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The Role of Treatment Expectancy in Youth Receiving Exposure-based CBT for Obsessive Compulsive Disorder

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Abstract

The purpose of this investigation was to examine correlates of parent, child, and therapist treatment expectations and their role in the exposure-based treatment of childhood obsessive compulsive disorder (OCD). Treatment expectations were assessed among 49 youth with primary OCD, their parents, and therapists as part of the baseline evaluation and post-treatment clinical outcomes were determined by blind evaluators. Baseline depressive symptoms, child/parent-rated functional impairment, externalizing behavior problems, number of comorbid psychiatric disorders, and a lower perception of control were associated with lower pre-treatment expectations. Parent expectation was associated with parental OCD symptoms, child depressive symptoms and child-reported impairment. Therapist expectations inversely correlated with child depressive symptoms, externalizing problems, and child-rated impairment. Pre-treatment OCD severity and prior treatment history were not linked to expectancy. Finally, higher treatment expectations were linked to better treatment response, lower attrition, better homework compliance, and reduced impairment.

Keywords

OCD; Obsessive-Compulsive-Disorder; Treatment Expectancy; Child; Expectation

Patients' expectations of treatment have long been thought to color their perception of and participation in treatment (Greenberg, Constantino, & Bruce, 2006). "A patient's expectancy of benefit from treatment in itself may have enduring and profound effects on his physical and mental state" (Frank, 1959 [p. 36]). A large body of literature has examined these expectations and their role in the treatment process for adults including links between expectancy and therapeutic alliance, attendance and outcome (Arnkoff, Glass, & Shapiro, 2002). Although the pattern of findings is complex, such work frequently reveals links between higher expectations of treatment efficacy and improved medical, surgical, and

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psychiatric health-outcomes (Di Blasi, Harkness, Ernst, Georgiou, & Kleijnen, 2001; Frank, 1968; Friedman, 1963; Goldstein, 1960; Henn, Kang, Tashjian, & Green, 2007; Krell, Leuchter, Morgan, Cook, & Abrams, 2004; Mahomed et al., 2002; Mondloch, Cole, & Frank, 2001; Montgomery et al., 1998).

There are a number of theoretical models for understanding the contribution of expectancy on psychological treatment outcome (Flood, Lorence, Ding, McPherson, & Black, 1993; Wilkins, 1973b). Self-efficacy theory (Bandura, 1977) is the most commonly cited theoretical model cited to explain the role of expectancy predicting health outcome (see Mondloch et al., 2001 for a review). Expectancy is unlikely a passive construct – actively targeting expectancy (e.g., via psychoeducation focused on reputed efficacy of therapy approaches) can have a profound effect (Mondloch et al., 2001; Wilkins, 1973b). Bednar (1970) suggested that improvement is based on the degree to which a therapist "successfully imparts to the client the expectation that he should be improving as a result of the expert treatment he is receiving [pp. 651-2]." Bandura's model (Bandura, Adams, & Beyer, 1977) might suggest that it is a bolstering self-efficacy that increases expectations (and indirectly health outcome. Conversely, experience with (or engagement in) therapeutic procedures may be more powerful in increasing favorable expectations as opposed to provision of credible information or an expert's rationale about the therapy (Kazdin & Wilcoxon, 1976; Newman & Fisher, 2010; Wilkins, 1973a). In addition to pre-treatment expectancy, change in expectancy (especially over the course of early sessions) is associated with CBT response in adults with GAD (Newman & Fisher, 2010). Cognitive dissonance theory (Festinger, 1957) offers a theoretical framework, predicting that substantial investment in therapy procedures would bring about positive beliefs about the procedures to match behavior (Newman & Fisher, 2010). In summary, self-efficacy, cognitive dissonance, experiential learning offer explanatory models for the link between expectation and outcome.

Research by the Treatment of Adolescent Depression Study (TADS) group (Curry et al., 2006) underscores the potential value of examining treatment expectations. In their examination of moderators and predictors of treatment outcome for adolescent depression, higher levels of adolescent treatment expectation at baseline predicted more favorable post acute-treatment outcomes. This is in keeping with work in the pediatric pain arena which indicates that parental expectancy relates to both improved outcome and to child expectancy for a pain intervention (Liossi, White, Franck, & Hatira, 2007).

