

Bibliotherapy for Children With Anxiety Disorders Using Written Materials for Parents: A Randomized Controlled Trial

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The current trial examined the value of modifying empirically validated treatment for childhood anxiety for application via written materials for parents of anxious children. Two hundred sixty-seven clinically anxious children ages 6–12 years and their parents were randomly allocated to standard group treatment, waitlist, or a bibliotherapy version of treatment for childhood anxiety. In general, parent bibliotherapy demonstrated benefit for children relative to waitlist but was not as efficacious as standard group treatment. Relative to waitlist, use of written materials for parents with no therapist contact resulted in around 15% more children being free of an anxiety disorder diagnosis after 12 and 24 weeks. These results have implications for the dissemination and efficient delivery of empirically validated treatment for childhood anxiety.

Keywords: child anxiety, anxiety disorders, childhood, treatment, self-help

Anxiety disorders in childhood have begun to be recognized as a serious mental health problem. Epidemiological studies have repeatedly shown anxiety disorders in childhood to be one of the most prevalent forms of mental disorder (Anderson, Williams, McGee, & Silva, 1987; Canino et al., 2004). Combined with this high prevalence, the moderate to severe life impact of anxiety (Strauss, Frame, & Forehand, 1987) means that childhood anxiety provides a serious burden for public health. Furthermore, several studies have shown that anxiety disorders in childhood provide risk markers for a range of later adolescent and adult psychopathology (Last, Perrin, Hersen, & Kazdin, 1996; Pine, Cohen, Gurley, Brook, & Ma, 1998; Weissman et al., 1999).

On the positive side, the past decade has seen an increased focus on treatment for broad-based childhood anxiety disorders, and treatment effects have been positive (Allen & Rapee, 2005). These positive treatment results for childhood anxiety have generally been achieved through a traditional therapist–client treatment model typically involving 10–20 face-to-face therapeutic sessions. Although this model is highly efficacious, it is also resource intensive. This means that therapeutic costs are high and that many treatment settings have long waiting lists.

One of the most widely researched alternatives to traditional therapy is self-help. Individuals can help themselves with the

assistance of video materials, audiotapes, or computerized programs, but by far the most widely developed and researched delivery is via printed materials (bibliotherapy). Among adults, bibliotherapy has been applied to the successful management of depression, eating disorders, and a variety of anxiety disorders (Loeb, Wilson, Gilbert, & Labouvie, 2000; McKendree-Smith, Floyd, & Scogin, 2003; Newman, Erickson, Preworski, & Dzus, 2003). In fact, self-help through bibliotherapy in adults has shown good outcomes, in many cases as efficacious as standard therapist-conducted treatment (Mains & Scogin, 2003). One of the obvious difficulties for self-help lies in the maintenance of motivation to change throughout a lengthy program. As a result, some bibliotherapy programs rely on at least minimal involvement from a therapist, and some evidence has demonstrated that the degree of improvement in anxiety disorders is related to the amount of therapist involvement (Marrs, 1995).

One potential characteristic of childhood disorders that may make them especially amenable to bibliotherapy is the fact that children live under the care and guidance of an adult, most commonly a parent. In this situation, bibliotherapy programs for children can make use of a possible motivating factor that exists in the child's daily environment by utilizing the parent's desire for his or her child to change. The potential advantages of targeting parents in bibliotherapy for children's problems are that (a) parents have personal knowledge of the child across several areas of functioning, (b) children usually have established trust and rapport with their parents, (c) parents have some degree of distance from the child's distress, and (d) parents are more broadly present and available in a child's life than is a therapist. On the other hand, conducting therapy for a child through his or her parents can be filled with dangers: (a) The parents may in fact not be very distant from the problems and in some cases may be part of the cause (J. L. Hudson & Rapee, 2004), (b) the parent–child relationship may be distressed and could undermine trust and rapport, and (c) parents typically lack the professional education and knowledge of a therapist. Thus, whether or not parents are capable of helping

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their children overcome emotional disorders via written materials is an empirical question.

Despite the promise of bibliotherapy for adult mental disorders and the potential advantages for childhood problems, there has been surprisingly little research using this method with children. Some work has indicated the value of written instructions for parents for childhood oppositional behavior (Connell, Sanders, & Markie-Dadds, 1997; Long, Rickert, & Ashcraft, 1993), headache (Griffiths & Martin, 1996), enuresis (van Londen, van Londen-Barentsen, van Son, & Mulder, 1995), and social skills in intellectually delayed children (A. M. Hudson et al., 2003). To date, no studies have examined the value of parent-delivered material for children's internalizing problems such as anxiety. This is surprising given the high prevalence and impact of these disorders (Canino et al., 2004; Strauss et al., 1987).

The aim of the current study was to examine the impact of using parents as therapists for their own child in a trial of bibliotherapy materials for parents of children with anxiety disorders. Being the first such study, its aim was simply to address the question of whether bibliotherapy for childhood anxiety was more efficacious than no treatment and as efficacious as standard therapist-led treatment. We focused on prepubertal children because of previous indications that parent involvement in child anxiety treatment is especially valuable for younger children (Barrett, Dadds, & Rapee, 1996). Furthermore, given the limited theoretical differences between childhood anxiety disorders, the high levels of comorbidity between disorders, and the fact that many treatment trials for childhood anxiety combine several anxiety disorders, this study included a variety of children's anxiety disorders using the same, adaptable program. Finally, we were aware of a serious limitation to external validity in many self-help trials for adult problems that include additional motivators such as reminder telephone calls, regular mail contact, or homework mailings. Therefore, to maximize the real-world relevance of the trial, we chose to have no contact between the researchers and self-help participants during the active treatment phase, thereby providing a very conservative test of self-help.

