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Cognitive Behavioral Treatment versus a Non-Specific Control for Children and Adolescents with Anxiety Disorders: A Randomized Trial

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Running Head: CBT versus a Non-specific control
Abstract

Objective: The current trial examined whether a specific cognitive behavioral treatment package was more efficacious in treating childhood anxiety disorders than a non-specific support package. Method: One-hundred and twelve children (ages 7-16 years) with a principal anxiety disorder were randomly allocated to either a group cognitive behavioral treatment (CBT) program or a control condition (Group Support and Attention; GSA). Results: Overall, results showed that CBT was significantly more efficacious compared to the GSA condition: 68.6% of children in the CBT condition did not meet diagnostic criteria for their principal anxiety diagnosis at 6 month follow-up compared to 45.5% of children in the GSA condition. The results of the child- and parent-completed measures indicated that whereas mothers of CBT children reported significantly greater treatment gains than mothers of GSA children, children reported similar improvements across conditions. Conclusions: Specific delivery of cognitive behavioral skills is more efficacious in the treatment of childhood anxiety than a treatment that includes only non-specific therapy factors.

Keywords: child anxiety; CBT; treatment.
Cognitive behavioral treatment versus a non-supportive control for children and adolescents with anxiety disorders

Following the pioneering work of Kendall,1 a growing number of well-controlled treatment outcome studies directed at anxiety disorders in youth have now been conducted. Recent review papers have concluded that cognitive behavioral treatment packages (CBT) have clear efficacy in the reduction of anxiety disorders in young people.2 Overall, CBT packages result in around 56% of children being free of either the principal anxiety or any anxiety disorder diagnosis following treatment compared with around 35% of children in comparison conditions. CBT typically includes a range of components: relaxation, cognitive restructuring, problem-solving, social skills, and in vivo exposure and where parents are included in treatment, additional training in child management strategies.1 The principle behind use of these components is to directly modify the key processes theoretically proposed to maintain anxiety.3 It is therefore assumed that efficacy of CBT is a direct result of these active components.

A large literature outside the child anxiety field has questioned whether CBT programs produce their effects due to the direct influence of purportedly active treatment techniques.4 A number of studies examining treatment outcome for adults and children have demonstrated the importance of non-specific components such as the therapeutic alliance.5 One review of over 100 studies has shown that common process factors accounted for 30% of the variance in adult treatment outcomes, beyond the 15% of variance accounted for by specific therapeutic techniques.6

One way of examining the extent to which specific, purportedly active treatment techniques play a key role in efficacy is to compare the effects of a complete, active treatment package against a comparison condition that contains the general and non-specific components of a treatment package but is stripped of theoretically active techniques. Of course factors that maintain a disorder might be influenced through many paths and hence such studies do not substitute for controlled experimental
manipulation. But they can at least inform the extent to which overt attention needs to be paid to specific treatment techniques. To date, these types of studies have been rare in the child anxiety field. The vast majority of treatment trials for child anxiety have compared active treatment against a waitlist comparison or occasionally against another active treatment, thereby limiting the conclusions that can be drawn about the importance of the theoretically active techniques.

A handful of studies have compared a CBT package to a non-specific treatment for anxious youth. Perhaps surprisingly, some of these studies have shown comparable results across conditions. A significant issue with these studies is the presence of theoretically active components in the control condition. In fact, Kendall and colleagues, reported that independent observers rated the control condition as consisting of 65% CBT. In contrast, clearer differences between conditions have been obtained in studies using control conditions that provided fewer theoretically active components. These studies suggest that some efficacy in treatment outcome might be attributable to specific techniques and strategies, over and above effects due to non-specific therapy factors. However, some methodological limitations of these studies exist: small sample sizes, use of specific subgroups of anxious children or use of non-clinic referred schoolchildren.

The current study aimed to address some of the limitations of previous research. We used a multimethod, multi-informant assessment of children with severe, broad-based anxiety disorders obtaining a sufficient sample to provide power to detect a moderate effect size difference between groups. Most importantly, the non-specific condition in the current study did not provide detailed information about the nature or maintaining factors in anxiety and did not provide training in specific cognitive behavioral strategies such as cognitive restructuring or in vivo exposure. We hypothesized that CBT would be superior to the control condition in producing diagnostic change (greater remission and reduction in severity of principal and all anxiety diagnoses) and symptom change (greater reduction in mother and child reported anxiety and internalizing symptoms).

