An Open Trial of Intensive Family Based Cognitive-Behavioral Therapy in Youth With Obsessive-Compulsive Disorder Who Are Medication Partial Responders or Nonresponders

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An Open Trial of Intensive Family Based Cognitive-Behavioral Therapy in Youth With Obsessive-Compulsive Disorder Who Are Medication Partial Responders or Nonresponders

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This study reports an open-trial of family-based cognitive-behavioral therapy (CBT) in children and adolescents with obsessive-compulsive disorder (OCD). Thirty primarily Caucasian youth with OCD (range = 7–19 years; 15 girls) who were partial responders or nonresponders to two or more medication trials that were delivered either serially or concomitantly received 14 sessions of intensive family-based CBT. Eighty percent of participants were considered improved at posttreatment and at 3-month follow-up, and symptom severity was reduced by 54% at both posttreatment and follow-up. Seventeen (56.6%) and 16 (53.3%) participants were classified as being in remission at posttreatment and follow-up, respectively. Significant reductions in OCD-related impairment, depressive symptoms, behavioral problems, and family accommodation were noted. No significant difference in youth-reported anxiety was found.

Methodologically rigorous studies among adults and children with obsessive-compulsive disorder (OCD) have established the superiority of cognitive-behavioral therapy (CBT) to placebo, attention-control conditions, and serotonin reuptake inhibitor (SRI) medications in
clinical trials (e.g., Pediatric OCD Treatment Study Team [POTS], 2004; Simpson et al., 2008). Despite these replicated findings, in the United States, most adults with OCD are initially treated with SRIs rather than CBT (Blanco et al., 2006) due to the scarcity of qualified CBT practitioners, limited access, differing beliefs about the psychological underpinnings of OCD, therapist reluctance to engage in exposures, and cost (Freiheit, Yve, Swan, & Cady, 2004).

Although SRIs have demonstrated efficacy relative to placebo for pediatric OCD (POTS, 2004), it is well recognized that many patients (~40%) do not respond to treatment, complete remission is uncommon (e.g., POTS, 2004), and undesirable side effects may be present (Safer & Zito, 2006). Data on evidence-based augmentation for youth who are partial responders or nonresponders to SRI therapy is scant. Although antipsychotic augmentation has empirical support in adults with OCD, this approach has not been well-studied in youth. In addition to being recommended as the first line approach to treatment, CBT should be considered for all youth who have an incomplete response to initial medication monotherapy. Yet supporting data of CBT response for medication partial or nonresponders are limited in pediatric populations.

Currently, several studies support the efficacy and effectiveness of CBT in patients with OCD who have had an incomplete response to SRI therapy. Among adults, Simpson et al. (2008) examined whether exposure and response prevention was more effective than stress management training for adult OCD patients who remained symptomatic after past SRI treatment. Relative to stress management training, effect sizes for exposure and response prevention were large ($d = 1.31$) relative to stress management training. Tolin, Maltby, Diefenbach, Hannan, and Worhunsky (2004) reported a waitlist controlled open trial to examine the additive benefits of twice-weekly CBT in 20 adults who had failed at least two SRI trials. Using intent-to-treat analyses for the final sample ($n = 15$), scores on the Yale–Brown Obsessive–Compulsive Scale (YBOCS; Goodman et al., 1989) decreased significantly at posttreatment and 6-month follow-up relative to waitlist ($\eta^2 = 0.55$). In a naturalistic study of adults who had residual symptoms following at least one SRI trial, Tundo, Salvati, Busto, Di Spigno, and Falcini (2007) found that 15 of 24 patients who completed treatment were rated as being “much improved” or “very much improved” on the Clinical Global Improvement Scale (Guy, 1976).