Despite its potential value as a predictor of treatment outcome, however, there is relatively little research examining treatment expectancy among child and adolescent populations (Curry et al., 2006). This is striking given that some of the most widely used and empirically supported treatments for childhood disorders employ cognitive behavioral therapy (CBT) techniques predicated on active engagement and participation (for example, exposure and response prevention therapy for Obsessive Compulsive Disorder [OCD]). To the extent that treatment expectations shape future participation and treatment experience, they are logical candidates for influencing clinical outcome for youth undergoing CBT. Moreover, children may offer the opportunity to study expectancies that are less likely to have been influenced (e.g., via education or past experience with treatment).

Although there is relatively little work exploring treatment expectations among child and adolescent populations, research with adults provides evidence for its potential influence on treatment response. In the adult CBT literature in particular, low expectations of treatment have been linked to poorer treatment outcome for several disorders including anxiety and depression (Chambless, Tran, & Glass, 1997; Elkin et al., 1999; Ilardi & Craighead, 1994; Newman & Fisher, 2010; Price, Anderson, Henrich, & Rothbaum, 2008; Westra, Dozois, & Marcus, 2007). With the exception of a handful of studies for OCD, (Lax, Basoglu, &

Marks, 1992; Vogel, Hansen, Stiles, & Gotestam, 2006), however, expectancy remains understudied in patients with OCD.

Outcome of a CBT trial for adults with OCD was associated with six-item measure that included expectation (*i.e.*, "faith in treatment") (de Haan et al., 1997). Notably, measurement of expectancy in the de Haan study might be confounded by other factors (e.g., motivation). Vogel and colleagues (2006) controlled for pre-treatment OCD severity in their analyses and found that patient expectations approached but did not reach significant prediction of post-treatment outcome. Notably, in the Vogel et al. (2006) study, expectancy was assessed after the first treatment session which included education/expert-rationale for procedures. Further, past CBT experience among the adult sample was not reported. Consequently factors such as therapeutic alliance and experiential bias may have influenced reports (Horvath & Luborsky, 1993). Interpretation of results were further complicated by the small sample size (n = 37). In a sample of 49 adults with OCD, a significant association between pre-treatment expectancy and outcome was not identified (Basoglu, Lax, Kasvikis, & Marks, 1988; Lax et al., 1992). This finding is difficult to interpret due to a number of methodological complications. First, patients in this study received clomipramine (N = 25) or pill placebo (N = 12). Second, therapies varied from at-home exposures (N = 12), clinician guided exposures (N = 25) and a condition recommending against exposures (N = 12). Third, instructions regarding exposures varied across subjects. Another recent study also failed to document significant associations between expectancy and OCD-symptom reduction in 39 adults with OCD (Steketee et al., 2011). However, expectancy ratings were assessed after four visits of treatment, thus complicating interpretation because expectancy may be influenced as early as after the first session (Newman & Fisher, 2010). Although this trial excluded adults who had received 10 sessions (or more) of CBT for OCD, data were not provided on how many patients were CBT naive.

Studying treatment expectancy in youth provides an opportunity to minimize confounds with the extant research, in particular bias and treatment history. Unfortunately, to our knowledge, no studies have examined patient expectations of treatment efficacy in youth with OCD. This is unfortunate given that, despite the recognition of CBT with exposure and response prevention (E/RP) as a first-line treatment for youth with OCD (POTS, 2004), between 12–43% of youth fail to benefit from the intervention (Lewin & Piacentini, 2009). Although factors such as increased comorbidity and syndrome severity impact outcome (Storch et al., 2010a), factors such as treatment expectations may also play a role given the demands associated with E/RP for OCD.