Method
Participants

Participants in the study were 112 children aged 7-16 years (64 boys) meeting criteria for a principal (most impairing) anxiety disorder according to DSM-IV.12 Anxiety disorders were assessed using the Anxiety Disorders Interview Schedule for DSM-IV, Parent and Child Versions (ADIS-IV-C/P).13 Exclusion criteria were mental retardation, psychoses and concurrent psychological treatment. Children on anxiety or depression medication were included (n = 6) if the dose was stable during treatment. Youth with major depression were referred to an alternate program. Children with co-morbid behavior disorders with a Clinical Severity Rating (CSR) of 6 or less (ADIS-IV–C/P) were included. Figure 1 presents the flow of participants through the study.

Measures

Structured Interview. All children and parents were interviewed using the ADIS-IV-C/P.13 Diagnoses and CSRs (on a scale of 0 to 8) were assigned by graduate students in clinical psychology or qualified clinical psychologists based on a composite parent and child report. The “or” rule was used, that is, a diagnosis was assigned when it was reported by either parent or child. A total of 22 participants were double coded for reliability purposes. Interrater reliability (kappa) for the presence of a disorder in the child's profile was .78 for the presence of separation anxiety disorder; 1.0 for generalized anxiety disorder and .89 for social phobia.

Anxiety Symptoms The Spence Children’s Anxiety Scale (SCAS)14 was used to assess child and mother-reported anxiety symptoms. This measure contains 38 items that load on a single factor (range from 0 to 114). Internal consistency and retest reliability are good14,15 The measure distinguishes anxious and nonclinical children15 and has adequate convergent and discriminate validity.14 The internal consistency in the current sample was excellent (mother report α = .90; child report α = .94).

Internalizing symptoms. To assess child internalizing symptoms, children and mothers completed the Strengths and Difficulties Questionnaire (SDQ-Child).16 The 5-item emotional symptoms subscale (SDQ-E) was of interest in this study. The SDQ has demonstrated very good psychometric properties
including retest reliability, concurrent validity and ability to distinguish between clinical and community samples.\textsuperscript{17,18} Internal consistency for the SDQ-E subscale in the current study was adequate (mother report $\alpha = .76$; child report $\alpha = .78$).

\textit{Treatment Conditions.} Treatments were conducted in groups over 10 x 2-hour weekly sessions. In each session, the therapist spent roughly equal time with the children, parent(s) and parents and children together. Children ($n = 5-7$) were allocated to a group based on age, resulting in groups of children with a range of different anxiety disorders. All treatment sessions were audio taped. Therapists were clinical psychologists or postgraduate students. Weekly supervision was provided by the Clinic Director or the first author.

\textit{Group CBT.} The group CBT condition utilized the Cool Kids program\textsuperscript{19} which has shown positive results in several trials.\textsuperscript{20,21} The manualized program (adapted from the Coping Cat and Coping Koala) is designed for the management of broad-based childhood anxiety disorders and included affect recognition, cognitive restructuring, child management, social skills training, assertiveness and gradual exposure. The exposure tasks are designed by the therapist in collaboration with the family. Seven sessions (4 – 10) are devoted primarily to designing and evaluating the child’s gradual exposure tasks and are considered a fundamental component of the program. With the exception of one therapist assisted in-group session of in-vivo exposures, children completed gradual exposure under the direction of their parents for homework. This was monitored by the therapists at the beginning of each session.

\textit{Group GSA.} The Group Support and Attention (GSA) Condition was adapted from previous control conditions by removing apparent CBT components (e.g., cognitive behavioral rationale, psychoeducation about anxiety; description of techniques). The aims of GSA were to: (i) provide a supportive environment; (ii) provide activities to help express and understand emotions; and (iii) to build relationships between and within families. Therapists were instructed not to provide cognitive
behavioral interpretations or strategies, or engage in problem solving with the families. Session content included: treatment rationale, description of anxiety (session 1); understanding emotions (sessions 2-3); understanding the child’s experience of anxiety (sessions 4-10). Participants completed weekly writing tasks for homework involving 3x 5-10 minute periods of writing about emotion. GSA families also gave a short presentation to the group about their family. Typically, parents presented the material to the group and the child provided assistance.