Method

Participants

Participants for the study were 267 children meeting *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. [DSM-IV]; American Psychiatric Association, 1994) criteria for an anxiety disorder. Because demonstration of differences between active treatments requires good power, the intention was to recruit the maximum sample size possible, with a minimum of 53 participants per condition, to allow a power of .8 to detect a maximum effect-size difference of $f = .25$ (Faul & Erdfelder, 1992). Participants were included if they were in Years 1 through 6 at school (ages 6–12 years), they met criteria for an anxiety disorder as their principal (most interfering) disorder, and their parent or parents were able to read a standard, English-language newspaper. To maximize external validity, children with comorbid nonanxiety disorders were not excluded unless these disorders demanded immediate attention (e.g., severe school nonattendance, suicidal risk). Children on medication were included if the medication had been stable for the previous month.

Diagnoses were assigned by graduate students in clinical psychology or qualified clinical psychologists following structured interview with the Anxiety Disorders Interview Schedule for DSM-IV, Parent and Child Versions (ADIS-CP; Silverman & Albano, 1996). Interviewers received

training to criterion, and research from our clinic overlapping with the current sample has demonstrated interrater agreement of $\kappa = 1.00$ for an overall diagnosis of anxiety disorder and ranging from .68 to .93 across the major anxiety disorders (Lyneham, Abbott, & Rapee, 2004). Children met criteria for the following principal diagnoses: generalized anxiety disorder ($N = 103$), social phobia ($N = 64$), separation anxiety disorder ($N = 51$), specific phobia ($N = 33$), obsessive-compulsive disorder ($N = 13$), and panic disorder ($N = 3$). The main comorbid diagnostic groups included anxiety disorder ($N = 219$; 82.0%), externalizing disorder ($N = 72$; 27.0%), and mood disorder ($N = 23$; 8.6%).

Measures

Structured interview. As described above, all children and their parents were interviewed by a clinician using the ADIS-CP. The interview was repeated at posttreatment and 3-month follow-up. Repeated interviews were conducted by clinicians who were masked to the child's allocated treatment condition but who were told the child's pretreatment diagnoses. This was done to ensure that clinicians completed a measure of diagnostic severity on each diagnosis even if the child no longer met criteria. Thus, the interview provided data on diagnostic status as well as clinician-rated severity.

Child reports. To measure symptoms of anxiety, children completed the Spence Children's Anxiety Scale (SCAS; Spence, 1998). This self-report measure contains 38 anxiety items that all load on a single higher order scale, with a range from 0 to 114. Internal consistency (.92) and 6-month retest reliability (.60) for the total scale are good (Spence, 1998).

Finally, children completed the Children's Automatic Thoughts Scale (CATS; Schniering & Rapee, 2002), a measure of children's negative thoughts and beliefs. The measure contains four subscales: social threat ($\alpha = .85$), physical threat ($\alpha = .92$), failure and loss ($\alpha = .92$), and hostility ($\alpha = .85$). The measure also has good retest reliability over 3 months (.68–.77), and the various subscales each discriminate between relevant forms of child psychopathology (Schniering & Rapee, 2002). For the current study, total scores were used to provide a measure of general negative thinking. This measure has a total of 40 items with a range from 0 to 160.

Parent reports. Parents completed the parent version of the SCAS (SCASp; Nauta, Scholing, Rapee, Abbott, & Spence, 2004). This measure contains items parallel to those of the child version but relates to questions about "my child" rather than self. Scores range from 0 to 114, and internal consistency (.89) is good (Nauta et al., 2004). The measure distinguishes clinically anxious from nonclinical groups of children (M_s 31.8 and 14.2, respectively; Nauta et al., 2004). Data from the mother and father SCASp, when available, were combined to form a single measure of parent-rated anxiety symptoms. When two parents did not provide data, results are based on a single parent, most often the mother.

To assess related and comorbid symptoms, parents also completed the Child Behavior Checklist (CBCL; Achenbach, 1991), which was scored simply as internalizing (CBCL-int) and externalizing (CBCL-ext) subscales. Internal consistency for the two subscales is reported to be strong (.89–.93), as is 1-week retest reliability (.87–.95), and the scales have been shown to differentiate referred and nonreferred children (Achenbach, 1991). Again, when available, the two parent scores on the CBCL were combined to form single measures of parent internalizing and parent externalizing, and t scores are reported.

Treatment Conditions

Group treatment. Group treatment was based on the Cool Kids Program, a nine-session cognitive-behavioral program for the management of broad-based childhood anxiety disorders (Rapee & Wignall, 2002). Previous research has shown the program to be efficacious and to provide results comparable with other empirically validated programs for the management

of child anxiety (Rapee, 2000, 2003). Therefore, it provided a valuable gold standard against which to compare bibliotherapy. Parents and children attend all nine sessions of the program on a weekly basis over 12 weeks (the final few sessions are biweekly) and cover recognition of emotion and anxiety, realistic thinking, child management strategies, exposure to feared cues, and additional skills such as assertiveness and dealing with teasing. Each session lasts for approximately 2 hours and is conducted in groups of around seven families. The program is manualized, and both child and parents receive written summaries, worksheets, and guides for home practice during sessions. In the present study, groups were conducted by pairs of therapists who were mostly graduate students in clinical psychology, with at least one having had previous experience conducting Cool Kids groups.