In addition to understanding relations between patient expectations of CBT with E/RP and treatment outcome, the literature lacks an understanding of the correlates of treatment expectancy. Improved understanding of clinical factors related to expectancy may assist clinicians to intervene early in the treatment process and maximize outcomes. For example, studies suggest that mental health providers can enhance expectancy via positive information about treatment and consequently improve outcomes (Di Blasi et al., 2001). Additionally, given the key role of parents in the treatment process in general, and in the treatment of pediatric OCD in particular (Barrett, Farrell, Dadds, & Boulter, 2005), it is important to consider correlates of parental treatment expectations. Finally, given that treatment expectations may influence fidelity and adherence to evidence-based protocols, it is important to examine links between clinician expectations of treatment efficacy and outcome (Wilkin, 1963b).

Heeding the call to consider treatment expectations when developing models of psychiatric treatment outcome for children and adolescents (Jensen et al., 1996), the present investigation examined the role of parent, child, and therapist treatment expectations in the

exposure-based treatment of childhood obsessive compulsive disorder. In addition, we examined clinical and demographic correlates of treatment expectation. The current study overcomes limitation from prior work in that (1) expectancy rating are obtained prior to treatment, (2), subjects are CBT naive, (3) serotonin reuptake inhibitors were exclusionary. Without these confounds, we expect that widely posited association between expectancy and outcome would be supported. Thus, we hypothesized that (a) higher levels of OCD symptom severity and related functional impairment would be associated with lower expectations of treatment. Consistent with self-efficacy theory, we expected higher levels of comorbidity would be associated with lower levels of treatment expectation. In line with expectancy theory, we expected that (c) parental OCD would be associated with lower treatment expectations for parents, and (d) that prior OCD treatment would be associated with poorer treatment expectations. Finally, building on findings from the TADS study (Curry et al., 2006), we (e) expected baseline expectations to predict treatment outcomes above and beyond baseline symptom severity. Given the dearth of research on treatment expectation in childhood OCD, exploratory investigation of correlates of expectancy were examined, including demographic factors and compliance with CBT homework.

Method

Participants

Our sample consisted of 71 youth with OCD and their parents who participated in a randomized controlled treatment trial (registered on clinical trials.gov #NCT00000386) conducted at a university medical center-based OCD specialty program (Piacentini et al., Under Review). The current study focused on 49 youth (59% male) who received exposure-based CBT and the demographic data below correspond to these youth. Mean age for the sample was twelve years (SD = 2.6 years, range = 8–17 years) with an ethnic/racial breakdown as follows: 77% Caucasian/White, 10% Hispanic/Latino; 4% Asia/Pacific Islander, 2% African American/Black, and 7% other ethnic background. Patients had not previously received a course of CBT with exposure and response prevention (ERP) for OCD. Twenty-four percent have received past psychopharmacological treatment for OCD and 22% reported past psychotherapy (non-ERP).

All study participants received a primary diagnosis of OCD based on the DSM-IV-TR (APA, 2000) and were free of medication prescribed for their OCD symptoms (9.1% were on stable psychotropic medication for comorbid symptoms, primarily stimulants for ADHD). Exclusion criteria were based on the presence of diagnoses or behaviors that contraindicated participation in the larger treatment study (e.g., schizophrenia-spectrum disorder or symptoms, suicidality). A more detailed description of the sample can be found in Piacentini et al (under review).

Measures

Diagnosis, Impairment and Functioning

Anxiety Disorders Interview Schedule for Children and Parents, Version IV (ADIS-IV): The ADIS-IV (Silverman, Saavedra, & Pina, 2001) is a semi-structured diagnostic interview with strong psychometric properties (Woods et al., 2006) that assesses the major DSM-IV anxiety, mood, and externalizing disorders experienced by youth. Parents and youth were interviewed separately.

Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS): The CY-BOCS (Scahill et al., 1997) is a semi-structured 10-item clinician-rated measure of OCD severity. Strong psychometrics (Storch et al., 2004) and treatment sensitivity (POTS, 2004) have been documented. In the present sample, α (internal consistency) = .77 for the CY-BOCS total

score. Responder status was conservatively based on a 30% reduction in OCD symptom severity (Storch, Lewin, De Nadai, & Murphy, 2010c).