Treatment measures. Using a 10-point rating scale, credibility items from the Credibility/Expectancy Questionnaire,22 were used to assess parent report of treatment credibility at session 1 for both conditions. Also, the first author assessed treatment integrity in a random sample of 40 therapy sessions using the observer rated Protocol Adherence Checklist- Modified;23 adapted for the two conditions. GSA sessions were also examined for therapist delivery of additional CBT strategies. Therapists demonstrated an average of 97.1% adherence to the manual in the CBT condition and 96.9% in the GSA condition. The integrity check revealed that the GSA protocol was breached once. The instance occurred during the child alone session of the group (session 5). When the child had read her diary entry for the week the therapist provided a cognitive explanation to the child’s experience (e.g., “So you learned that nothing bad happened). All groups involving this therapist were then all checked for further breaches in the treatment protocol. No further problems were identified. Twenty percent of the tapes coded by the first author were listened to by a second coder and good agreement was achieved (kappa = .85; percent agreement = 98%).

Procedures

Following a brief telephone screen, parents signed consent forms at the assessment and children provided verbal assent. Children who met criteria for inclusion and agreed to participate were allocated to a group based on the child’s age. The first author used a schedule from a random number generator to assign each group to CBT or GSA (CBT: 10 groups, 60 participants; GSA 9 groups, 52 participants) and to therapists. Prior to random allocation, families were informed that the two possible treatments
were chosen for the study because of their potential effectiveness and because they were based on established psychological principles. Families were informed that one of the treatments was new to our clinic. Once in treatment, families were only provided information about the condition to which they were allocated. Families completed a post and three-month follow-up assessment (ADIS-IV-C/P and symptom measures). Structured interviews were conducted by diagnosticians who were masked to condition. All diagnoses present at pre treatment were assigned a CSR at post and follow-up (0-8). Post and follow-up diagnoses with a CSR less than 4 were considered remitted. Two families in the CBT condition and one family from the GSA condition received additional treatment between the post and follow-up period. After the follow-up assessment, GSA participants were provided information about the CBT condition and were offered group CBT treatment free of charge if they still met criteria for a principal anxiety diagnosis at the 3-month follow-up. All families in the GSA condition who did not participate in additional treatment at the clinic were sent a parent self-help book outlining the CBT strategies used for anxious children24.

Data Analysis

The primary research question pertained to differences in outcome based on the receipt of the CBT package; thus, treatment completer analyses were of greatest importance to the study. Nevertheless, intent to treat (ITT) analyses were also conducted and reported in footnotes. Participants in the completer sample included families in which the child and at least one parent completed at least 6 sessions (N= 95). ITT analyses included all participants randomized to the two conditions. Missing diagnostic data were handled using the last-point-carried-forward method. Continuous data was analyzed using a stacked database (each line represents one observation for one participant), thus a missing observation does not result in deletion of the participant.25

The proportion of participants who no longer met criteria for: i) the principal anxiety diagnosis and ii) any anxiety diagnosis, at post and 3-month follow-up in the two conditions was examined using chi-
squared tests of independence. Hierarchical Linear or Mixed models containing random factors for subject, and fixed effects for condition and time (and their two-way interaction) were fitted to measures of child and mother-reported symptoms, and diagnostic severity. As a conservative measure, analyses were run with and without the children present in the group involved in the protocol breach. The inclusion of these children did not alter the results and hence the children were included in the reported analyses. When a significant interaction between Time x Condition occurred, follow-up contrasts were conducted to examine slope differences between conditions across time. Effect sizes were calculated as the estimated fixed effect divided by the square root of the sum of the two variance components. Child Age (in months) and Age x Time were also included in the mixed model analyses to examine possible age effects across condition. Age was centered at its mean in order to facilitate the interpretation of simple effects.

Results

Comparisons of treatment completers and treatment dropouts. Children who dropped out of treatment were older than treatment completers, $t(112) = 3.11, p = .00$ (Completers $M = 113$ months, $SD = 31$; Attrition cases $M = 149$ months, $SD = 38$). There were no other significant differences between attrition cases and completers ($ps > .05$).

Pre-treatment comparisons. The two conditions were compared on demographic and pre-treatment symptom measures (see Tables 1 and 2). Children in the CBT group had a higher total clinical severity for anxiety compared to children in the GSA group, $t(154) = 2.08, p = .04$. There were no other significant differences between the two conditions at pre-treatment (all $ps > .05$). Analyses conducted on the intent-to-treat sample ($N = 112$) and completer samples produced comparable results.

