Effectiveness of psychosocial intervention for children and adolescents with comorbid problems: a systematic review

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CRD summary
The review concluded that psychosocial interventions effectively reduced internalising and externalising problems in children and adolescents with comorbidity. Due to potential biases in the review, the heterogeneous and limited evidence base and absence of direct comparisons, the reliability of the authors’ conclusions is not clear.

Authors’ objectives
To assess the effectiveness of psychosocial interventions to treat comorbidity in children and adolescents.

Searching
PsycINFO, MEDLINE and ERIC were searched from 1994 to August 2009 for relevant studies published in English; search terms were reported. The reference lists of retrieved studies were handsearched.

Study selection
Randomised trials (either clinical or controlled) of individuals between the ages of three and 18 years with one DSM-IV diagnosis and at least one additional impairment, experiencing any type of psychosocial intervention, were eligible for inclusion in the review. Studies had to include externalising and/or internalising behaviours, and/or psychosocial functioning measures plus pre- and post-assessment points for at least one of the comorbid problems. Trials of pharmacological interventions were included if there was a psychosocial intervention group.

Included participants were diagnosed with a variety of disorders, such as: conduct disorder; oppositional defiant disorder; disruptive behaviours; anxiety-based school refusal; anxiety; post traumatic stress disorder; depression. Comorbid conditions included: substance abuse/dependence; mild to moderate mental retardation; anxiety; depression; attention deficit/hyperactivity disorder; high functioning autism; obsessive compulsive disorder; panic disorder; school phobia; conduct disorder; aggression. Psychosocial interventions were delivered in individual, family or group format. Some trials compared different types of psychosocial intervention and other trials compared psychosocial interventions with control groups which included wait list, standard care, treatment as usual or medication. Outcomes were measured by a wide range of assessment tools (reported in the publication). Studies were mostly conducted in community clinics but one trial used a school setting.

Two reviewers independently selected studies for the review, disagreement were resolved by consensus.

Assessment of study quality
Studies were assessed for quality using the Cochrane risk of bias tool; criteria included sequence generation, allocation concealment, blinding, incomplete outcome data, selective outcome reporting and other bias. Overall scores were calculated, a maximum of 12 points indicated low risk of bias.

Two reviewers independently assessed studies for quality; disagreements were resolved by discussion and consensus.

Data extraction
Data were extracted on outcomes and Cohen d effect sizes were calculated. Effect sizes of 0.8 were considered large, 0.5 medium, 0.2 small, 0.0 no effect and d below 0.0 harmful. The effect sizes for each outcome represented the difference between post intervention and baseline scores and, where possible, between baseline and follow-up.

The authors did not state how many reviewers extracted data.

Methods of synthesis
Studies were synthesised in narrative format and the findings for each study displayed in tables. Summary results were presented in the text according to categories of outcomes (externalising or internalising behaviours and psychosocial...
functioning). Results were presented by type of psychosocial intervention (individual-based, family-based or group-based) and by type of comorbidity; either homotypic (disorders of the same diagnostic grouping) or heterotypic (co-occurring disorders not belonging to the same diagnostic grouping).

Results of the review
Ten randomised trials (537 participants, ranging from 15 to 136) were included in the review. The average overall quality score was 7.4 (ranging from 5 to 10). Most studies had small sample sizes, ranging from 15 to 45 participants in the active treatment group. Two studies did not include formal measures of treatment fidelity and only one had a sample size calculation. Six studies reported analyses accounting for attrition. It appeared that results were only presented for groups that received psychosocial interventions.

The mean effect size for outcomes categorised as externalising behaviour was 1.12 and for outcomes categorised as internalising behaviour 1.09.

In studies that reported significant psychosocial outcomes, mean effect size for psychosocial functioning was 0.40.

The mean effect size for family-based interventions was 1.8, for individual-based interventions 0.78 and for group-based interventions 0.54.

Average treatment effects were larger for homotypic comorbidity (1.18) than for heterotypic comorbidity (0.57).

Six out of 10 trials included post intervention follow-ups at three, six and 12 months post-intervention. Effect sizes for internalising and externalising behaviours ranged from -0.53 to 0.33 at three months, from -0.15 to 0.48 at six months and from -0.21 to 1.08 at 12 months follow-up.

Authors’ conclusions
Psychosocial interventions effectively reduced internalising and externalising problems in children and adolescents with comorbidity.

CRD commentary
The review addressed a clear research question, supported by appropriate but broad inclusion criteria. Relevant sources was searched for studies published in English, but the authors did not report any specific attempts to identify unpublished studies, so publication and language bias could not be excluded. Appropriate methods were used to select studies and assess studies for quality but the authors did not state how many reviewers extracted data, so reviewer error and bias as a result of this process could not be ruled out. A valid tool was used to assess studies for quality; overall quality scores were generally moderate to good.

The included studies were all randomised but were few in number and had small sample sizes. Types of comorbidity and outcome measures varied between the trials, making it difficult to make direct comparisons. Some of the trials compared different types of psychosocial intervention and others compared psychosocial interventions with control groups. The authors did not make direct group comparisons and only used data from the groups which had psychosocial interventions. They compared effects within groups from baseline to post treatment or later follow-up, using the participants within groups as their own controls; in effect using the data from the RCTs as if they were from a before/after study design. Synthesis of the studies was appropriate, but it was unclear how the average effects were computed and no measures of variation or statistical heterogeneity were reported, making it difficult to compare results.

The authors acknowledged the limitations of the review and suggested that the results should be interpreted with caution. Due to some potential for bias in the review, the heterogeneous and limited evidence base, and absence of direct comparisons, the reliability of the conclusions was not clear.

Implications of the review for practice and research
Practice: The authors stated that changes in comorbidity should be monitored to appropriately target psychosocial treatments.

Research: The authors stated that more robust research was needed which explicitly addressed and described...
comorbidity.

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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.