Bibliotherapy. Parents of participants allocated to bibliotherapy were informed that they were to conduct treatment at home with their own child using self-help materials. Each parent was provided with a copy of the commercially available consumer book *Helping Your Anxious Child: A Step-by-Step Guide* (Rapee, Spence, Cobham, & Wignall, 2000), which describes anxiety management skills and ways of introducing them to and implementing them with children. In addition, children were provided with a workbook that contained the summaries and worksheets referred to in the parent book and used within the group program. The materials for bibliotherapy were developed to contain the strategies and information that characterize most empirically supported treatments for child anxiety. Hence, the techniques covered in bibliotherapy more or less paralleled those covered in the standard group program. Nevertheless, we were working with a commercially available product, and hence, the bibliotherapy program was not completely parallel to the Cool Kids group program. Examples of some differences are a section on relaxation in the commercial book that was not included in the group program and attention to dealing with teasing and bullying in the group program that was not included in the commercial book.

Parents were given a cover letter explaining that they were to work through the materials with their child and would be seen again for assessment in 3 months' time. The letter informed parents that they were to work through the program at their own pace but provided them with a suggested timetable for completing the program within the 3 months. To evaluate pure bibliotherapy, no further contact with a therapist or the researchers was to be initiated. If a parent initiated contact during the treatment period, he or she was encouraged by research staff to continue to implement the skills and was reminded of the timing of the next assessment. If a parent reported a severe deterioration in his or her child (e.g., school refusal, suicidal ideation), research staff referred the case to the unit's clinical supervisor to determine the most appropriate course of action.

Waitlist. Participants in waitlist were simply told that they had been randomly assigned to wait for treatment and that they would be recontacted for additional assessment in 3 months' time, after which they would be offered the next available treatment group.

Procedure

Recruitment for the study began in November 1999 and ended in August 2002. Final follow-up concluded in early 2003. Participant flow is shown in Figure 1. Participants contacted the Macquarie University Anxiety Research Unit (Sydney, New South Wales, Australia) following referral from school counselors, general practitioners, or mental health professionals or by word of mouth and were screened with a brief telephone conversation to determine whether the stated problem appeared reasonably appropriate. They were then sent the questionnaire measures to complete at home and return at the pretreatment structured diagnostic interview. Those who met criteria for inclusion were allocated to a research condition and provided the appropriate materials, scheduled into a group, or informed when their waitlist period would end. Randomization occurred in blocks of eight to allow allocation to group treatment based on a predetermined

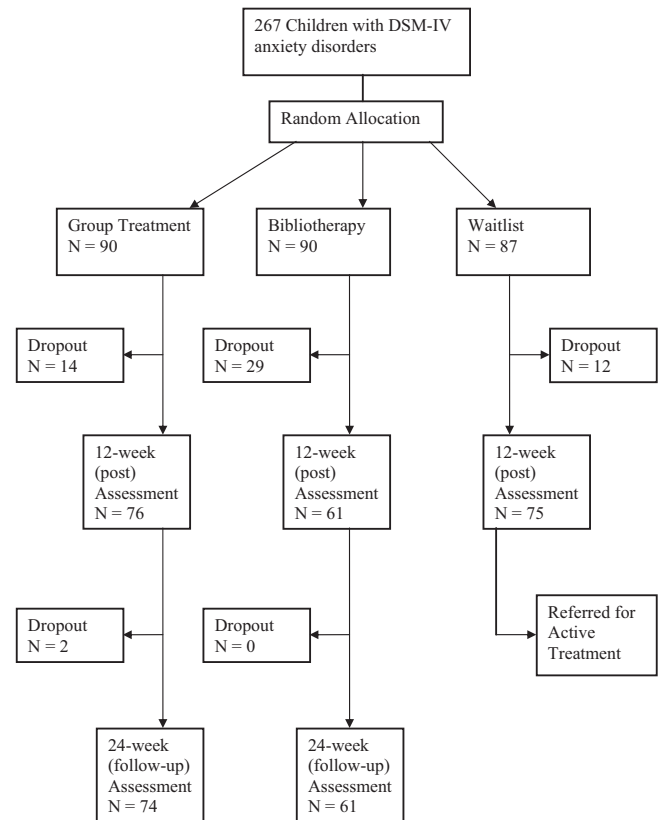


Figure 1. Flow diagram of participants through the study. DSM-IV = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.).

random number schedule known only to the study coordinator (Maree J. Abbott). After the initial 12 weeks, all children were once again given the initial questionnaires and were reassessed using the ADIS-CP by interviewers who were masked to group allocation. No adverse events due to participation in treatment were noted. Participants in waitlist were then offered group treatment. Participants in bibliotherapy and group treatments were asked to continue practicing the skills for a further 3 months, at which time they were again reassessed. After the 3-month follow-up period, bibliotherapy participants were offered group treatment if they felt they needed it.

Parents signed informed-consent forms, and children provided verbal assent. The methods were approved by the Macquarie University Human Ethics Committee.

Data Analysis

Data from all three conditions were available only at pre- and posttreatment points because, for ethical reasons, waitlist participants were offered group treatment after the end of the waiting period. Thus, the three experimental groups were compared at pre- and posttreatment using mixed-model analyses. Two types of analyses were conducted. Treatment completer analyses included only those participants who returned data at both time points and, in the group condition, completed at least seven sessions. An equivalent to the seven-session rule for people in bibliotherapy was not possible, and therefore, all bibliotherapy participants who returned data were included in treatment completer analyses. Hence, results for this condition are necessarily somewhat conservative. Intention-to-treat analyses included all participants who were allocated to a condition (aside from 7 participants who did not return any data at pretreatment) and used

the last-point-carried-forward method to deal with missing data. Both methods of analyzing data address somewhat different questions.