A mixed model analysis (with age and pre-test scores as covariates) was conducted to determine whether ‘group’ was a significant source of variation on the main outcome variables. Note that group refers to the group to which the child was allocated based on age and not the treatment condition. If group was a significant source of variation, then the clustering would need to be taken into account in
the main analyses. The median intraclass correlation was zero, ranging from 0 to .13. These results indicated that group was not a significant source of variation and could be disregarded.

Treatment Credibility. Examination of treatment credibility revealed a significant difference between conditions, \( t(81) = 3.85, p < .01 \). Although parents in both conditions reported moderately high mean ratings of credibility, parents in the CBT condition reported higher credibility than parents in the GSA condition (see Figure 2). Although enhanced credibility is inherent to the CBT package, it was important to determine the role credibility played in determining treatment outcome. First, we were interested in whether credibility accounted for any differences in outcome after accounting for the effects attributed to condition. Mixed models containing random factors for subject, and fixed effects for Condition, Time, Credibility, Condition x Time, Credibility x Time were fitted to symptom measures (SCAS and SDQ-E child and mother report) and diagnostic severity (CSR). Credibility was not significantly associated with outcome after controlling for condition (all \( p > .44 \)). Second, we examined whether credibility was associated with treatment outcome before taking into account condition. The mixed model analyses were repeated without Condition and Condition x Time showing that credibility was not significantly associated with changes in symptom measures (all \( p > .11 \)). As a result, treatment credibility was not considered an appropriate covariate for the main analyses. One needs to be careful not to introduce a confound into the main outcome analyses. If credibility is a proxy for treatment condition (given the inherently credible nature of the CBT package), then controlling for differences in credibility may inappropriately remove the effects of the treatment condition.26

Diagnostic Changes at Posttreatment and Follow-up Across Conditions

At follow-up, a significantly greater proportion of children in the CBT condition were free of their principal anxiety diagnosis (i.e., CSR of principal anxiety diagnosis was less than 4) compared to children in the GSA condition, and a trend difference was observed at post treatment (See Table 3). At post treatment and follow-up, a significantly greater proportion of children in the CBT condition no
longer met criteria for any anxiety diagnoses (i.e., all anxiety diagnoses had CSRs less than 4) compared to children in the GSA condition.

**Symptom measures and diagnostic severity Across Time and Condition**

Mixed model analyses were fitted to clinical severity ratings, child reported symptoms and mother reported symptoms. Tables 2 and 3 provide descriptive statistics for the outcome variables and the slopes and intercepts for the model, respectively. Analyses utilizing the intent-to-treat and completer samples produced comparable results. Also, results were comparable regardless of controlling for initial total clinical severity.

**Clinical severity rating (CSR) of the principal diagnosis.** There was a significant Time x Condition interaction (see Table 2). Children in the CBT condition showed significantly greater positive change in principal diagnosis CSR compared to children in the GSA condition between pre and post treatment, pre and follow-up but not between post treatment and follow-up.

**Clinical severity rating of anxiety diagnoses.** There was a significant interaction between Time x Condition (see Table 2). Children in the CBT condition showed significantly greater positive change in the clinical severity of all anxiety diagnoses compared to children in the GSA condition between pre and post treatment, pre and follow-up but not between post and follow-up.

**Child report of child anxiety (SCAS child).** There was a significant main effect for Time. Children demonstrated significant improvements in child-reported anxiety from pre to post treatment, pre treatment to follow-up and between post treatment and follow-up. No significant main effect was found for Condition and no significant Time x Condition interaction (ps > .5). See Figure 3.

**Mother report of child anxiety (SCAS mother).** There was a significant Condition x Time interaction. Children in the CBT condition showed a significantly greater positive change in mother-reported child anxiety compared to children in the GSA condition between pre and post treatment and pre treatment to follow-up but not between post treatment and follow-up. See Figure 4.
Child report of emotional problems (SDQE-child). There was a significant Time effect. Children demonstrated significant improvements in child reported emotional problems from pre to post treatment, pre to follow-up and from post treatment to follow-up. No significant main effect was found for Condition, and no significant Time x Condition interaction (ps > .90).

