Article

Feasibility of guided cognitive behaviour therapy (CBT) self-help for childhood anxiety disorders in primary care

Cathy Creswell BA (Ox) Hons DClinPsy PhD
Clinical Research Fellow

Francoise Hentges BSc MSc PhD
Post-Doctoral Researcher

Monika Parkinson BSc DClinPsy
Clinical Psychologist

Berkshire Child Anxiety Clinic, The Winnicott Research Unit, School of Psychology and Clinical Language Sciences, University of Reading, UK

Paul Sheffield MA MBA
Service Manager, Oxfordshire Primary Child and Adolescent Mental Health Service, UK

Lucy Willetts BSc MSc PhD
Clinical Director

Peter Cooper BA D Phil
Professor of Psychopathology

Berkshire Child Anxiety Clinic, The Winnicott Research Unit, School of Psychology and Clinical Language Sciences, University of Reading, UK

ABSTRACT

Anxiety disorders in childhood are common, disabling and run a chronic course. Cognitive behaviour therapy (CBT) is effective but expensive and trained therapists are scarce. Guided self-help treatments may be a means of widening access to treatment. This study aimed to examine the feasibility of guided CBT self-help in primary care for childhood anxiety disorders, specifically in terms of therapist adherence, patient and therapist satisfaction and clinical gain.

Participants were children aged between five and 12 years referred to two primary child and adolescent mental health services (PCAMHSs) in Oxfordshire, UK, who met diagnostic criteria for a primary anxiety disorder. Of the 52 eligible children, 41 anxious children were assessed for anxiety severity and interference before and after receiving CBT self-help delivered via a parent (total therapy time = five hours) by primary mental health workers (PMHWs). Therapy sessions were rated for treatment adherence and parents and PMHWs completed satisfaction questionnaires after treatment completion. Over 80% of therapy sessions were rated at a high level of treatment adherence. Parents and PMHWs reported high satisfaction with the treatment. Sixty-one percent of the children assessed no longer met the criteria for their primary anxiety disorder diagnosis following treatment, and 76% were rated as ‘much’/‘very much’ improved on the Clinical Global Impression–Improvement (CGI–I) scale. There were significant reductions on parent and child report measures of anxiety symptoms, interference and depression. Preliminary exploration indicated that parental anxiety was associated with child treatment outcome. The findings suggest that guided CBT self-help represents a promising treatment for childhood anxiety in primary care.

Keywords: child anxiety, cognitive behaviour therapy (CBT), primary care
Introduction

Anxiety disorders are among the most common forms of mental health disturbance in childhood, with a point prevalence of 5–10%. These problems have a significant adverse impact on children’s emotional and social development and impede scholastic achievement. Anxiety disorders tend to be stable over time and they commonly precede the development of other problems (e.g. depression and substance abuse). The high prevalence, persistence and risks associated with anxiety disorders in childhood highlight the need for effective and deliverable interventions.

Cognitive behavioural treatments for children with anxiety disorder have been found to be efficacious: using conservative intention-to-treat criteria, the remission rate for anxiety disorder is around 55% for CBT compared to 13% for controls, and clinical gains are well maintained. However, CBT is a specialist form of treatment which is not widely available. Indeed, only a small proportion of children in need of treatment receive appropriate help. Furthermore, the number of trained CBT therapists in the UK is small and the shortfall is especially acute in the child disorder field. It is notable that of the 59 current national CBT training courses only three focus on training for the treatment of children and adolescents. There is a need for the development of an evidence-based, efficient system of delivering CBT for child anxiety disorder.

Step care constitutes a potentially efficient means of delivering interventions, and is recommended by NICE for emotional disorders. A stepped care approach involves first line treatments that are the least ‘restrictive’ in terms of patient and funding burden, reserving more intensive treatments for those who do not benefit from these. Since the delivery of CBT treatments for child anxiety disorder has been shown to be successful when managed by parents, a potential first line treatment could involve guiding parents through a self-help programme to help their children overcome problems with anxiety disorder.

Self-help manuals for CBT have been shown to be effective for many adult disorders, such as depression, anxiety disorder and eating disorders, with the balance of evidence favouring a guided approach. There is a striking lack of research into the use of guided self-help with juvenile populations. Although there is some evidence that manuals for parents can be effective in reducing child symptoms of depression, oppositional behaviour, chronic headaches, enuresis and post-operative pain, the significance of these findings is uncertain as the nature of the self-help and the degree of therapist involvement has varied across studies. Recently, a modest impact has been demonstrated for unguided self-help with parents of children with an anxiety disorder. Within a rural Australian sample, the addition of telephone support for parents was associated with much more positive results.