Limited data have been reported for pediatric samples. Piacentini, Bergman, Jacobs, McCracken, and Kretchman (2002) reported an open CBT trial for 42 youth with OCD. Fifty-two percent were on medication at baseline; response was not associated with medication status. March, Mulle, and Herbel (1994) openly treated 15 youth with CBT; most were receiving concurrent SRI pharmacotherapy when CBT commenced. CBT was associated with significant benefits overall, with 9 of 15 youth experiencing a 50% reduction in symptoms. Storch, Bagner, et al. (2007) reported on five children with OCD, who previously had a partial response or nonresponse to psychotropic medications, that later benefited from 3 weeks of intensive CBT. In eight children who were partial or nonresponders to an SRI upon presentation for CBT, Franklin et al. (1998) showed a 55% decrease in Children’s YBOCS (CYBOCS; Scahill et al., 1997) scores following treatment. Finally, in a study examining the effectiveness of combined CBT and pharmacotherapy in 57 youth with OCD (Weyer & Rey, 1997), 68% of youth were clinically remitted after receiving 4 weeks of daily treatment that was initiated after being on an SRI medication for 2 weeks. Because youngsters were started on medication first with daily CBT added later, it is not possible to determine the effects of CBT on nonresponders or partial responders to sequential medication.

In the present study, we report an open trial in which we examined the merits of intensive family-based CBT for youth who were partial or nonresponders to at least two medication trials that were delivered either serially or concomitantly. We predicted that participation in CBT would be associated with decreased OCD symptom severity, functional impairment, family accommodation, anxiety, depressive, and externalizing symptoms.

**METHOD**

Participants

Participants were 30 youth (15 girls) ranging in age from 7 to 19 years who presented to a specialty clinic for intensive CBT (see Table 1 for information about the sample). The overwhelming majority of patients came from greater than 150 miles away, and the medication regimens of 24 of 30 youth were handled by their local psychiatrist rather than the authors. All participants met study criteria for having partial response or nonresponse to two or more trials of SRIs and/or an SRI(s) augmented with an atypical antipsychotic(s). Children were considered to have been a partial or nonresponder if they had received—either serially or concomitantly—at least two medications deemed by their prescribing physician to be of reasonable clinical value and
duration \(^1\) based on the child’s age, body mass, and tolerability, which did not result in symptom remission by the time of the pretreatment assessment (defined as a CYBOCS Severity Scale \(\geq 19\) and rating of at least “moderately ill” on the Clinical Global Impressions of Severity Scale [CGI-S]; National Institute of Mental Health, 1985). A history of medication trials was obtained by interview with patients and their families. Past/current medication use and the presence of a partial or nonresponse were assessed by parent report only in conjunction with the above noted CYBOCS and CGI-S criteria at the time of evaluation.\(^2\) Psychotropic medications remained stable throughout treatment.

Additional inclusion criteria included (a) primary diagnosis of OCD made dually through a clinical interview by the first author and the Anxiety Disorders Interview Schedule for \textit{DSM–IV: Parent Version} (ADIS–IV–P; Silverman & Albano, 1996) with a clinical severity rating \(\geq 4\), (b) 7 to 19 years of age, and (c) availability of at least one parent to attend all treatment sessions with the child. Children were excluded if they met any of the following criteria: (a) primary diagnosis other than OCD; (b) current or past psychosis, bipolar disorder, or pervasive developmental disorder, or current suicidality; (c) change in medication within the 8 weeks prior to study entry; and (d) diagnosis in the parent of mental retardation or psychiatric disorders (e.g., psychosis) that would limit their ability to understand CBT. Of the 32 children screened, 2 did not meet eligibility (1 due to comorbid psychosis, 1 due to a recent medication change).

**Procedures**

All study procedures were approved by the local Institutional Review Board. Assessments occurred at

\(^1\) For SRIs, adequate duration was defined as at least 12 weeks, with 8 weeks at a therapeutic dose determined by the prescribing clinician to have reasonable chance of benefit (i.e., a balance of treatment response and side effects that was determined by the prescribing clinician). For atypical antipsychotics, this included taking the medication for at least 8 weeks, with 4 weeks at a therapeutic dose determined by the prescribing clinician to have reasonable chance of benefit (unless the child was unable to tolerate the medication). For a minority of children, the actual duration and dosing were relatively short given the presence of side effects that caused the physician to discontinue the therapy. The Pediatric OCD Treatment Study II (POTS–II; Freeman et al., 2009) study is a recently completed multisite trial examining augmentation strategies (i.e., CBT, “diluted” CBT, and continued SRI therapy) of partial response to past community-based SRI pharmacotherapy. Although the present study utilized fewer controls relative to the POTS–II study (e.g., strict definitions of partial response), all children had a partial or nonresponse to at least two medication trials that were adequate in duration or unable to be tolerated by the child (per physician determination).

