncertain. Despite some methodological flaws, the conclusions appear reliable.

Authors' objectives
To investigate the independent effects of different treatment elements on a number of secondary problems related to childhood and adolescent sexual abuse, and to investigate the effect of a number of moderators on treatment effectiveness.

Searching
PsycINFO, Social Science Abstracts and MEDLINE were searched for studies published between 1975 and 2004; the search terms were listed. The search was restricted to English language articles published in a peer-reviewed journal. The search was supplemented by the examination of reference lists of relevant empirical studies and review articles.

Study selection
Study designs of evaluations included in the review
Studies were eligible if they used a pre-test post-test design and had a sample size of at least 10.

Specific interventions included in the review
Studies were eligible if they assessed therapies for sexually abused children or adolescents. The treatment modalities used in the individual studies included individual therapy, group therapy, cognitive-behavioural therapy, abuse-specific therapy, supportive therapy, family therapy, no treatment, play therapy, and eye movement desensitisation and reprocessing, or several treatment modalities in combination.

Participants included in the review
To be eligible, studies needed to include sexually abused children or adolescents aged between 3 and 18 years. Where reported, the mean age of the participants ranged from younger than 6 years to older than 12 years, and most included only female, or both female and male participants. Where reported, between 2 and 100% of the participants were nonwhite and in 19 to 100% of cases the perpetrator of the abuse was inafamial.

Outcomes assessed in the review
Studies reporting sexual abuse treatment outcomes and providing enough statistical information to enable the computation of effect sizes were eligible for inclusion. Child and adolescent outcomes (or secondary problems) were assessed with respect to social functioning, behaviour, psychological distress, self-concept and 'other' problems (including level of academic functioning and risk assessment abilities).

How were decisions on the relevance of primary studies made?
The authors did not state how the studies were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Study quality ratings were based on sample size (greater or less than 40), use of random assignment to treatment or
control groups, and use of a comparison group. Three authors independently assessed quality; in the case of disagreement, consensus was reached through discussion.

Data extraction
Three authors independently extracted the data; in the case of disagreement, consensus was reached through discussion. The mean pre- and post-test measures for each treatment were extracted, and a d-value calculated, for each study. Only immediate post-test results were extracted.

Methods of synthesis
How were the studies combined?
The effect sizes for each study were averaged to obtain an overall effect size. Effect sizes were categorised as small (0.2), medium (0.5) or large (0.8). The results were weighted by sample size. Publication bias was assessed using a funnel plot analysis and by the Rosenthal method.

How were differences between studies investigated?
Heterogeneity was assessed using the Q statistic. The pooled effect sizes for child, abuse and therapy characteristics were analysed to determine how sample size, age, ethnicity, gender, and relationship to the perpetrator of the victim (intra- or extrafamilial) moderated the overall mean weighted effect size.

Results of the review
Twenty-eight studies (n=1,839) were included in the review.

In terms of quality, of the 28 included studies, 12 were randomised trials, 21 were controlled, and 16 had a sample size over 40.

Effectiveness.

The overall mean weighted effect size (d) of any therapy was 0.72 (standard error 0.02; range: -0.20, 2.08, p<0.001). There was significant heterogeneity between the studies (p<0.001). No significant effects of study quality, coder or coding time on overall effect size was found.

There was a significant difference in the mean weighted effect size between treatment groups (d=0.74) and no treatment groups (d=0.46; p<0.001). Significant heterogeneity (p<0.001) was found for both treatment and no treatment groups.

There were moderate mean effect sizes for social functioning (d=0.48) and large effects for behaviour, psychological distress, self-concept and 'other' outcomes (including academic functioning and risk assessment) (d=1.60, d=1.05, d=0.71 and d=1.49, respectively). For each of the outcome measures, significant heterogeneity remained (p<0.01 to 0.001).

Effect sizes (d) above 0.8 were achieved by cognitive-behavioural therapy, play therapy, supportive therapy, group therapy and abuse-specific therapy.

Effect sizes over 1 were reported for behaviour outcomes (supportive, group and abuse-specific therapies), psychological distress outcomes (cognitive-behavioural therapy, abuse-specific therapy, individual therapy and family therapy), self-concept outcomes (group therapy and no treatment) and other outcomes (play therapy, supportive therapy, group therapy and abuse-specific therapy). For social functioning, the largest effect size was achieved by play therapy (d=0.72).

Moderator analyses.

No significant effects were found for age or gender of the participants or therapist training. Significant moderator effects were reported for ethnicity (effect sizes increased with an increasing proportion of non-Caucasians; p<0.001).
intrafamilial abuse (effect sizes smaller with a greater proportion of intrafamilial abuse; p<0.002), and numbers of therapy sessions and duration of treatment (greater effects were seen with more sessions and longer duration; p<0.001).

No significant funnel plot asymmetry was found. The number of non significant studies needed to reduce the overall effect size to below statistical significance was 22.

Authors' conclusions
Treatment of sexual abuse in children seemed to have a greater effect on secondary problems than no treatment, but there was variability across treatments and secondary problems. The choice of therapy should depend on the child's main presenting secondary problem.

CRD commentary
This review had clearly stated inclusion criteria with respect to the study design, participants, interventions and outcomes. The authors searched relevant databases and made efforts to identify supplemental information, and publication bias was assessed. However, non-English studies were excluded, leading to the potential for language bias. The data extraction and quality assessment processes were conducted in duplicate, thus reducing the potential for error and bias. However, it is unclear whether the same precautions were taken at the study selection stage.

Study details were tabulated, and demonstrated the clinical heterogeneity between the included studies. Therefore, pooling the results of these studies might not have been appropriate. There were no direct head-to-head comparisons of the different treatment modalities being evaluated. The authors acknowledged that the analyses were often based on a small number of underpowered studies, and that many studies were poorly reported. Given the limitations of the available evidence, the conservative conclusion drawn by the authors, and the recommendation for further research, seem appropriate and reliable.

Implications of the review for practice and research
Practice: The authors stated that the most beneficial treatment for a child was likely to be child-specific and depend on the child's main secondary problems (e.g. behavioural problems, psychological distress).

Research: The authors stated that more research investigating additional possible effect moderators should be performed. They also stated that future studies should use larger sample sizes, and that study methodology and sample characteristics should be reported more clearly.

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