In addition, the two active conditions, bibliotherapy and group treatment, were compared across the three time points for which they were expected to return data: pretreatment, posttreatment, and 3-month follow-up. Mixed-model analyses were used, and again, both completer and intention-to-treat analyses were conducted.

Results

Pretreatment Comparisons

Of the 267 children, 90 were allocated to group treatment, 90 to bibliotherapy, and 87 to waitlist. Participants allocated to the three experimental groups were compared on both demographic variables and pretreatment measures of psychopathology. On demographic variables, there were no significant differences between groups on child's age, parent marital status, percentage on a low family income, number of siblings, or use of medication (all $ps > .10$). Child's sex differed significantly between groups, $\chi^2(2, N = 267) = 11.13, p < .01$, with the group treatment condition having a greater proportion of female children. Therefore, all analyses described below were repeated with sex included as a covariate. In no case was sex a significant covariate, and hence, it is not described further. Demographic data are presented in Table 1. On measures of psychopathology, there was no significant difference between groups on their principal diagnosis, severity of principal diagnosis, number of comorbid diagnoses, or scores on the SCAS, CATS, SCASp, CBCL-int, or CBCL-ext (all $ps > .10$; see Table 2).

Analyses of Dropout Data

A total of 55 participants (20.6%) failed to return posttreatment data or attended fewer than seven group treatment sessions. Among these participants, 12 (13.8%) were from waitlist, 29 (32.2%) were from bibliotherapy, and 14 (15.6%) were from group treatment. There was a significant difference between conditions in the proportion of those who did not return posttreatment data, $\chi^2(2, N = 267) = 11.30, p < .01$.

Participants who dropped out at posttreatment were compared with those who did not drop out on demographic and psychopathology measures. Those who dropped out had a significantly greater number of comorbid diagnoses (M dropout = 2.2, SD =

1.3; M nondropout = 1.8, SD = 1.3), $F(1, 265) = 4.71, p < .05$, and scored significantly higher on several measures of psychopathology: CATS (M dropout = 48.9, SD = 33.8; M nondropout = 34.3, SD = 26.7), $F(1, 254) = 11.18, p = .001$; CBCL-ext (M dropout = 57.8, SD = 9.1; M nondropout = 54.4, SD = 9.7), $F(1, 262) = 5.29, p < .05$; and SCAS (M dropout = 39.6, SD = 18.6; M nondropout = 31.8, SD = 18.2), $F(1, 246) = 7.64, p < .01$. Several other measures did not differ significantly between groups, including child's age, child's sex, child's medication use, parents' marital status, number of siblings, SCASp, and CBCL-int.

Among participants in the bibliotherapy and group treatments, 45 (25.0%) failed to return any data at 3-month follow-up. Among these participants, 29 (32.2%) were from bibliotherapy, and 16 (17.7%) were from group treatment, $\chi^2(1, N = 180) = 5.01, p < .05$.

Pre-Post Comparisons Between Conditions

Changes across time from pre- to posttreatment (completion of first 12 weeks) were compared between the three conditions using repeated measures mixed-model analyses. As described above, both completer and intention-to-treat analyses were conducted.

The proportion of children in each condition who no longer met criteria for any *DSM-IV* anxiety disorder is shown in Figures 2 and 3. There were significant differences between groups based on both the completer sample, $\chi^2(2, N = 212) = 51.79, p < .001$, and the intention-to-treat sample, $\chi^2(2, N = 267) = 47.88, p < .001$. Post hoc analyses indicated that for the completer sample, bibliotherapy resulted in significantly more children free of an anxiety disorder (25.9%) than for waitlist (6.7%), $\chi^2(1, N = 136) = 8.62, p < .005$, but less than for children in group treatment (61.1%), $\chi^2(1, N = 137) = 15.31, p < .001$. A similar pattern was apparent for the intention-to-treat sample: bibliotherapy (17.8%) versus waitlist (5.7%), $\chi^2(1, N = 177) = 6.12, p < .05$; bibliotherapy versus group treatment (48.9%), $\chi^2(1, N = 180) = 19.6, p < .001$.

The clinician-rated global severity scale for the principal anxiety disorder diagnosis also showed a significant Condition \times Time interaction based on both completer, $F(2, 208.8) = 67.14, p < .001$, partial $\eta^2 = .372$, and intention-to-treat samples, $F(2, 264) = 44.77, p < .001$, partial $\eta^2 = .253$. Comparisons of the change across time for each condition using the intention-to-treat sample showed that children in bibliotherapy improved more than those on waitlist, $t(264) = 2.14, p < .05$, but not as much as those in group treatment, $t(264) = 6.95, p < .001$. Children in group treatment improved significantly more than those on waitlist, $t(264) = 9.03, p < .001$. Similar patterns were shown in the completer sample: bibliotherapy versus waitlist, $t(208.1) = 3.54, p < .001$; bibliotherapy versus group, $t(210.3) = 7.19, p < .001$; group versus waitlist, $t(208) = 11.41, p < .001$. Data are presented in Tables 2 and 3.

