



# Cochrane review summary: psychological interventions for parents of children and adolescents with chronic illness

**Daksha Trivedi**

Senior Research Fellow, Evidence Based Practice, Centre for Research in Primary and Community Care, University of Hertfordshire, Hatfield, UK

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## Review question

To evaluate the effectiveness of psychological parent interventions on:

- parent behaviour and mental health for parents of children/adolescents with chronic illnesses;
- child/adolescent behaviour/disability, mental health and symptoms of illness and family functioning; and
- adverse events.

## Relevance to primary care and nursing

Families of children with chronic health conditions are often treated in primary care settings. A guidance report has highlighted the importance of coordinated care and training primary care teams, including nurse practitioners, to deliver psychological interventions (Royal College of Psychiatrists and Royal College of General Practitioners, London, 2008).

Although psychological therapies are being developed in primary health care, there is a lack of evidence on what works to improve mental health

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Correspondence to: Dr Daksha Trivedi, Senior Research Fellow, Evidence Based Practice, Centre for Research in Primary and Community Care, University of Hertfordshire, College Lane, Hatfield, AL10 9AB, UK. Email: d.trivedi@herts.ac.uk

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and behaviour in parents and children with chronic illnesses. This systematic review has summarised all the available evidence for psychological interventions delivered to parents of children/adolescents with a chronic illness (Eccleston *et al.*, 2012)

## Type of review

This is a summary of a Cochrane review containing 35 randomised controlled trials (RCTs). Where appropriate, data were combined in a meta-analysis.

## Characteristics of the evidence

The review included a total of 2723 participants who were parents (primary caregivers or adults responsible for parenting) of children and adolescents (under 19 years of age) with a chronic illness lasting three months or more. The included studies comprised children with prespecified illnesses: painful conditions (eg, headaches, back pain, recurrent abdominal pain, sickle cell disease, rheumatological and mixed conditions) (12 RCTs), cancer (six RCTs), diabetes (nine RCTs), asthma (four RCTs), traumatic brain injury (TBI) (three RCTs) and atopic eczema (one RCT). No trials of inflammatory bowel disease or gynaecological conditions were identified.

Interventions needed to be primarily psychological in nature and have examined credible psychological/psychotherapeutic parental programmes aiming to change parent cognition or behaviour for improving parent or child outcomes. Exclusions were: parents acting as ‘coaches’, health promotion interventions, combined psychological and pharmacological interventions, qualitative designs, studies with  $n < 10$  in comparison groups or studies that included children with more than one type of chronic illness.

The primary outcomes were parent behaviour and mental health, child behaviour/disability and mental health, child symptoms, family functioning and adverse events.

The interventions included cognitive behavioural therapy (CBT) (19 RCTs), family therapy (FT) (seven RCTs), problem-solving therapy (PST) (seven RCTs) and community-based multisystemic therapy (MST) (two RCTs), which included broad interventions targeting the patient, their family and environment. They were compared with attention control group (involving similar time and contact as the intervention), usual care without intervention or a wait list control. Interventions were delivered in various community and hospital-based settings by general and mental health professionals, nurses, social workers, therapists, counsellors, trained psychologists and researchers.

The amount of therapy provided to parent and child varied between studies, although most studies ( $n = 22$ ) gave equal consideration to both parent and child. The treatment sessions combining both parent and child treatment together ranged from 5 h to 44 h. In 28 studies, a therapist treated patients in person, and in seven studies the intervention was delivered online. Of the studies, 25 studies described therapy delivered to individuals or a family unit, and eight studies used a group format. One study used a combined group and individual intervention, and one study did not specify the format.

Twenty-six studies were graded as high quality and nine as low quality. Limitations included inadequate descriptions of interventions, various measurement instruments, insufficient reporting of results and small sample sizes.

## Summary of key evidence

The effects of interventions were analysed in two categories: (1) outcomes for each condition across

all interventions and (2) outcomes for each intervention across all conditions. Data were analysed for each of the six outcomes at post-treatment and at first available follow-up (varied from 1 to 12 months). No adverse events were reported.

Data were pooled using standardised mean difference (SMD) with 95% confidence interval (CI). The overall effect reported as Z-score, with ‘*P*’ value is indicated for significant effects ( $P < 0.05$ ). The total number of studies and participants ( $n$ ) are shown in parenthesis.

## Individual conditions across all psychological interventions

### Painful conditions

#### Post-treatment

There was no significant effect of psychological interventions on parent behaviour (two studies,  $n = 92$ ), child behaviour/disability (six studies,  $n = 429$ ) or child mental health (four studies,  $n = 356$ ). An overall significant effect on child symptoms (eight studies,  $n = 512$ ) was reported ( $Z = 2.23$ ,  $P < 0.05$ ; SMD  $-0.29$  (95% CI  $-0.55$  to  $-0.03$ )) when compared with active controls, wait-list controls or standard paediatric care. Only one study measured family function, and therefore results were inconclusive. No studies provided appropriate data on parent mental health.

#### Follow-up

Only one study measured parent behaviour with inconclusive results.

There was no significant effect on child behaviour/disability (three studies,  $n = 289$ ), child mental health (two studies,  $n = 255$ ) or child symptoms (six studies,  $n = 391$ ). Only one study measured family function and the results were inconclusive. No studies provided appropriate data on parent mental health.

### Cancer

#### Post-treatment

There was no significant effect on parent behaviour (four studies,  $n = 629$ ) or parent mental health (five studies,  $n = 706$ ). No studies provided appropriate data on other outcomes.

*Follow-up*

There was no significant effect on parent behaviour (four studies,  $n = 597$ ) or parent mental health (four studies,  $n = 598$ ). No studies provided appropriate data on other outcomes.