The evidence to date points to guided CBT self-help as a possible efficient means of providing treatment for anxious children. This study was conducted to explore the feasibility of adopting such an approach within primary care. Specifically, we aimed to ascertain whether guided CBT self-help for childhood anxiety disorders is deliverable within primary care (i.e. whether PMHWs show high levels of treatment adherence), is acceptable to patients and professionals, and is associated with significant health gain. We also aimed to explore factors associated with child treatment outcome. There has been a lack of consistency in the published literature with regard to predictors of outcome from CBT for childhood anxiety disorders, however, the most consistent predictors include severity of child anxiety and depression pre-treatment, child age and parental psychopathology, in particular anxiety.

Method

Setting

The study was set in two Primary Child and Adolescent Mental Health Services (PCAMHs) in Oxfordshire, with the guidance to parents provided by Primary Care Mental Health Workers (PMHWs).

Patient participants

Inclusion criteria required children to be aged between five and 12 years and to meet diagnostic criteria for a current anxiety disorder. Children were excluded if they scored above clinical cut-offs on the Social Communication Questionnaire (SCQ), a 40-item, parent report screening measure for autistic spectrum disorder (ASD) (a score of 15 or more indicates a high likelihood of ASD). Children were also excluded if their primary caregiver had significant, disabling mental health or learning difficulties. Ninety-one children were referred to the two PCAMH Services for anxiety related difficulties between February 2008 and March 2009. Of these, 89 children were assessed using the Anxiety Disorders Interview Schedule for Children (ADIS-C/P) to establish that the child had a

Two families reported no longer needing help.
current and primary anxiety disorder on the basis of DSM-IV diagnostic criteria. Sixty-two families were eligible for the study (see Figure 1). Fifty-two (84%) agreed to participate in the study. Eleven families were lost to follow-up (nine did not complete treatment, two due to serious medical health problems in a parent, six to difficult family circumstances (e.g. involvement of social services), two could not be contacted for reassessment) and reassessments were carried out with 41 families. Diagnostic data at the pre-treatment assessment for the 52 eligible patients is provided in Table 1. The majority of patients met

![Figure 1 Patient flow](image)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Present % (n)</th>
<th>Primary diagnosis % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalised anxiety disorder</td>
<td>71.2 (37)</td>
<td>30.8 (16)</td>
</tr>
<tr>
<td>Obsessive compulsive disorder</td>
<td>1.9 (1)</td>
<td>0</td>
</tr>
<tr>
<td>Separation anxiety disorder</td>
<td>67.3 (35)</td>
<td>40.4 (21)</td>
</tr>
<tr>
<td>Social phobia</td>
<td>61.5 (32)</td>
<td>23.1 (12)</td>
</tr>
<tr>
<td>Specific phobia</td>
<td>19.2 (10)</td>
<td>3.8 (2)</td>
</tr>
<tr>
<td>Panic disorder +/- agoraphobia</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Post traumatic stress disorder</td>
<td>1.9 (1)</td>
<td>0</td>
</tr>
<tr>
<td>Major depressive disorder</td>
<td>5.8 (3)</td>
<td>0</td>
</tr>
<tr>
<td>Oppositional defiant disorder</td>
<td>25.0 (13)</td>
<td>0</td>
</tr>
<tr>
<td>Attention deficit/hyperactivity disorder</td>
<td>7.7 (4)</td>
<td>0</td>
</tr>
</tbody>
</table>
diagnostic criteria for multiple disorders (mean = 2.5).

Procedure
All five to 12-year-old children referred to PCAMHS for anxiety related difficulties and one or both of their parents were visited at home by a post-doctoral psychologist to establish suitability for the study and obtain baseline measures of the children’s anxiety. Where a DSM-IV anxiety disorder was confirmed, the family was invited to participate in the study and guided self-help CBT was offered. Four weeks after completing treatment, families were visited for re-assessment at their homes. The participating parent completed outcome and satisfaction questionnaires. PMHWs also completed satisfaction surveys after completing treatment with each family. Where participation in the research study was refused, families were provided equivalent treatment.