Parent report of child anxiety (SCASp) demonstrated a significant difference between groups based on both intention-to-treat, $F(2, 262.6) = 8.20, p = .001$, partial $\eta^2 = .058$, and completer samples, $F(2, 179.3) = 6.75, p = .001$, partial $\eta^2 = .072$. Comparisons of change across time for each condition showed slightly different patterns based on analysis sample. For intention-to-treat analyses, bibliotherapy failed to differ significantly from waitlist, $t(262.2) = 0.98, p > .32$, but was significantly different from group treatment, $t(262.8) = 2.93, p < .01$. Group treatment also

Table 1
Demographic Data Across the Three Conditions (*SDs* in Parentheses)

Demographic	Waitlist (<i>N</i> = 87)	Bibliotherapy (<i>N</i> = 90)	Group treatment (<i>N</i> = 90)
Child age (months)	114.1 (19.1)	114.7 (18.1)	113.7 (20.4)
Child sex (% female)	29.9	35.6	53.3
Marital status (% married)	85.1	87.8	86.7
Low family income (% below \$30,000)	16.3	10.3	17.0
Using medication (%)	17.2	16.7	24.4
Number of siblings	1.4 (0.9)	1.4 (0.7)	1.4 (0.9)
Number of comorbid diagnoses	1.9 (1.2)	1.9 (1.4)	1.9 (1.4)

Table 2
Mean Pretreatment, Posttreatment, and Follow-Up Data Across the Three Conditions for All Participants (Intention to Treat) With Last Data Carried Forward (SDs in Parentheses)

Measure	Waitlist		Bibliotherapy			Group treatment		
	Pre	Post	Pre	Post	Follow-up	Pre	Post	Follow-up
Diagnostic severity	6.5 (0.9)	5.8 (1.6)	6.4 (1.0)	5.2 (1.8)	5.0 (1.8)	6.5 (1.0)	3.4 (2.6)	2.8 (2.5)
SCASp	30.1 (13.4)	27.7 (13.8)	31.1 (14.2)	27.2 (15.4)	25.9 (15.7)	32.0 (13.0)	23.7 (13.6)	22.3 (14.3)
CBCL-int	68.4 (7.7)	65.1 (8.8)	68.4 (8.3)	64.6 (10.3)	63.4 (11.0)	67.7 (8.3)	60.3 (9.7)	58.7 (11.3)
CBCL-ext	55.1 (9.5)	53.9 (10.5)	55.1 (9.7)	52.8 (10.5)	51.7 (10.6)	55.2 (9.8)	50.9 (9.3)	49.6 (10.3)
SCAS	33.2 (18.0)	25.5 (15.9)	34.2 (18.2)	28.1 (20.1)	25.4 (19.4)	32.9 (19.6)	25.6 (16.7)	23.8 (17.2)
CATS	36.9 (28.7)	26.8 (24.2)	35.7 (26.2)	18.9 (18.6)	18.6 (19.1)	39.5 (31.7)	25.0 (20.7)	19.0 (21.2)

Note. Pre = pretreatment; Post = posttreatment; SCASp = Spence Children’s Anxiety Scale, Parent Version; CBCL-int = Child Behavior Checklist, internalizing scale; CBCL-ext = Child Behavior Checklist, externalizing scale; SCAS = Spence Children’s Anxiety Scale; CATS = Children’s Automatic Thoughts Scale.

showed a greater decrease across time than waitlist, $t(262.8) = 3.89, p < .001$. In contrast, completer analyses indicated that bibliotherapy showed a significantly greater decrease over time than waitlist, $t(180.7) = 2.02, p < .05$, but did not differ significantly from group treatment, $t(179.9) = 1.36, p > .17$. Group treatment again showed a significantly greater decrease across time than waitlist, $t(177.5) = 3.66, p < .001$.

Parent report of internalizing behavior (CBCL-int) showed a significant Condition \times Time interaction based on both intention-to-treat, $F(2, 262.1) = 9.41, p < .001$, partial $\eta^2 = .066$, and completer samples, $F(2, 188.6) = 7.75, p = .001$, partial $\eta^2 = .084$. Comparisons across time for each condition showed slightly different patterns based on analysis sample. Intention-to-treat analyses showed that children in bibliotherapy failed to improve significantly more than those on waitlist, $t(261.4) = 0.53, p = .60$, and improved significantly less than children in group treatment, $t(262.5) = 3.49, p = .001$. Children in group treatment improved significantly more than those on waitlist, $t(262.5) = 3.98, p < .001$. In contrast, completer analyses indicated that bibliotherapy showed a significantly greater decrease over time than waitlist, $t(189.7) = 2.08, p < .05$, but did not differ significantly from group treatment, $t(189.2) = 1.55, p > .12$. Group treatment again

showed a significantly greater decrease across time than waitlist, $t(187.2) = 3.93, p < .001$.

Parent report of externalizing behavior (CBCL-ext) showed a significant Condition \times Time interaction based on both intention-to-treat, $F(2, 261.7) = 6.03, p < .01$, partial $\eta^2 = .043$, and completer samples, $F(2, 183.4) = 5.56, p = .005$, partial $\eta^2 = .060$. Comparisons across time for each condition showed slightly different patterns based on analysis sample. Intention-to-treat analyses showed that children in bibliotherapy failed to improve significantly more than those on waitlist, $t(261.3) = 1.26, p > .20$, and improved significantly less than children in group treatment, $t(261.9) = 2.20, p < .05$. Children in group treatment improved significantly more than those on waitlist, $t(261.9) = 3.43, p = .001$. In contrast, completer analyses indicated that children in bibliotherapy showed a significantly greater decrease over time than those on waitlist, $t(184.1) = 2.25, p < .05$, but did not differ significantly from children in group treatment, $t(183.8) = 0.72, p > .47$. Group treatment again showed a significantly greater decrease across time than waitlist, $t(182.4) = 3.23, p = .001$.