**Diabetes***Post-treatment*

Only one study analysed parent mental health and child behaviour/disability and the results were inconclusive. There was no significant effect on child mental health (two studies,  $n = 198$ ), child symptoms (six studies,  $n = 455$ ) or family functioning (four studies,  $n = 306$ ). No studies provided appropriate data on parent behaviour.

*Follow-up*

Only one study analysed parent mental health and the results were inconclusive. There was no significant effect on child symptoms (three studies,  $n = 239$ ). No studies provided appropriate data on other outcomes.

**Asthma***Post-treatment*

Only one study analysed parent behaviour and child behaviour/disability with inconclusive results. No significant effect was reported on parent mental health (two studies,  $n = 74$ ) or child symptoms (three studies,  $n = 170$ ). No studies provided appropriate data on other outcomes.

*Follow-up*

There was no significant improvement in child symptoms (two studies,  $n = 132$ ). No studies provided appropriate data on other outcomes.

**Traumatic brain injury***Post-treatment*

There was no significant effect on parent mental health (two studies,  $n = 72$ ), child behaviour/disability (two studies,  $n = 72$ ) or family functioning (two studies,  $n = 67$ ). No studies provided appropriate data on other outcomes.

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*Follow-up*

No studies provided appropriate data on any outcomes.

**Skin diseases***Post-treatment*

Only one study analysed parental and child outcomes and results were inconclusive. No studies provided appropriate data on other outcomes.

**Individual psychological interventions across all conditions****CBT***Post-treatment*

There was no significant effect of CBT at post-treatment on parent behaviour (four studies,  $n = 166$ ), parent mental health (four studies,  $n = 224$ ), child behaviour/disability (seven studies,  $n = 459$ ), child mental health (five studies,  $n = 439$ ) or family function (three studies,  $n = 211$ ). The overall effect on child symptoms (11 studies,  $n = 726$ ) was significant ( $Z = 2.61$ ,  $P < 0.05$ ; SMD  $-0.25$  (95% CI  $-0.44$  to  $-0.06$ )) when compared with active controls, wait-list controls or usual care/standard education.

*Follow-up*

There was no significant effect of CBT at follow-up on parent behaviour (two studies,  $n = 85$ ), parent mental health (two studies,  $n = 115$ ), child behaviour/disability (three studies,  $n = 289$ ), child mental health (two studies,  $n = 257$ ), child symptoms (seven studies,  $n = 472$ ) or family functioning (two studies,  $n = 107$ ).

**FT***Post-treatment*

Only one study measured parent behaviour with inconclusive results. There was no significant effect of FT on parent mental health (two studies,  $n = 74$ ), child behaviour/disability (two studies,  $n = 107$ ), child symptoms (four studies,  $n = 202$ ) or family functioning (two studies,  $n = 132$ ). No studies provided appropriate data on child mental health.

### Follow-up

Only one study measured parent mental health with inconclusive results.

There was no significant effect of FT on child symptoms (two studies,  $n = 96$ ) at follow-up. No studies provided appropriate data on other outcomes.

## PST

### Post-treatment

PST significantly improved parent behaviour ( $Z = 2.64$ ,  $P < 0.05$ ; SMD  $-0.22$  (95% CI  $-0.38$  to  $-0.06$ ) in three studies ( $n = 588$ ) compared with standard psychosocial care or active control. Five studies ( $n = 660$ ) showed a significant effect on parent mental health ( $Z = 2.14$ ,  $P < 0.05$ ; SMD  $-0.27$  (95% CI  $-0.53$  to  $-0.02$ ) when compared with standard psychosocial care, usual care or active controls.

There was no significant effect on child behaviour/disability (two studies,  $n = 72$ ) or family functioning (two studies,  $n = 67$ ). Only one study examined child symptoms with inconclusive results. No appropriate data were provided on child mental health.

### Follow-up

There was no significant effect of PST at follow-up on parent behaviour (three studies,  $n = 556$ ) or parent mental health (three studies,  $n = 557$ ). Only one study examined child symptoms with inconclusive results. No appropriate data were provided on other outcomes.

## MST

### Post-treatment

Only one study examined child mental health with inconclusive results. There was no significant effect of MST on child symptoms (two studies,  $n = 142$ ). No appropriate data were provided on other outcomes.

### Follow-up

Only one study examined child mental health at follow-up with inconclusive results. No appropriate data were provided on other outcomes.

## Implications for practice

Psychological interventions that focused on parents improved child symptoms for painful conditions post-treatment. CBT improved child symptoms post-treatment and PST showed positive effects on parent behaviour and parent mental health post-treatment. However, for many common chronic illnesses in children, there were no significant effects at follow-up and no evidence on improved outcomes of functioning. More intensive psychological therapies tailored for parents of children with chronic illness, specifically focusing on parent outcomes that need to be evaluated with longer follow-up data. Specific approaches aimed at parent outcomes, such as problem-solving skill training may be more effective. Interventions aimed at relapse prevention may be needed to sustain longer-term effects of interventions.

## Implications for research

High-quality trials are required for psychological interventions that specifically target parents of children with chronic illness, especially for gynaecological disorders or irritable bowel diseases, for which no studies were identified and for skin diseases, for which only one study was identified. Given the limitations of the review, studies should be adequately powered, have clearly defined outcomes, develop interventions that specifically target change in primary outcomes and include consistent and appropriate measures within and across various diseases. PST needs to be evaluated in other conditions such as chronic pain. Research needs to examine the impact of changes in parent outcomes on child outcomes, as well as specific features of interventions such as the intensity and duration of interventions provided for children compared with parents.

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### **Conflicts of Interest**

None.

### **Ethical Standards**

Not applicable. This is a summary based on secondary research and is not dealing with animals.

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