Intervention
The treatment was a guided CBT self-help treatment for anxious children administered through the parent. Parent(s) were provided with a self-help book37 and had eight weekly contacts with a PMHW: four face-to-face contacts (4 x 1 hour), and four telephone contacts (4 x 15 minutes) the total contact time was five hours. The sessions reviewed key concepts covered by the self-help book, including general information on anxiety, challenging anxious thoughts, gradually facing fears and problem solving. The role of the PMHW was to encourage the parent(s) to work through the book, to rehearse key skills, and to help problem solve challenges that arose.

PMHW training and supervision
PMHWs received an implementation manual to accompany the self-help book and attended a two-day workshop on the intervention delivered by clinical psychologists experienced in the treatment approach (CC, MP, LW). PMHWs then received one hour of group supervision on a fortnightly basis from a clinical psychologist (MP).

Measures

Anxiety Disorders Interview Schedule for Children/Parents (ADIS-C/P)38
Diagnoses and clinical severity ratings (CSRs) were allocated by an experienced diagnostician (LW) on the basis of the ADIS-C/P for DSM-IV, a widely used structured diagnostic interview. Interrater reliability with a postgraduate psychologist (FH) was assessed for all CSRs and was excellent (ICC = 0.93).

Adherence to treatment delivery
All treatment sessions (face-to-face and telephone) were audio recorded and 30 sessions (covering all PMHWs and all session numbers) were rated for adherence to treatment by two independent raters (graduate psychologists) trained to a high level of reliability (concordance >80%). Ratings were made to establish the degree to which PMHWs followed the treatment delivery manual in relation to both process and content, on five-point scales (from ‘not at all’ to ‘a great deal’). Specifically, with regard to process, sessions were rated for the extent to which PMHWs collaborated with parents, adopted a non-blaming approach, and individualised the therapy to the specific problems being experienced by the family. With regard to content, sessions were rated for both the presence and depth/accuracy of agenda setting, homework review, homework setting, and agenda following.

Parent satisfaction questionnaire
Parents’ satisfaction with the intervention was assessed using a seven-item questionnaire developed for this study. Parents were asked to rate five areas of satisfaction on five-point Likert scales: change in their child’s anxiety, satisfaction with the book, the help received, overall satisfaction, and whether the parent would recommend the approach to others. Parents were also asked about satisfaction with the amount of help and the balance of face-to-face and telephone contact.

Mental health worker satisfaction questionnaire
PMHWs rated six satisfaction items (developed for this study) on five-point Likert scales after completing treatment with each family (to assess comfort in role as guider, satisfaction with amount and content of training, satisfaction with amount and content of supervision, and overall satisfaction). They also indicated their level of support for the implementation of the approach within primary care and the likelihood that they would continue to use the approach. Average satisfaction ratings were compiled for each PMHW.
Feasibility of guided CBT self-help for childhood anxiety disorders in primary care

Clinical Global Impression–Improvement (CGI–I)\(^39\)

A CGI–I score was allocated on the basis of the full diagnostic interview post-treatment in comparison to pre-treatment. The CGI–I is rated on a seven-point scale (from 1 = very much improved to 7 = very much worse). Interrater reliability was assessed for 35% of the sample (\(n = 15/43\)) and was excellent (ICC = 0.96).

Spence Child Anxiety Scale – child/parent report (SCAS-c/p)\(^40\)

The SCAS is a 38-item child and parent report questionnaire that assesses anxiety symptoms in children. It has good internal consistency (Cronbach’s alpha = 0.92 child report; 0.90 parent report) and convergent and divergent validity.\(^40,41\)

Child Anxiety Impact Scale (CAIS)\(^42\)

The CAIS is a 27-item parent report measure which assesses the impact of anxiety symptoms on the psychosocial functioning of children and adolescents with anxiety disorders. It has good internal consistency (Cronbach’s alpha = 0.87) and construct validity.\(^42\)

Short Moods and Feelings Questionnaire (SMFQ-c/p)\(^43\)

The SMFQ is a brief screening instrument for symptoms of depression in childhood, consisting of 13 items in parallel child and parent versions. It has high internal consistency (Cronbach’s alpha = 0.87 child report; 0.92 parent report) and good validity.\(^43\)

Depression Anxiety Stress Scale (DASS 21)\(^44\)

The short form of the DASS comprises three seven-item self-report scales and was used to measure parental depression, anxiety and stress. The scales of the DASS have high internal consistency (Cronbach’s alpha = 0.82 anxiety scale) and discriminant validity.\(^44–46\)