\(^2\) A CYBOCS cutoff of 19 or more corresponds to clinically important OCD and is similar to a CYBOCS entry score of 16 that was used in the Pediatric OCD Treatment Study II (Freeman et al., 2009).

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<table>
<thead>
<tr>
<th>Variable</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>15 girls (50%)</td>
</tr>
<tr>
<td>Age</td>
<td>(M = 13.4) years, (SD = 3.2) years (range = 7–19 years)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>23 (76.7%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3 (10%)</td>
</tr>
<tr>
<td>African American</td>
<td>2 (6.7%)</td>
</tr>
<tr>
<td>Asian American</td>
<td>2 (6.7%)</td>
</tr>
<tr>
<td>Comorbidity</td>
<td></td>
</tr>
<tr>
<td>Attention Deficit Hyperactivity Disorder</td>
<td>11</td>
</tr>
<tr>
<td>Disruptive Behavior Disorders</td>
<td>10</td>
</tr>
<tr>
<td>Generalized Anxiety Disorder</td>
<td>8</td>
</tr>
<tr>
<td>Depressive Disorders</td>
<td>8</td>
</tr>
<tr>
<td>Tourette Syndrome/Chronic Tic Disorder</td>
<td>4</td>
</tr>
<tr>
<td>Social Phobia</td>
<td>3</td>
</tr>
<tr>
<td>Separation Anxiety Disorder</td>
<td>1</td>
</tr>
<tr>
<td>Enuresis</td>
<td>1</td>
</tr>
<tr>
<td>Youth With Multiple Psychiatric Comorbidities</td>
<td>17</td>
</tr>
<tr>
<td>No Comorbid Condition</td>
<td>5</td>
</tr>
<tr>
<td>Treatment History</td>
<td></td>
</tr>
<tr>
<td>Medication(^a)</td>
<td></td>
</tr>
<tr>
<td>Total Medication Trials</td>
<td>90 SRIs and atypical antipsychotic medications (average per child = 3.0)</td>
</tr>
<tr>
<td>Trials of (\geq) Two SRIs</td>
<td>5</td>
</tr>
<tr>
<td>SRIs(s) + an Atypical Antipsychotic</td>
<td>25</td>
</tr>
<tr>
<td>Psychotherapy</td>
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</tr>
<tr>
<td>Adequate CBT Trial</td>
<td>6</td>
</tr>
<tr>
<td>Non-CBT Form of Psychotherapy</td>
<td>17</td>
</tr>
<tr>
<td>No Psychotherapeutic Treatment</td>
<td>7</td>
</tr>
</tbody>
</table>

\(^a\) Note: The Disruptive behavior disorders classification included Oppositional Defiant Disorder and Disruptive Behavior Disorder Not Otherwise Specified (NOS). The Depressive disorders classification included Major Depression, Depressive Disorder NOS. An adequate cognitive-behavioral therapy (CBT) trial was defined as 10 or more sessions lasting at least 60 min. SRI = serotonin reuptake inhibitor.

\(^b\) Six youth were also currently taking various medications for inattention and/or hyperactivity symptoms (e.g., methylphenidate HCL); 6 were taking an antianxiety medication p.r.n. (e.g., lorazepam); and 1 child was taking an anti-convulsant (divalproex sodium).
treatment of any participants but not blinded given the open nature of this trial. Inter-rater reliability procedures for the ADIS–IV–P were not conducted. However, diagnoses for all patients were confirmed using the following checks: (a) a clinical interview with the patient by the first author and (b) a review of records by the fourth author followed by a discussion among the rating clinician and first and fourth authors about clinical presentation. Only clinician-administered measures were completed (typically by phone) at follow-up, as many participants lived too far from our facility to return for an in-person assessment. Rater training included (a) didactics, (b) observation of five assessments conducted by experienced raters, and (c) administration of at least three assessments with in vivo supervision.