Children’s reports of anxious symptoms (SCAS) failed to show a significant Condition \times Time interaction based on either intention-to-treat, $F(2, 243.3) = 0.15, p > .86$, partial $\eta^2 < .01$, or completer samples, $F(2, 179.3) = 0.82, p > .44$, partial $\eta^2 = .011$. As seen in Tables 2 and 3, children reported a marked decrease in anxiety in all three conditions, including waitlist.

Finally, children’s reports of negative beliefs (CATS) also failed to show a significant Condition \times Time interaction based on either the intention-to-treat sample, $F(2, 249.4) = 0.15, p > .85$, partial $\eta^2 < .01$, or the completer sample, $F(2, 187.8) = 0.96, p > .38$, partial $\eta^2 < .01$.

Maintenance Effects for Active Treatment Conditions

The proportion of participants in each condition who no longer met criteria for any anxiety disorder differed significantly at 3-month follow-up based on both intention-to-treat (bibliotherapy = 18.9%; group = 61.1%), $\chi^2(1, N = 180) = 33.43, p < .001$, and completer samples (bibliotherapy = 17.9%; group = 73.6%), $\chi^2(1, N = 128) = 39.18, p < .001$ (see Figures 2 and 3).

Participants in group treatment and bibliotherapy were compared across time from preintervention to 3-month follow-up using mixed-model analyses. Data are presented in Tables 2 and 3.

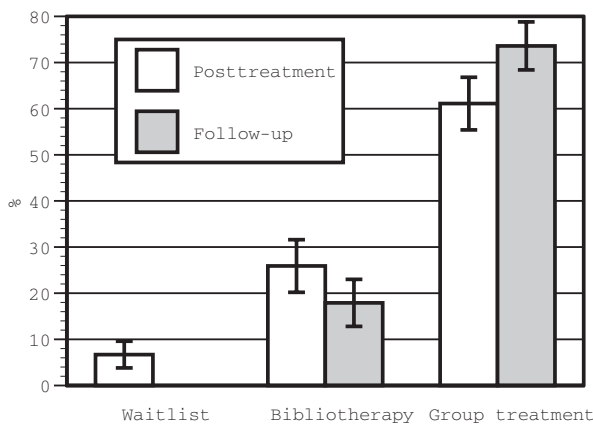


Figure 2. Percentage (including standard error) of children in each condition who no longer met criteria for any anxiety disorder at posttreatment and 3-month follow-up based on completer analyses.

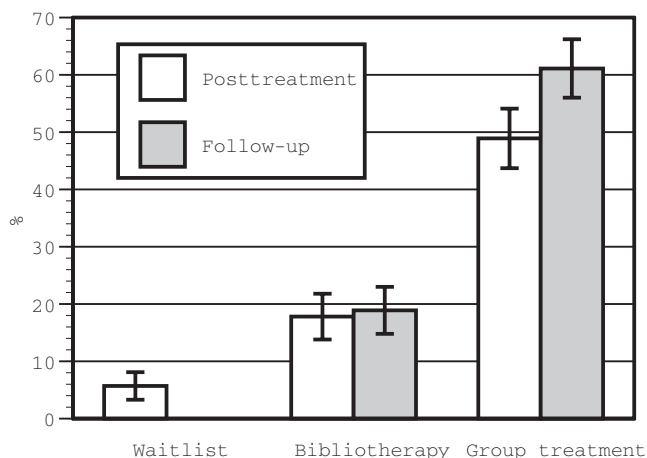


Figure 3. Percentage (including standard error) of children in each condition who no longer met criteria for any anxiety disorder at posttreatment and 3-month follow-up based on intention-to-treat analyses.

Analyses based on both intention-to-treat and completer analyses produced similar patterns, and hence, only intention-to-treat analyses, being the more conservative, are reported.

Clinician rating of diagnostic severity showed a significant decrease across time, $F(2, 356) = 177.00, p < .001$, partial $\eta^2 = .499$, and a significant Condition \times Time interaction, $F(2, 356) = 36.77, p < .001$, partial $\eta^2 = .171$. The two conditions differed significantly in their change from pretreatment to follow-up, $t(356) = 8.03, p < .001$, but not in their change from posttreatment to follow-up, $t(356) = 1.40, p > .16$.

Parent rating of anxiety (SCASp) showed a similar significant effect of time, $F(2, 354.2) = 69.31, p < .001$, partial $\eta^2 = .281$, and a Condition \times Time interaction, $F(2, 354.2) = 6.97, p = .001$, partial $\eta^2 = .038$. Bibliotherapy and group treatment differed significantly in their change from pretreatment to follow-up, $t(354.3) = 3.27, p = .001$, but not in their change from posttreatment to follow-up, $t(354.1) = 0.06, p > .95$.

Parent report of internalizing symptoms (CBCL-int) showed a significant decrease across time, $F(2, 353.5) = 90.68, p < .001$, partial $\eta^2 = .338$, and a Condition \times Time interaction, $F(2, 353.5) = 7.72, p = .001$, partial $\eta^2 = .041$. The conditions differed

significantly in their change from pretreatment to follow-up, $t(353.6) = 3.55, p = .001$, but not in their change from posttreatment to follow-up, $t(353.2) = 0.31, p > .75$.

Parent report of externalizing symptoms (CBCL-ext) also showed a significant effect of time, $F(2, 353.3) = 59.68, p < .001$, partial $\eta^2 = .252$, and a significant Condition \times Time interaction, $F(2, 353.3) = 3.54, p < .05$, partial $\eta^2 = .019$. The conditions differed significantly in their change from pretreatment to follow-up, $t(353.3) = 2.45, p < .05$, but not in their change from posttreatment to follow-up, $t(353.1) = 0.32, p > .74$.