Child Obsessive Compulsive Impact Scale (Parent and Child Reports; COIS-R P & C): The COIS-R (Piacentini, Peris, Bergman, Chang, & Jaffer, 2007b) is a 27-item self-report questionnaire designed to assess the OCD-specific academic, social, and home/family impairment among youth with OCD. Very good internal consistency (for total scores) was found in the present sample for the COIS-R-P ($\alpha = .83$) and the COIS-R-C ($\alpha = .90$). Consistent with Piacentini et al. (under review), subjects were considered COIS responders if there was no endorsement of functional impairment (above 'minimal') at post-treatment.

Comorbid Symptoms

Children's Depression Inventory (CDI): The CDI (Kovacs, 1985) is a 27-item self-report scale for assessing depression in children with excellent psychometric properties. Age and gender corrected T-scores were utilized, with excellent internal consistency ($\alpha = .89$ for the CDI total) found within this sample.

The Multidimensional Anxiety Scale for Children (MASC): The MASC (March, Parker, Sullivan, Stallings, & Conners, 1997) is an extensively-validated 39-item self-report scale assessing anxiety. Age and gender corrected T-scores were utilized. In the present sample, $\alpha = .88$ for the MASC total.

Child Behavior Checklist (CBCL): The CBCL (Achenbach, 1994) is an extensively-used parent-report of child behavioral and emotional problems with well-documented psychometric properties. Age and gender corrected T-Scores ($M = 50$; $SD = 10$) were obtained for broad-based internalizing (e.g., mood, anxiety) and externalizing (e.g., oppositional, inattentive) symptoms.

Cognitive Factors

Perceived Control Scale (PCS): The PCS (Weisz, Southam-Gerow, & Sweeney, 1998) is a 24-item questionnaire measuring a child's beliefs his/her ability to exert control over environmental (academic, social and behavioral) outcomes. Internal consistency was strong for the current sample ($\alpha = .91$ for the PCS).

Parental Psychopathology

Yale-Brown Obsessive Compulsive Scale (Y-BOCS): The Y-BOCS (Goodman et al., 1989) is measure of OCD symptom severity. Following procedures used by others (Storch et al., 2004), the measure was administered to parents in self-report format. Nine parents had clinically significant scores (total score ≥ 14) on the Y-BOCS (Lewin et al., 2011). In the present sample, $\alpha = .96$ for the Y-BOCS total score.

Outcome Measures

Clinical Global Impression (CGI): The CGI (Guy, 1976) includes single item, clinician-rated, Likert-type scales of Severity (CGI-S) and Improvement (CGI-I). The CGI-S allows the clinician to rate the global severity of the illness with scores ranging from 0 ("no illness") to 6 ("serious illness"). Similarly, the on the CGI-I, clinical improvement is rated from 1 ("very much improved") to 6 ("very much worse"). A score of 1 or 2 reflects substantial improvement and was used to designate treatment responders.

Homework Compliance: Homework compliance was assessed weekly (starting with the second session) via therapist rating (4-point Likert scale rating Homework Compliance:

none, some, moderate, good). Compliance ratings were obtained during the session subsequent to the homework assignment in question and were based on parent and child's report of the extent to which the assignment was completed as assigned.

Expectancy Rating: Treatment expectation was assessed at baseline via self-report on a seven point Likert Scale. On paper, respondents were asked, "How sure are you that doing the behavior therapy will help [your/your child's/this child's] obsessive compulsive symptoms?" Responses were provided on a 7-point Likert scale from 1(Not sure at all) to 7(Extremely Sure). Higher scores indicate more positive expectations about treatment. Youth, parents, and therapists completed the item independently and were not aware of each other's responses. The single item format is consistent with prior adult (Borkovec & Nau, 1972; Vogel et al., 2006) and child (Curry et al., 2006) studies. For child-reported expectancy, mean = 5.0 (SD = 1.4), median = 5, mode = 5, range = 1–7. For parent-reported expectancy, mean = 5.4 (SD = 1.1), median = 6, mode = 6, range = 2–7. Finally, for therapist-rated expectancy, mean = 5.3 (SD = 1.1), median = 6, mode = 6, range = 2–7.