CBT
Participants received 14 sessions of family-based CBT that were 90 min in length and conducted over 3 weeks. Treatment was the same as used in Storch, Geffken, Merlo, Mann, et al. (2007), which is an adaptation of the POTS (2004) protocol for use in an intensive format. Treatment was tailored to children’s individual symptoms and developmental level and included psychoeducation, development of a hierarchy of the child’s specific feared situations, exposure and response prevention, cognitive therapy, and relapse prevention. Families were assigned treatment-related tasks (up to 2 hr a day) to complete independently between sessions. At least one parent attended all sessions with the child to promote generalization of treatment gains, provide instruction in helpful ways for the family to respond to the child’s OCD symptoms (e.g., refraining from symptom accommodation), and enhance their child’s compliance with treatment recommendations (e.g., implementing contingency management strategies).3

Similar to Storch, Geffken, Merlo, Mann, et al. (2007), treatment for each participant was provided by a team of one postdoctoral fellow and one predoctoral clinical psychology intern, with the 14 sessions divided equally between them. Therapists were supervised by the first author on a daily basis. Based on session content (per therapist report), the first author rated the fidelity of each CBT session to the manual on a 6-point scale, ranging 0 (poor fidelity) to 5 (excellent fidelity; $M = 4.70, SD = 0.56$). There was no limit on treatment access (i.e., further therapy; medication changes) during the follow-up period, and thus these data were not collected. One participant terminated treatment early due to improvement in her symptoms but did not complete posttreatment and follow-up assessments. We used last observation carried forward analyses for clinician administered data only. Only the participant who terminated treatment early was missing clinician-administered data at the post- and follow-up assessments. Only data from treatment completers was used for child- and parent-report measures given missing data. The number of participants completing child- or parent-report measures at both time points ranged from 20 to 28 (see Results section for exact numbers for each measure).

Measures

ADIS–IV–P (Silverman & Albano, 1996). The ADIS–IV–P is a semistructured diagnostic interview designed specifically to assess anxiety and mood disorders in youth as well as to screen for other disorders such as externalizing behavior disorders, eating disorders, and psychosis. Diagnoses are determined by endorsement of symptoms reflecting Diagnostic and Statistical Manual of Mental Disorders (4th ed. [DSM–IV]; American Psychiatric Association, 1994) diagnostic criteria, as well as receiving a distress/impairment severity rating of 4 or greater (on a 0–8 scale) that was based on parent report and clinical judgment. The ADIS–IV–P possesses good psychometric properties, including test–retest reliability (Silverman, Saavedra, & Pina, 2001); interrater reliability (Lynen, Abbott, & Rapee, 2007); and construct validity in OCD (Gallant et al., 2008) and non-OCD anxiety samples (Wood, Piacentini, Bergman, McCracken, & Barrios, 2002).

CYBOCS (Scahill et al., 1997). The CYBOCS is a clinician-rated, semistructured measure of OCD symptom severity over the past week. The CYBOCS was administered to the child and parent(s) jointly, as many youth underestimate their symptoms. The CYBOCS has excellent internal consistency, test–retest stability ($\alpha = .89$ in the present sample; Scahill et al., 1997; Storch et al., 2004), and interrater reliability (Yucelen, Rodopman-Arman, Topcuoglu, Yazgan, & Fisek, 2006); correlates positively with other measures of symptom severity and weakly with measures of diverging constructs (Storch et al., 2004); and is treatment sensitive (POTS, 2004).
CGI–S (National Institutes of Mental Health, 1985). The CGI–S is a widely used clinician rating of the global severity of psychopathology on a scale of 0 (no illness) to 7 (extremely severe). Among pediatric patients with OCD, the CGI–S correlates highly with the CYBOCS Severity Scale (Storch et al., 2004) and is sensitive to treatment effects (POTS, 2004; Storch, Geffken, Merlo, Mann, et al., 2007).

Child Obsessive Compulsive Impact Scale–Child and Parent Versions (COIS–C/P; Piacentini et al., 2003). The COIS–C/P are 56-item, parent- or child-report questionnaires that assesses OCD-related impairment in different areas of the child’s functioning, including school, social, and home/family activities. The COIS–C/P demonstrate favorable psychometric properties such as excellent internal consistency, concurrent validity (i.e., modest relations with OCD symptom severity; Piacentini, Bergman, Keller, & McCracken, 2003), and treatment sensitivity (Storch, Geffken, Merlo, Mann, et al., 2007). Internal consistency for the pretreatment COIS–C and COIS–P in this sample was .94 and .96.