Mother report of child emotional problems (SDQE-mother). The Condition x Time interaction was significant. A greater positive change in mother-reported emotional problems was observed for CBT compared to GSA participants from pre to post treatment but not between post treatment and follow-up, or pre treatment to follow-up.

Discussion

The aim of the present study was to examine whether a treatment package containing training in specific, cognitive behavioral skills was more efficacious in treating childhood anxiety than a package that contained non-specific therapy components. The study addressed some of the limitations of previous research by using diagnostic and questionnaire data from multiple informants, including a larger sample of clinical children with a variety of broad-based anxiety disorders, and attempting to minimize any potentially active components in the non-specific package. Overall, the results suggested that CBT was significantly more efficacious compared to the non-specific package at post and follow-up, although this conclusion could not extend to data from the children’s self reports or the change in principal diagnosis at post-treatment.

At post treatment, a significantly greater proportion of children in the CBT condition were free of any anxiety diagnosis compared to children in the GSA condition, while at 3-month follow-up a significantly greater proportion of children in the CBT condition were free of both primary and any anxiety diagnoses compared to children in the GSA condition. Although the remission of principal diagnoses at post treatment was not significantly different between the two conditions this was approaching significance. This pattern of results reflects a strengthening of treatment differences over time. Clinician rated severity based on both the principal diagnosis and all anxiety diagnoses were
consistent with diagnostic change data showing significantly greater improvements in the CBT versus the GSA condition at both post-treatment and follow-up.

Measures of symptoms based on reports from mothers supported the reports from clinicians. According to mothers’ reports of child anxiety and emotional problems, children in the CBT condition experienced significantly greater positive change compared to children in the GSA condition between pre and post treatment. Thus the results based on both clinician and maternal reports suggest that a comprehensive treatment package with a clear focus on training in anxiety management techniques results in greater decreases in children’s anxiety than a non-specific treatment that contains similar non-specific aspects of therapy without the inclusion of specific anxiety management strategies. These results are generally in line with previous research that has compared CBT packages with non-specific treatment.10,27

Taken together, these studies suggest that cognitive behavioral components add a significant therapeutic benefit beyond nonspecific treatment effects for anxiety disorders in children. This is not to imply that non-specific therapeutic components are irrelevant to outcome – far from it. It is important to point out that 30% of children in the GSA condition were free of their initial anxiety disorder at post-treatment and 16% were free of any anxiety diagnosis. Although it is difficult to determine the relative merit of these results due to the lack of a waitlist comparison, it is likely that this is not a trivial effect. Previous research from our unit has suggested that around 0-7% of children are free of any anxiety disorder diagnosis following a 12-week waiting period.20 Therefore it is likely that engaging in a group treatment program that provides support and general emotional information results in significant reduction in symptoms. This effect is consistent with a wealth of literature pointing to the importance of non-specific therapeutic factors in treatment outcome5 and with some more recent research in the child anxiety field.28 Exactly how these effects occur is an intriguing theoretical question. Treatment studies such as the current one cannot provide a comprehensive test of underlying mechanisms of change. It is also possible that engaging in GSA resulted in shifts in some of the hypothesized factors
that maintain child anxiety. For example, discussion and normalization of symptoms and experiences may have shifted threat appraisals. Or parental discussion of behaviors and norms may have altered overprotective parental behavior. The group format and the family presentations may have also inadvertently (and unavoidably) allowed exposure to social situations (talking to others and presenting to the group) and to emotion. Thus, despite the absence of active teaching of anxiety management skills the treatment delivered in the GSA condition may have resulted in change of these theoretically important mechanisms.

The significant differences between the two conditions with regard to treatment credibility warrant discussion. As argued earlier previous studies that have managed to develop non-specific treatment conditions that were rated similarly credible to CBT, may have included some potentially active treatment components. One of the unique features of the GSA condition in the current study was that it was carefully designed to remove such potentially active educational components. So while our approach was similar in terms of support, time and warmth, the removal of components on education and treatment rationale may have come at the cost of a slight decrease in credibility. Regardless, it should be pointed out that credibility of both treatments in the current study was high (7.24 and 8.41 on a 0-10 scale). One of the key features of CBT programs is their strong emphasis on providing a logical understanding and rationale for treatment and this is a major feature of the Cool Kids program. Further, one of the clear strengths of CBT is its logical and common sense approach that hinges on active client participation. Hence high credibility is a fundamental and inherent feature of cognitive behavioral programs so that removing this credibility, either practically or statistically, may not provide a true representation of CBT. Perhaps most importantly from a theoretical perspective, treatment credibility in the current study was not significantly related to treatment outcome. Hence, although it is difficult to tease apart the skills training in CBT programs and their inherent credibility, it appears that the effects of treatment rely on more than simply the credibility of these techniques. It may be extremely difficult to produce a completely non-specific treatment that includes no theoretically active ingredients and is
equally credible to an active treatment. Further, the field is now at a stage where future research may benefit more from comparisons between different active treatments. Alternately, studies comparing treatments that differ in the inclusion of one or more active ingredients might be useful to begin to examine the importance of specific treatment components.