Children's report of anxiety symptoms (SCAS) showed a significant effect of time, $F(2, 322.7) = 42.77, p < .001$, partial $\eta^2 = .216$, but failed to show a significant Condition \times Time interaction, $F(2, 322.7) = 0.06, p > .94$, partial $\eta^2 < .01$.

Finally, children's report of negative beliefs (CATS) showed a significant effect of time, $F(2, 327.2) = 26.17, p < .001$, partial $\eta^2 = .138$, but failed to show a significant Condition \times Time interaction, $F(2, 327.2) = 0.15, p > .86$, partial $\eta^2 < .01$.

Discussion

Overall, the results of the current trial demonstrate that children whose parents received bibliotherapy with no therapist contact improved somewhat more than children on waitlist after 12 weeks and that these results maintained up to 3 months. However, the specific pattern of results differs slightly depending on the type of analysis and the reporting source. On the basis of structured clinical interviews, bibliotherapy was significantly better than no treatment according to both completer and intention-to-treat analyses. In contrast, parent reports indicate a significant difference between bibliotherapy and waitlist according to completer, but not according to intention-to-treat, analyses. Finally, children in all three groups reported significant and marked change over time, but differences between groups were not significant. The results also show that standard cognitive-behavioral group treatment with a therapist resulted in greater change than bibliotherapy according to both clinician and parent reports. Therefore, these results do not suggest a replacement of traditional models of therapy but do suggest a potential alternate model of treatment delivery under appropriate circumstances.

The data indicate the usual disagreement between sources of reporting (Cole, Truglio, & Peeke, 1997). The clearest differences

Table 3
Mean Pretreatment, Posttreatment, and Follow-Up Data Across the Three Conditions for Participants Who Completed Each Assessment (SDs in Parentheses)

Measure	Waitlist		Bibliotherapy			Group treatment		
	Pre	Post	Pre	Post	Follow-up	Pre	Post	Follow-up
Diagnostic severity	6.5 (0.9)	5.8 (1.7)	6.4 (1.1)	4.7 (1.8)	4.8 (1.8)	6.4 (0.9)	2.5 (2.2)	2.0 (2.1)
SCASp	30.6 (13.7)	26.6 (13.1)	29.6 (14.2)	21.0 (12.2)	16.1 (10.8)	30.8 (13.0)	20.2 (11.2)	16.9 (10.8)
CBCL-int	68.6 (7.4)	64.3 (8.8)	68.2 (8.8)	60.6 (10.8)	56.7 (12.1)	67.2 (8.6)	58.3 (9.3)	54.8 (10.9)
CBCL-ext	54.7 (9.1)	52.7 (10.1)	54.3 (10.4)	48.9 (9.9)	46.5 (10.6)	54.3 (9.7)	48.8 (8.2)	45.9 (9.2)
SCAS	32.6 (18.4)	21.9 (14.7)	32.1 (16.6)	19.1 (15.0)	15.5 (11.6)	30.7 (19.5)	21.4 (14.5)	17.6 (14.5)
CATS	34.5 (26.8)	27.1 (24.3)	33.6 (24.6)	18.9 (18.6)	18.6 (19.1)	34.8 (28.5)	25.0 (20.7)	19.0 (21.2)

Note. Pre = pretreatment; Post = posttreatment; SCASp = Spence Children's Anxiety Scale, Parent Version; CBCL-int = Child Behavior Checklist, internalizing scale; CBCL-ext = Child Behavior Checklist, externalizing scale; SCAS = Spence Children's Anxiety Scale; CATS = Children's Automatic Thoughts Scale.

between conditions are reflected in the ratings made by therapists and based on interview with parents and child. Although every attempt was made to keep interviewers masked to treatment condition, in reality this is quite difficult, and it is possible that interview ratings were influenced by interviewers' preconceptions of outcome. Nevertheless, the advantages of interview ratings include the potential to combine all relevant information, to adhere to clear diagnostic criteria, to incorporate information about context and interference, and to provide a relative benchmark based on experience with a variety of cases. Overall, the results based on interview criteria indicate that relative to the passage of time, around 15% more children were free of an anxiety disorder simply through the use of psychotherapeutic materials written for their parents.

In general, the pattern of results from interview was reflected for the most part in parent questionnaire reports. However, the difference between bibliotherapy and waitlist failed to reach statistical significance based on intent-to-treat analyses whereby participants who failed to return data had their previous data carried forward to the next point. This is an especially conservative method of missing data imputation. However, in the absence of widely agreed methods for handling missing data (Tabachnick & Fidell, 2001), we decided to utilize this conservative approach. The different pattern of significance between intent-to-treat and completer analyses suggests that although bibliotherapy appears to be of value for those who implement it completely, it may not be of significant value across a general population to which it is applied. In other words, bibliotherapy for anxious children may be efficacious when used appropriately, but it may not be effective because of limits in people's ability or willingness to implement it. This point is of relevance to all modes of treatment but may be especially relevant in the case of self-help strategies such as bibliotherapy where factors such as understanding, correct implementation, and motivation become particularly salient because of the lack of a therapist. Combining self-help with reduced amounts of therapist input may be one way in which to maximize the strengths of each approach (Marrs, 1995; Newman et al., 2003). In addition, future research into identification of factors that influence the implementation and success of self-help will be vital to translating efficacy into effectiveness.