Multidimensional Anxiety Scale for Children (MASC; March, 1997). The MASC is a self-report Likert-type measure of symptoms of general, social, and separation anxiety in youth. The MASC is internally consistent, demonstrates good test–retest stability over periods of 2 weeks and 3 months (March, Sullivan, & Parker, 1999), and exhibits excellent construct validity (Baldwin & Dadds, 2007; March, 1997). Internal consistency for the pretreatment MASC was .92.

Children’s Depression Inventory (CDI; Kovacs, 1992). The CDI is a widely used, 27-item self-report measure of depressive symptoms over the past 2 weeks. The CDI has demonstrated good internal consistency (α = .67 in this sample), test–retest reliability, and discriminative validity (Carlson & Cantwell, 1979), as well as construct validity as determined by high correlations with other depression measures and a stable factor structure (Craighead, Smucker, Craighead, & Ilardi, 1998; Kovacs, 1992).

Child Behavior Checklist (CBCL; Achenbach, 1991). The CBCL is a 113-item parent-report measure that assesses a wide range of behavioral and emotional problems in the respondent’s child. The CBCL consists of eight subscales that make up an Internalizing Problems Scale (Withdrawn, Somatic Complaints, and Anxious/Depressed subscales) and an Externalizing Problems Scale (Delinquent Behavior and Aggressive Behavior subscales) and a Total Score, which is composed of the subscales making up the two composite scores and the Social Problems, Attention Problems, and Thought Problems subscales. Widely used in clinical studies, the CBCL has established psychometric properties including high internal consistency, test–retest reliability, and construct validity as determined by a stable factor structure and strong correlations between subscales and measures of similar constructs (Achenbach, 1991). Internal consistency for the pretreatment Internalizing and Externalizing Scales were .86 and .91.

Family Accommodation Scale (Calvocoressi et al., 1995). The Family Accommodation Scale is a clinician-administered 13-item measure of the extent to which family members accommodate OCD symptoms and distress/impaired related to such accommodation. Excellent psychometric properties have been reported in adult and pediatric OCD samples including high internal consistency, and positive correlations with symptom severity and functional impairment (Amir, Freshman, & Foa, 2000; Storch, Geffken, Merlo, Soto, et al., 2007). Internal consistency was high in this sample (α = .91).

RESULTS

CYBOCS

Table 2 presents the means, standard deviations, and statistics at each time point. An analysis of variance with time as the within-subjects factor and the CYBOCS Severity scale as the outcome variable was significant (n = 30), F(2, 58) = 75.38, p < .001. Follow-up t tests revealed significant differences in CYBOCS Severity scale from pre- to posttreatment, t(29) = 10.60, p < .001. This difference was maintained at follow-up, t(29) = −0.13, p > .05. Overall, symptom severity was reduced by 54% from pretreatment levels at both posttreatment and follow-up ([baseline mean − posttreatment mean]/baseline mean).

CGI–S

The omnibus analysis of variance for the CGI–S was significant (n = 30), F(2, 58) = 81.47, p < .001. At pretreatment, the mean rating was 4.70 (SD = .60); this improved to a mean rating of 2.14 (SD = 1.09) at posttreatment, t(29) = 11.01, p < .001, and follow-up (M = 2.21, SD = 1.08), t(29) = −0.31, p > .05.

Clinical Improvement

Tolin, Abramowitz, and Diefenbach (2005) found that a YBOCS reduction of 30% or greater corresponded with
treatment improvement ratings. This criterion exhibited excellent positive and negative predictive validity in predicting treatment related improvement [Positive Predictive Value (PPV) = .90, Negative Predictive Value (NPV) = .92], which corresponds to false positive rates of 10% and false negative rates of 8%. Using this criteria, 80% (n = 24/30) of participants were clinically improved at posttreatment and follow-up.