A somewhat unexpected finding in the present study was the lack of significant differences between conditions on children’s report measures of anxiety and emotional problems. There was a marked reduction in symptoms following treatment, which was maintained at follow-up, but this was the case across both groups. In line with other studies that have found disagreement between sources of reporting, child-report data were slightly inconsistent with parent-report data, clinician severity data, and diagnostic data in the present study. Children and adolescents with internalizing disorders vary markedly in the extent to which they disclose information about their distress, and it has been suggested that children who score low may not necessarily be asymptomatic. It may be that children are responding to demand characteristics of the task, and that they under-report their symptoms following treatment. This could be related to social desirability or a desire to “fake good”. In line with this suggestion and with the present data, other treatment outcome trials have also failed to show significant differences between treatment and wait-list or placebo conditions on children’s reports despite demonstrating marked reductions in self-reported anxiety in children across time. Nevertheless, it should be noted that some studies have shown significant differences between treatment and waitlist conditions using child self-reports. Clearly the “child as client” provides an important source of information and the findings based on child report suggest that CBT is not more effective than a nonspecific treatment condition.

The present study has a number of similar limitations to previous outcome trials using a nonspecific treatment condition. The study has not been designed to pinpoint specific treatment components that are crucial in leading to positive gains. Also, the lack of congruence between child-report and parent/clinician-report could be taken to indicate that treatment resulted only in changes to
parent perception and not to real changes in anxiety symptoms. However this seems unlikely, as a) child report did in fact demonstrate a significant decrease in anxiety, just not more so than the control condition, b) lack of concordance between parent and child reports are common and may represent different views of the problem\cite{35,36}, and c) overwhelmingly, standardized diagnoses indicated significant differences between conditions. These points underscore the importance of using a multi-informant approach to evaluate treatment effects in children. Additionally, due to recent improvements in consumer education, it is possible that parents in the GSA condition were aware of current treatments for child anxiety and so were aware that the treatment they received was not the treatment of choice for child anxiety. This may have affected the severity ratings provided to the unaware diagnosticians, exacerbating clinician and parent rated differences between conditions.

In conclusion, this study is one of the few to demonstrate that therapy incorporating training in specific cognitive behavioral skills is more efficacious in the treatment of childhood anxiety than a treatment that includes only non-specific therapy factors. The study reduced limitations of previous trials by including larger numbers of clinically diagnosed children, using a multi-informant approach, and by removing potentially active components from the non-specific treatment. Results demonstrated that CBT contributes significant therapeutic benefits over and above non-specific treatment effects. These results were consistent for clinician and parent data, although they did not extend to children’s reports. Future studies should aim to tease apart the specific contribution of cognitive-behavioral components in the reduction of child anxiety.
<table>
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<tr>
<th>Demographic Data Across Conditions (SDs in Parentheses)</th>
<th>CBT</th>
<th>GSA</th>
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<tr>
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Number of comorbid diagnoses 2.4(2.0) 2.0(1.5)


<sup>a</sup> Other disorders include Selective Mutism (N=2) Enuresis (N=3) Sleep Terror Disorder (N=1). Parents are asked to record their ethnicity in an open-ended question. The majority of our clients identify as ‘Australian’. A smaller proportion of families identified with North-West, Southern or Eastern European (e.g., Italian, Croatian-Australian) or South-East, North-East, Southern or Central Asian (Thai, Chinese-Australian) heritage.

<sup>b</sup> Other disorders include Selective Mutism (N=2) Enuresis (N=3) Sleep Terror Disorder (N=1).
Table 2.