Results

PMHW treatment adherence

Table 2 shows the ratings for treatment adherence. Of note, over 80% of therapy tapes were rated as showing the highest levels of adherence (rating 3 or 4 on a 0–4 scale) on all scales.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>PMHW adherence to the treatment manual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
</tr>
<tr>
<td>Was the PMHW collaborative?</td>
<td>0</td>
</tr>
<tr>
<td>Was the PMHW non-blaming?</td>
<td>0</td>
</tr>
<tr>
<td>Did the PMHW individualise the therapy?</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Present (%)</th>
<th>Depth/accuracy of coverage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Did the PMHW</td>
<td>Low</td>
</tr>
<tr>
<td>Set an agenda?</td>
<td>90</td>
</tr>
<tr>
<td>Review homework?</td>
<td>97</td>
</tr>
<tr>
<td>Set homework?</td>
<td>100</td>
</tr>
<tr>
<td>Follow agenda?</td>
<td>97</td>
</tr>
</tbody>
</table>
Parent satisfaction

Parents’ satisfaction with the treatment is shown in Table 3. In summary, 95% of parents reported improvements in their child’s anxiety and over 80% of parents rated high levels of overall satisfaction with the treatment. In addition, 82% of parents reported that the amount of help received was ‘just right’ and 80% of parents reported that they would definitely continue to use the approach beyond the end of the intervention.

PMHW satisfaction

PMHW responses indicated that they were highly satisfied with the treatment approach and the amount and content of training and supervision, with mean scores on all indices being above four on the five-point scales (4.09 – 4.67). They also indicated a high probability that they would continue to use the approach in the future (mean = 4.53, SD = 0.77) and that they would support the implementation of the treatment within a primary care setting (mean = 4.37, SD = 0.95).

Child treatment outcome

Following treatment, 25 children (61% of completers; 50% of intention-to-treat) no longer met diagnostic criteria for their initial primary diagnosis and 18 children (44% of completers; 35% of intention-to-treat) were free of all anxiety diagnoses. On the CGI-I, 31 children (76% of completers; 60% of intention-to-treat) were rated as ‘much’ or ‘very much’ improved, nine (22% of completers) as ‘unchanged’ or ‘minimally improved’ and one (2% of completers) as ‘minimally worse’ in comparison to their presentation at the pre-treatment assessment.

Based on child and parent reports (see Table 4) there were significant reductions between pre- and post-treatment on all measures (SCAS-p, t(40) = 4.89, P < 0.001; SCAS-c t(40) = 2.96, P = 0.006; CAIS, t(40) = 4.12, P < 0.001; SMFQ-p, t(40) = 3.32, P = 0.002; SMFQ-c, t(40) = 2.96, P = 0.006).

<table>
<thead>
<tr>
<th>Table 3 Parental feedback on satisfaction with treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in child anxiety</td>
</tr>
<tr>
<td>Satisfaction with book</td>
</tr>
<tr>
<td>Satisfaction with help received</td>
</tr>
<tr>
<td>Overall satisfaction</td>
</tr>
<tr>
<td>Would you recommend to others?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4 Questionnaire measures pre and post treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-treatment (Mean (SD))</td>
</tr>
<tr>
<td>Impact of child anxiety (CAIS) – parent report</td>
</tr>
<tr>
<td>Child anxiety symptoms (SCAS) – parent report</td>
</tr>
<tr>
<td>Child depression symptoms (SMFQ) – parent report</td>
</tr>
<tr>
<td>Child anxiety symptoms (SCAS) – child report</td>
</tr>
<tr>
<td>Child depression symptoms (SMFQ) – child report</td>
</tr>
</tbody>
</table>

*P < 0.001; **P < 0.01
Associations with child treatment outcome

Child treatment outcome CGI–I score was not significantly associated with child age \( (r(41) = 0.19, P = 0.23) \), gender \( (t(39) = 0.17, P = 0.86) \), pre-treatment child depression \( (r(33) = -0.06, P = 0.74) \); parent report: \( r(39) = 0.002, P = 0.99 \), anxiety symptoms \( (SCAS; \text{child self-report: } r(33) = -0.31, P = 0.16; \text{parent report: } r(39) = 0.14, P = 0.40) \) or impact \( (CAIS; r(39) = 0.13, P = 0.41) \), or parental stress \( (r(39) = 0.07, P = 0.69) \) or parental depression \( (r(38) = 0.07, P = 0.66) \). The only factor that correlated significantly with child treatment outcome was parental anxiety \( (r(38) = 0.35, P = 0.03) \). As these analyses were exploratory these findings should be regarded as preliminary and warrant replication.