Remission Status
Consistent with others (Storch, Geffken, Merlo, Mann, et al., 2007), we defined remission as having a severity rating on the ADIS-IV-P at 3 or less and CYBOCS Total Score at 10 or less. Seventeen of 30 participants (56.6%) were classified as being in remission at post-treatment; most of these remained remitted at follow-up (53.3%; n = 16/30).

Secondary Outcomes
Paired samples t tests were used to examine secondary outcome measures as these measures were not collected at follow-up. Youth reported a significant decrease on the CDI total score from pre- to posttreatment (n = 20), t(19) = 3.23, p < .01. Scores on the MASC were not significantly different from the pre- to posttreatment (n = 27), t(26) = 1.82, ns. A significant decrease was found from pre- to posttreatment for the COIS-P (n = 23), t(22) = 5.01, p < .001, and COIS-C (n = 22), t(21) = 3.71, p < .001. A significant decrease was found in accommodation of the child's OCD symptoms from pre- to posttreatment (n = 28), t(27) = 3.22, p < .01. Parents reported reduced internalizing (n = 28), t(27) = 4.51, p < .001, and externalizing (n = 28), t(27) = 3.90, p < .001, symptoms in their children at posttreatment compared to pretreatment.

DISCUSSION
The present data provide preliminary support for the utility of CBT in treating youth who were partial responders or nonresponders to two or more serial or concomitant trials of pharmacotherapy for OCD (e.g., SSRIs, atypical antipsychotics) that were generally managed by community physicians prior to their presentation. In general, the results are very encouraging. Children who had previously had a limited response to serial and/or concomitant medication trials showed an average CYBOCS reduction of 54% from pre- to posttreatment, and this reduction was maintained at the 3-month follow-up. As well, at posttreatment and follow-up, approximately one half of children were in clinical remission.

Improvements in secondary outcomes are also encouraging. It is not surprising that impairment ratings were significantly reduced, given the reductions in CYBOCS scores. When a distressing and chronic psychiatric condition improves significantly after treatment, it would follow that depressive symptoms may decrease, which is a finding reported by others (e.g., Barrett et al., 2004; Storch, Geffken, Merlo, Mann, et al., 2007). It may be that cognitive components taught to children in this CBT protocol assist with depressive cognitions by empowering the child to fight back against the symptoms as opposed to being more passive. Given evidence that OCD precedes the onset of depressive symptoms in the majority of affected adults (e.g., Rasmussen & Eisen, 1992), targeting OCD symptoms may have an indirect benefit in reducing depressive symptoms. Reductions in parent-rated externalizing symptoms may be a function of fewer negative interactions centered around OCD and related symptoms as well as components of the treatment protocol that address problematic family dynamics (e.g., reducing expressed emotion and family
accommodation). Indeed, the large reduction in family accommodation is also a marker of the reduced interference of OCD in family functioning.

Only the children’s ratings of their own anxiety on the MASC did not show improvements, which is consistent with several past reports (e.g., Martin & Thienemann, 2005) but not others (Barrett et al., 2004; Storch, Geffken, Merlo, Mann, et al., 2007). This may be because the MASC assesses symptoms of general anxiety rather than OCD symptoms per se, underreporting by the child, the modest test–retest stability of the MASC in a recent study (Baldwin & Dadds, 2007), and/or our sample’s low baseline levels of anxiety symptoms relative to other studies of children with OCD (Barrett et al., 2004; Martin & Thienemann, 2005; Storch, Geffken, Merlo, Mann, et al., 2007) and non-OCD anxiety disorders (e.g., van Gastel & Ferdinand, 2008).

The clinical global improvement rate of 80% seen in the present study is consistent with other studies using comparable definitions of improvement involving more treatment-naïve samples of youth with OCD (e.g., Freeman et al., 2008; Storch, Geffken, Merlo, Mann, et al., 2007) and further suggests the merits of family-based CBT for pediatric patients. Generally speaking, secondary outcomes (e.g., COIS-C/P, CDI) evidenced similar reductions to those found in Storch, Geffken, Merlo, Mann, et al. (2007). Although the small sample size limits our ability to examine outcome predictors, our anecdotal experiences suggest that youth with poor insight and/or significant disruptive behavior had a truncated response. The current results are also consistent with studies involving adults with OCD who did not respond fully to two or more medication trials, though the pediatric patients generally demonstrated a superior outcome (e.g., Tolin et al., 2004, found a 67% clinical global improvement rate using the Clinical Global Improvement Scale).