Surprisingly, self-report data from children did not indicate differences between conditions but showed a marked reduction in symptoms across all groups, including waitlist. Childhood anxiety is not generally considered to be a transient condition, and previous treatment outcome studies have usually indicated relatively small changes across time (Barrett et al., 1996; Kendall, 1994). Therefore, the reasons for the greater change across time in child report relative to other sources of information in this study are unclear. Some authors have reported the tendency of anxious children to "fake good" (Kendall, 1993), and it is likely that they also become bored with repeatedly completing the same measures. Most self-report measures are not validated at the lower age groups included in this trial. Consequently, the reports from young children such as those used in this study need to be considered with some care. However, children are the ultimate customer, and hence, their perceptions of change need to be considered in any evaluation of outcome. Clearly, the children in this trial reported marked improvement across the 24 weeks, but whether these

effects were due to intervention or simply to the passage of time remains uncertain.

On the negative side, bibliotherapy resulted in greater dropout from participation than did traditional group therapy or waiting for treatment. This finding highlights an important caveat to the use of bibliotherapy. Clearly bibliotherapy, or perhaps simply the concept of bibliotherapy, is not suitable for some people. Patients seeking psychotherapy often expect guidance and advice from an expert who assumes some degree of responsibility and control (Furnham & Wardley, 1990). Thus, individuals with such expectations who are then confronted with an independent and active model of therapeutic change may be disheartened. It is possible that an alternate recruitment strategy, self-selection, or a more active marketing of the positive side of bibliotherapy could attract a greater proportion of individuals who are suited to this treatment model. In the current study, we found that treatment dropouts had slightly more severe symptomatology than completers. Further post hoc examination of this issue demonstrated that this greater severity was not specific to those who dropped out of bibliotherapy but characterized dropouts across all conditions. Future research aimed at identifying sufferers who can derive the greatest benefit from self-help would be of tremendous value for the streamlining and cost reduction of mental health resources (Baillie & Rapee, 2004).

Several additional limitations to the current study should be considered. First, the structured interviews were not technically administered in exactly the way prescribed by Silverman and Albano (1996). Although the interview instructions require interviewers to make separate diagnoses based on parent report and child report and then to combine these diagnoses, our interviewers created combined diagnoses based on their separate interviews with parents and children without the intervening step of producing actual diagnoses based on each separate interview. It is extremely unlikely that this would have systematically influenced the results, but this possibility cannot be excluded. More important to note is that the lack of separate diagnoses meant that there was no independent validation for the self-reports from parents and children. Given the lack of significant differences shown on child report, it may be argued that bibliotherapy produced changes only in parent perceptions rather than in actual anxiety. However, this is unlikely given that (a) child report in fact indicated a marked reduction in anxiety, but not significantly more than the surprising decrease in anxiety reported by waitlist children, and (b) an identical pattern of results was shown in the group treatment. An additional limitation is the fact that parents did not complete data on compliance or preference for bibliotherapy. Such data would be important to more fully understanding the implications and benefits of self-help and should be included in any future studies. Perhaps the main limitation to the study is the fact that the sample for the study came from a traditional, specialist anxiety clinic. This was necessary to allow a properly controlled scientific design and a group treatment comparison. However, this recruitment means that we cannot be certain whether those families who do not seek traditional forms of therapy would benefit from bibliotherapy. Clearly, it would be useful to specifically target these families in future research.

Given the suggestion that bibliotherapy for child anxiety appears to be of value at least for those families who successfully implement it, some important clinical implications can be high-

lighted. Most obviously, written materials could be used to reduce the waiting lists of busy therapeutic services. In particular, if it was made clear to clients that bibliotherapy materials were being offered as an interim measure while waiting for an available therapist, the current results suggest that up to 20% would no longer require the services of a therapist 12 weeks later. Although not directly addressed in the current study, it is also possible that using bibliotherapy materials might allow a reduction in the amount of required therapist time and hence allow a stretching of limited professional resources. Similarly, other research has suggested that augmenting bibliotherapy for childhood anxiety with alternate methods of therapist contact (such as telephone and Internet) can provide treatment to populations whose physical location makes reaching traditional therapeutic services impossible (Lyneham & Rapee, 2005).

The current study also raises important issues for public health. Epidemiological surveys have shown that only a small proportion of children in need reach appropriate sources of help (Canino et al., 2004; Farmer, Stangl, Burns, Costello, & Angold, 1999). Perceived stigma and a desire to handle problems themselves have been shown to characterize anxious adults who do not seek help (Issakidis & Andrews, 2002), and it is likely that similar attitudes are held by parents of anxious children. The traditional treatment model is also limited by a lack of physical and professional resources available to implement the empirically supported treatments (Kendall & Choudhury, 2003; Miller et al., 2003). Consequently, if it were possible to increase the proportion of sufferers who seek help, there would not exist sufficient resources in the mental health sector to provide the necessary assistance.

Bibliotherapy has the potential to address all of these issues. The promising findings reported here provide the first step toward exploring these broader public health implications by showing that bibliotherapy has the potential to reduce childhood anxiety. Clearly, future studies need to focus on methods to attract those anxious children whose families are reluctant to seek traditional treatment and to determine whether bibliotherapy can provide an effective means of reducing the impact of anxiety for these children while minimizing stigma and allowing greater flexibility. Increased public education campaigns or training for professionals who work with children can help to increase the recognition of anxiety and its effects, as well as methods for managing it. By including bibliotherapeutic strategies among the treatment options, it may be possible to attract a greater proportion of families who would usually avoid traditional therapeutic services.

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