Procedure

Approval for this study was obtained by the Institutional Review Board, and parental consent/youth assent were obtained prior to assessment. As noted earlier, data from this study were drawn from a larger clinical trial comparing ERP with a family component to relaxation training and psychoeducation (see Piacentini et al., under review, for details). This study included only youth randomized to the ERP group (N = 49) and ratings used for this study were conducted after participants were informed of their condition. Treatment consisted of 12 ERP 60-minute sessions conducted weekly (biweekly for the last two visits) following a published protocol (Piacentini, Langley, & Roblek, 2007a). Baseline measures, including treatment expectations, were administered as part of the pre-treatment protocol (post-randomization). Assessment of homework compliance was completed weekly starting with the second session by the treating clinician, and a full post-treatment assessment battery was completed following 12 sessions of exposure based CBT.

All assessments were conducted by doctoral students and licensed clinical psychologists trained to criterion on all study measures including the ADIS-IV, CY-BOCS and CGI. Rater training included training didactics focused on the ADIS, CYBOCS, and CGI, observing and coding a videotaped interviews, co-rating multiple live interviews conducted by a trained diagnostician. Following training-to-criteria on the preceding, raters completed at least one evaluation while under the supervision of a trained diagnostician. Weekly meetings with the principal investigator were conducted to review of ratings and taped assessments. As reported in Piacentini et al. (under review), ICC = .96 for a randomly selected sample of interdependently-reviewed CY-BOCS (n = 26). All raters were kept blind to study condition.

Data Analysis

Correlation analyses were employed to examine relations between expectancy and clinical, cognitive, and demographic factors (including homework compliance). They were also used to assess links between parent-, child-, and therapist-expectations of treatment and clinical and functional outcomes. T-tests were utilized to examine differences in expectancy as a function of receiving prior treatment and as a function of treatment assigned (E/RP versus relaxation/education controls). We subsequently conducted a hierarchical logistic regression to determine whether expectancy, depressive symptoms, and pre-treatment OCD severity were predictors of E/RP treatment-completer status. Hierarchical multiple regression was used to determine whether treatment expectancy predicted unique variance in treatment outcome above and beyond baseline OCD severity and depressive symptoms. All

hierarchical regression models included OCD symptom severity (baseline CY-BOCS total score) and child depressive symptoms (baseline CDI) in the first block to control for these variables in order for the unique contributions of expectancy to be assessed. Data for treatment completers (N = 41) and intent-to-treat (using last observation carried forward [LOCF], N = 49) are presented. Analyses are confined to the 49 subjects in the CBT group (with the exception of the exploratory aim contrasting expectancy between treatment conditions).

Results

Evaluation of study hypotheses

Are higher levels of OCD symptom severity and functional impairment associated with lower expectations of treatment?—Child ratings of OCD-specific functional impairment were negatively correlated with child and therapist expectancies. Expectancy was not correlated with baseline OCD severity. Data are presented in Table 1.

Are higher levels of comorbidity associated with reduced treatment expectations?—Higher child-rated symptoms of depression (at baseline) were associated with lower expectancy (as rated by all three respondents). Higher parent ratings of child externalizing symptoms (at baseline) were associated with decreased expectancies by the parent and therapist but not the child. No relations between rating of anxiety symptoms (at baseline) or parent-ratings of internalizing symptoms and expectancy were identified. Additionally, child expectancy was inversely related to the number of comorbid diagnoses identified using the ADIS-IV such that higher levels of baseline comorbidity were linked to poorer child expectations of treatment. Data for these correlations are also presented in Table 1.

Are OCD symptoms among parents associated with lower parent-expectations for treatment?—Higher parent expectancy was associated with lower parent-endorsed OCD symptoms on the Y-BOCS (see Table 1 for correlation coefficients).

Is prior OCD treatment history associated with lower expectations for treatment?—Expectancy for all three informants was not related to prior OCD treatment history (CBT or any OCD treatment).