Discussion

The findings of this study indicate that PMHWs delivered guided self-help CBT with parents of anxious children to a high level of treatment adherence, following brief training and with fortnightly group supervision. Both parents and PMHWs reported high levels of satisfaction with all aspects of the intervention. Of note, 80% of parents reported that they would continue to use the approach beyond the end of treatment, an important consideration given the brief treatment delivered and consistent reports that children’s anxiety symptoms continue to improve beyond the end of treatment.\(^{11}\) At post-treatment assessments, children showed marked reductions in the presence of anxiety disorders, with 61% of those who completed treatment no longer meeting diagnostic criteria for their primary anxiety diagnosis, and 44% free of all anxiety disorder diagnoses. In addition, independent clinician rated global impressions of improvement were high. Significant reductions were also apparent on all child and parent report measures of anxiety and depression symptoms and impact of child anxiety. These findings strongly support the feasibility of guided CBT self-help for childhood anxiety problems within primary care. Preliminary examination of predictors of treatment outcome identified that where parents were more anxious children benefited less from treatment.

The main strength of this study is the use of independent assessments (rated to a high level of reliability) to provide both diagnoses and clinical impressions. Parent and child reports were also obtained and independent raters monitored the content and process of therapy sessions using reliable rating scales applied to audio recordings. The primary limitation relates to the fact that, since this was a feasibility study with no comparison group, it cannot be concluded with certainty that the improvements in child anxiety were directly a result of the intervention. In order to establish this, randomised controlled trial (RCT) methodology is required. It seems unlikely, however, that the extent of change observed represents natural remission, given that meta-analyses of randomised controlled trials have reported remission in waiting-list control groups averaging 12.9%.\(^{11}\) The lack of a longer-term follow up is also a weakness of this study. However, as noted above, it has consistently been found that children continue to experience improvements after treatment completion. Longer-term outcomes may be particularly important for assessing brief interventions when there has been less time for changes to take effect and impact on daily life; the reported results may therefore underestimate the true clinical impact of the guided self-help intervention.

The outcomes found in this study compare favourably to those of other studies of the treatment of childhood anxiety. Based on conservative intention-to-treat data, 50% of children were free of their primary anxiety disorder and 35% were free of any anxiety disorder diagnosis. This compares to average recovery rates of 55% diagnosis-free based on far more intensive treatment protocols (averaging 12–16 hours’ therapist contact compared with five hours in the guided self-help intervention).\(^{8–11}\) A recent multicentre RCT conducted in the USA used the Clinical Global Impression–Improvement index as the primary outcome variable and reported that 59.7% of children were ‘much’ or ‘very much’ improved after 14 sessions of individual child CBT;\(^{14}\) this compares to a conservative estimate of 61% in the current study.

The finding that high parental anxiety militates against optimum treatment outcome is consistent with findings from other studies of treatment of childhood anxiety.\(^{33–35}\) It makes intuitive sense that a programme which relies on parents for treatment delivery may be particularly confounded by the presence of high parental anxiety. These preliminary findings may indicate that treatments for anxious children should be stratified on the basis of parental anxiety.

The results of this study provide support for the feasibility of guided CBT self-help with parents as a potential first line treatment for children with anxiety disorders in primary care. Specifically, treatment was delivered well within existing PCAMHSs, the treatment was well received by parents and professionals, and the majority of patients experienced significant health gain. It is important to establish whether this novel intervention represents
an improvement over standard practice in primary care and also to identify predictors of outcome of this intervention.

ACKNOWLEDGEMENTS

We wish to thank the Banbury and Witney Primary Mental Health Workers and the participating families. We would also like to thank Shelley Bartlett and Kyla Vaillancourt for coding therapist adherence.

REFERENCES

26 Griffiths J and Martin P. Clinical versus home-based treatment formats for children with chronic head-


FUNDING

The current study was funded by the National Institute of Health Research (NIHR) Research for Patient Benefit (RPB) scheme (PB-PG-0107–12042). Cathy Creswell is supported by an MRC Clinician Scientist Fellowship.

CONFLICTS OF INTEREST

None.

ADDRESS FOR CORRESPONDENCE

Professor PJ Cooper, The Winnicott Research Unit, School of Psychology and Clinical Language Sciences, University of Reading, Berkshire RG6 6AL, UK. Tel: +44 (0)118 368 6667; fax: +44 (0)118 378 6668; email: p.j.cooper@reading.ac.uk

Accepted April 2010