Mean Pretreatment, Posttreatment, and Follow-up Data Across the Two Conditions in the Completer Sample (SEs in Parentheses)

<table>
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<th>Measure</th>
<th>CBT</th>
<th>GSA</th>
<th>F and t values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre (SE)</td>
<td>Post (SE)</td>
<td>Follow-up (SE)</td>
</tr>
<tr>
<td>CSR (Principal)</td>
<td>6.29(.25)</td>
<td>3.45(.25)</td>
<td>1.53(.27)</td>
</tr>
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<td></td>
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<td></td>
</tr>
<tr>
<td>CSR (Anxiety diagnoses)</td>
<td>18.04(1.17)</td>
<td>10.59(1.17)</td>
<td>7.77(1.17)</td>
</tr>
<tr>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SCAS (child)</td>
<td>35.55(2.40)</td>
<td>23.43(2.46)</td>
<td>17.54(2.46)</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SCAS(mother)</td>
<td>37.86(1.82)</td>
<td>21.52(1.86)</td>
<td>18.85(1.88)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDQ-E(child)</td>
<td>5.52 (.34)</td>
<td>3.51 (.35)</td>
<td>2.85 (.35)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDQ-E(mother)</td>
<td>6.18 (.33)</td>
<td>2.91 (.34)</td>
<td>3.04 (.34)</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>
Note: PRE=Pretreatment; POST=posttreatment; Principal CSR=Clinical Severity Rating of the child’s principal diagnosis; Anxiety CSR=Summed Clinical Severity Rating for all Anxiety Diagnoses; SCAS=Spence Children’s Anxiety Scale; SDQ-E=Strengths and Difficulties Questionnaire- Emotional Difficulties subscale; GSA=Group Support and Attention condition; CBT=Cognitive Behavioral Therapy condition; a Pretreatment to Posttreatment b Pretreatment to Follow-up, c Posttreatment to Follow-up
Table 3
Proportion of Children No Longer Meeting Criteria for the Principal Anxiety Diagnosis at Post and Follow-up Across the Two Conditions in the Completer Sample

<table>
<thead>
<tr>
<th></th>
<th>Post-treatment</th>
<th></th>
<th>Follow-up</th>
<th></th>
<th>Fischer’s exact&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Fischer’s exact&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CBT</td>
<td>GSA</td>
<td>CBT</td>
<td>GSA</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>Principal</td>
<td>23</td>
<td>13</td>
<td>35</td>
<td>20</td>
<td>(45.1)</td>
<td>(68.7)</td>
</tr>
<tr>
<td></td>
<td>(45.1)</td>
<td>(29.6)</td>
<td></td>
<td></td>
<td>(68.7)</td>
<td>(45.5)</td>
</tr>
<tr>
<td>Anxiety diagnoses</td>
<td>17</td>
<td>7</td>
<td>25</td>
<td>13</td>
<td>(33.3)</td>
<td>(49.0)</td>
</tr>
<tr>
<td></td>
<td>(33.3)</td>
<td>(15.9)</td>
<td></td>
<td></td>
<td>(49.0)</td>
<td>(29.6)</td>
</tr>
</tbody>
</table>

Note: <sup>a</sup>Analyses conducted on the intent-to-treat sample (N=112) produced equivalent results. CBT = Cognitive Behavioral Therapy condition; GSA = Group Support and Attention condition.
Table 4  Effects of CBT and GSA for Diagnostic Severity, Mother- and Child-report Measures Across Time