Do baseline expectations predict treatment outcomes above and beyond baseline symptom severity?—Hierarchical regression was used to evaluate the contribution of expectancy, above and beyond baseline OCD severity and baseline depressive symptoms, in the prediction of treatment response and completion. Results of a hierarchical logistic regression analysis with treatment completion status (yes or no) as the dependent variable are presented in Table 2. In the first step, baseline CY-BOCS and CDI explained only 7% of variance in treatment completion status. Expectancy explained an addition 21% of the variance. The overall model remained a good fit upon the addition of the expectancy variables, explaining 28% of the variance in treatment completion. Child expectancy was the only variable that remained a significant predictor when all other variables were controlled. Results of the hierarchical regression models with CGI-Improvement and Post-treatment (week 14) CY-BOCS scores as the dependent variables are presented in Table 3. Baseline CY-BOCS and CDI did not predict significant variance in CGI-Improvement at week 14. The addition of treatment expectancy variables added significantly to the model and explained an additional 31% of the variance in CGI-I); child and therapist expectancy predicted unique variance. In the second regression, baseline CY-BOCS and CDI predicted 11% of the variance in post-treatment CY-BOCS. The subsequent

block of the regression adding expectancy variables explained an additional 32% of the variance in post-treatment CY-BOCS; only therapist expectancy was predictive of unique variance in post-treatment CY-BOCS. Regression coefficients and standardized betas are presented in Table 3.

Exploratory analyses

Intercorrelation of expectancy—Parent-child treatment expectancies were strongly correlated ($r = .43$, $p < .001$) as were child-therapist expectancies ($r = .46$, $p < .001$). Parent-therapist correlations ($r = .24$) were nonsignificant.

Demographics—Child, parent, and therapist expectancies were not correlated with the child's age, duration of illness, or age of OCD onset. There was a significant gender effect with parents reported higher expectations for boys (M = 5.7 ± 1.0) as compared to girls (M = 5.1 ± 1.2; $t[47] = 1.9$; $p < .05$). Expectancy for all three informants was not related to family history of OCD. The child's perception of perceived control was positively correlated with both child and therapist expectancy (see Table 1).

Treatment condition—Expectation differed as a function of the treatment condition for therapists ($t[69] = .56$, $p < .001$; therapists had significantly higher expectations for ERP versus the relaxation control) but not for youth ($t[69] = 1.2$, $p = .24$) or parents ($t[69] = 1.2$, $p = 1.2$).

Treatment compliance—As early as the third week of treatment, significant correlations between child/therapist expectancy and CBT homework emerged. These associations are consistent throughout the remainder of treatment (during which the baseline expectancy of all three raters correspond with homework compliance. Data are presented in Table 4.

Discussion

The present investigation examined clinical and demographic correlates of parent, child, and therapist treatment expectations and links between expectancies and treatment outcome for youth receiving CBT for OCD. We hypothesized that higher levels of child OCD symptom severity, comorbidity, parental OCD, and prior OCD treatment would be associated with lower expectations of treatment for all three respondents. As expected, parents endorsing their own OCD symptoms had lower expectations of their children's treatment. Child comorbidity was also associated with lower treatment expectations, although this link appeared to be specific to the type of co-occurring illness. Lower treatment expectations were associated with increased depressive symptoms; however, they were not associated with anxiety or internalizing problems. Parent and therapist expectations were lower for youth with comorbid externalizing problems. Contrary to expectations, baseline OCD severity and history of prior OCD treatment were not associated with expectations for treatment.

Critically, we found support for the hypothesis that treatment expectations would be linked to clinical outcomes for youth receiving exposure-based CBT. Greater child and therapist expectancies (for CBT) were associated with the child's post-treatment symptom severity, level of OCD symptom reduction, and independent clinician ratings of improvement. Further, youth with higher expectancy for CBT were more likely to: (1) have at least a 30% reduction in OCD symptoms; (2) be considered a treatment responder (per blinded clinician rating); and (3) complete the course of treatment. A similar pattern was found for therapist expectancy but not parent expectancy. Further, children with higher expectancy were less likely to have significant OCD-related impairment following treatment. Taken together,

these findings underscore the value of harnessing engagement and buy-in early in the treatment process.