There are several possible explanations for the modest differences in findings. First, the present sample likely had a shorter duration of illness relative to the patients in the Tolin et al. (2004) and Tundo et al. (2007) studies. This may have resulted in relatively lower levels of functional impairment and less “entrenched” beliefs about OCD symptoms. Second, typical medication-prescribing practices may differ depending on whether the patient is a child or adult, meaning that the samples may have had differing pharmacological treatment histories. For example, providers may make more frequent medication shifts with pediatric patients when a rapid improvement is not evident. Thus, pediatric patients may not have had an adequate trial of past medications before switching, which we were only able to assess via retrospective recall. Some evidence for this is seen in the recent increases in the prescription of the atypical antipsychotics for youth (Cooper, Hickson, Fuchs, Arborgast, & Ray, 2004) despite potentially undesirable side effects. Third, treatment in the present study was delivered intensively (i.e., every weekday) versus the twice-weekly sessions in Tolin et al. Treatment-resistant cases may benefit from more intensive treatment. Finally, this intervention addressed family dynamics that were typically not addressed in adult studies. Indeed, we showed a relatively large reduction in family accommodation ratings that was likely a product of therapeutic attention to behaviors that may reinforce symptoms.

Several study limitations must be noted. First, the overwhelming majority of youth (24/30) were managed by a physician in their community rather than the authors, and pharmacological regimens upon presentation were not always based on published practice parameters. Thus, it is possible that many of these youngsters would have had a more positive outcome had medication been more systematically managed. Many of the pharmacological combinations were not consistent with practice parameter recommendations, which may reflect the challenges of dealing with difficult-to-manage youth when CBT is not readily available and/or that community providers are basing medication choices on clinical judgment or extrapolations from adult data when relevant child data are not available. Second, there was no control for time or treatment provision; a randomized-controlled (i.e., attention-control) design would have been preferable. Third, psychotropic medications varied among youth and past medication history and side effects was assessed through parent report and not externally verified. As a result, it is possible that this information was not entirely accurate or complete. Fourth, the follow-up period was modest in duration and additional treatment was allowed during this interval. Thus, the long-term durability of treatment gains in the context of an experimental design awaits further investigation. Finally, treatment integrity was assessed via daily supervision with the treating clinicians and clinician-reported protocol adherence. Review of audio- or videotapes of sessions would have been preferable.

Implications for Research, Policy, and Practice

The present study adds significantly to the literature by suggesting that CBT may hold promise in reducing obsessive-compulsive symptoms among children who have had a partial response or nonresponse to two or more trials of pharmacotherapy. Although CBT alone or together with SSRI pharmacotherapy therapy is recommended as the gold-standard intervention (POTS, 2004), dissemination remains limited due to the shortage of trained practitioners and geographical barriers. As a result, many children in the United States receive
pharmacotherapy alone or in conjunction with non-CBT psychotherapy. Given that most youth in this study improved regardless of treatment history, the present data further suggest that CBT should be a major component of first-line treatment for pediatric OCD, even in the context of limited response to past pharmacotherapy alone and/or non-CBT psychotherapy. CBT also has the added advantage of safety and tolerability relative to certain medication classes, particularly the atypical antipsychotics.

As well, family-based intensive interventions may hold particular relevance for treatment-resistant cases given the frequency of sessions; massed exposure tasks, which is conducive to learning treatment skills (Storch, Geffken, Merlo, Mann, et al., 2007); and family focus on alleviating symptoms. Because many families do not have access to trained CBT providers, traveling to receive intensive treatment may reduce this barrier. Investigating alternative methods of CBT delivery is also needed to improve treatment access, such as self/parent-guided protocols and telephone or computer-based approaches (see Lack & Storch, 2008, for a review). Although there exists a modest literature supporting such approaches among adults (e.g., BT Steps; Greist et al., 2002), relatively little has been done using technology to improve treatment dissemination among youth, which is highlighted as a future direction.

REFERENCES