<table>
<thead>
<tr>
<th></th>
<th>CSR (principal)</th>
<th>CSR (Anxiety)</th>
<th>SCAS (child)</th>
<th>SCAS (mother)</th>
<th>SDQ-E (child)</th>
<th>SDQ-E (mother)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B (SE)</td>
<td>d</td>
<td>B (SE)</td>
<td>d</td>
<td>B (SE)</td>
<td>B (SE)</td>
</tr>
<tr>
<td>Fixed effects</td>
<td></td>
<td></td>
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<tr>
<td>Intercept,</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>* Intercept (CBT at pre)</td>
<td>6.29 (.24)***</td>
<td>3.55</td>
<td>18.04 (1.17)</td>
<td>2.17</td>
<td>35.55(2.40)***</td>
<td>2.08</td>
</tr>
<tr>
<td>* GSA-CBT (at pre)</td>
<td>-.11 (.36)</td>
<td>.06</td>
<td>-3.56(1.71)*</td>
<td>.43</td>
<td>-1.07 (3.52)</td>
<td>.06</td>
</tr>
<tr>
<td>Pre to Post-treatment slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Control slope (CBT)</td>
<td>-2.84 (.31)***</td>
<td>1.61</td>
<td>-7.45(1.00)***</td>
<td>.89</td>
<td>-12.12 (2.22)***</td>
<td>.71</td>
</tr>
<tr>
<td>* GSA vs CBT</td>
<td>1.14 (.45)*</td>
<td>.64</td>
<td>4.68(1.46)**</td>
<td>.56</td>
<td>-.55(3.26)</td>
<td>.03</td>
</tr>
<tr>
<td>Pre to Follow-up slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Control slope (CBT)</td>
<td>-4.76 (.33)***</td>
<td>2.69</td>
<td>-10.28(1.00)***</td>
<td>1.23</td>
<td>-18.01(2.22)***</td>
<td>1.06</td>
</tr>
<tr>
<td>* GSA vs CBT [Post to Follow-up slope]</td>
<td>1.25 (.48)**</td>
<td>.71</td>
<td>6.30(1.46)***</td>
<td>.76</td>
<td>3.01(3.33)</td>
<td>.18</td>
</tr>
<tr>
<td>* Control slope (CBT)</td>
<td>-1.92(.33)***</td>
<td>1.08</td>
<td>-2.82(1.0)**</td>
<td>.34</td>
<td>-5.89(2.27)**</td>
<td>.35</td>
</tr>
<tr>
<td>* GSA vs CBT</td>
<td>.11 (.48)</td>
<td>.06</td>
<td>1.61(1.46)</td>
<td>.19</td>
<td>3.56(3.41)</td>
<td>.21</td>
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<tr>
<td>Random effects</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1: Residual Variance</td>
<td>2.43</td>
<td>25.30</td>
<td>114.79</td>
<td>62.71</td>
<td>3.17</td>
<td>2.49</td>
</tr>
<tr>
<td>Level 2: Intercept Variance</td>
<td>0.72</td>
<td>44.08</td>
<td>176.70</td>
<td>107.02</td>
<td>2.61</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Note. Analyses reported within square brackets indicate additional mixed models conducted to enable all comparisons to be reported. These analyses resulted in different intercepts.

+p<.10, *p<.05, **p<.01, *** p <.001
Figure 1. Consort Diagram of Participants through the Study

Figure 2. Descriptive data on treatment credibility by treatment condition.

Figure 3. Child reported anxiety symptoms (SCAS) across Condition and Time

Figure 4. Mother reported anxiety symptoms (SCAS) across Condition and Time
References


4. Luborsky L, Singer B, Luborsky E (1975), Comparative studies of psychotherapies. Is it true that everyone has won and all must have prizes. *Archives of General Psychiatry* 32: 995-1008


Enrolment

Assessed for eligibility (n = 180)

Randomized (n = 112)

Excluded (n=68):
Did not meet inclusion criteria (n=35)
- ADHD (n = 4)
- ODD (n = 3)
- Selective Mutism (n = 2)
- Adjustment Disorder (n = 1)
- PTSD (n = 1)
- Psychosis (n = 2)
- Aspergers (n = 1)
- Dysthymia (n = 12)
- No diagnosis (n = 9)

Referred to disorder-specific treatment (n = 1)
Declined group treatment (n = 32)

Allocation

Randomized to GCBT (n = 60)
Received GCBT (n = 58)
Did not receive GCBT (n = 2)
- Attrition before session 1

Randomized to GSA (n = 52)
Received GSA (n = 49)
Did not receive GSA (n = 3)
- Attrition before session 1

Post

Lost to post (n = 0)
Discontinued GCBT (n = 5)
- making insufficient progress
- goals for therapy changed
- no stated reason

Lost to post (n = 1)
- failed to return calls
Discontinued GSA (n = 2)
- making insufficient progress
- no stated reason

Follow-up

Lost to follow-up (n = 2)
- failed to return calls
- parents did not participate in treatment
- not interested
- failed to show for appointments ≥3X

Lost to follow-up (n = 2)
- failed to return calls
- not interested
- failed to show for appointments ≥3X

Analysis

Analyzed in Intent to treat analyses (n = 60)
Analyzed in treatment completer analyses (n = 51)

Analyzed in Intent to treat analyses (n = 52)
Analyzed in treatment completer analyses (n = 44)