Consistent with previous research (Ahmed & Westra, 2009; Westra et al., 2007), higher expectations for treatment success were associated with higher CBT homework compliance. These associations were identified as early as the third treatment session (following the second homework assignment) and were generally consistent throughout the remainder of treatment. Child expectancy was most closely linked to homework compliance (as opposed to parent or therapist expectancies), which is reasonable given that children are the central element to therapeutic homework exercises. Although parental participation is often encouraged (if not prescribed) in E/RP homework exercises, if a child does not believe the exposure will be helpful, he/she appears less likely to engage. This is particularly important for the treatment of OCD, where exposure exercises are considered the active ingredient for progress (Piacentini et al., 2007a)

Not surprisingly, we found significant, positive correlations between youth, parental, and therapist treatment expectations with the exception of the correlation between parent and therapist. Despite the strong relations between youth and parent expectancy, child expectancy demonstrated stronger ties to both clinical and demographic correlates. Additionally, youth treatment expectancy was a better predictor of outcome and improvement than parental treatment expectancy. Further, child expectations were more consistent with therapist expectations in terms of both clinical correlates and in relation to outcome. Given that children (versus parents) are the targets of the intervention, and, that they are ultimately, responsible for doing the bulk of the work in therapy, it is not surprising that their beliefs about treatment are most closely related to these variables.

Therapist expectations are somewhat more difficult to interpret. The specific strategies a given clinician employs to generate a treatment expectation rating are likely driven by numerous factors which makes them difficult to untangle. Clinical experience suggests that therapist expectations maybe based on a patient's primary symptom severity, related functional impairment, and comorbidity, each of which has been associated with treatment response in the extant literature (Peris et al., 2010; Storch et al., 2010b). With this in mind, it is perhaps not surprising that therapist expectancies in this study were linked to the patient's baseline comorbidity (especially depressive and externalizing symptoms) and were highly related to outcome status. Parents' treatment expectations were also related to child comorbidity, with links emerging between expectancy and the presence of child depressive symptoms and syndrome severity. Interestingly, parental expectations also appear guided by their own OCD symptoms (as well as child depressive symptoms and impairment). Thus it is noteworthy that parental expectancy was neither a predictor of outcome status nor of clinical improvement.

The positive association between decreased expectations and increased child depressive symptoms was found across raters. This finding is intuitive. The hopelessness, diminished energy, worthlessness, and other low feelings common to depression can clearly minimize hope of a positive prognostic outlook. It is possible that child expectancy mediates relations between depressive symptoms (such as hopelessness) and treatment outcome. Future samples with sufficient statistical power should investigate this hypothesis.

These data also only allow for speculation regarding the mechanism of the treatment expectancy-outcome relationship in youth with OCD. Compliance with CBT homework presents one possible theory. Lower expectation is linked with diminished homework compliance, even early on in treatment. Given the distress placed upon the child during the exposure to aversive stimuli, it is logical that the child's expectations of the efficacy of CBT

with E/RP may be linked to outcome (or at their very least to their participation). Thus youth who do not expect the treatment to work have lower engagement, less exposure/response prevention, and consequently less habituation and worse outcomes.

Differences between our findings and the extant adult literature may suggest the theoretical underpinnings of the expectancy-treatment response relationship. Unlike the adult studies, youth in our sample were relatively treatment naïve and consequently should not have had a substantial foundation on which to judge CBT/ERP (based on previous experience). While one would not expect youth in our sample to have researched CBT, parents may have been less likely to present with naïve understandings of the treatment. Thus, consistent with the adult research, parent expectancy was not significantly associated with CBT outcome. Youth in our study were not prescribed medications (for OCD), eliminating another confound of the existing adult research. Finally, in this study, assessments were conducted prior to initiating therapy, limiting the likelihood of mechanisms such as cognitive dissonance explaining the relationship (or of therapist-factors, e.g., alliance) explaining the relationship. The relationship between perceived control with expectancy (in the absence of links between expectancy and treatment condition) provide anecdotal support for the putative self-efficacy model proposed in prior studies (e.g., Ahmed & Westra, 2009; Mondloch et al., 2001). Although the present data cannot affirm the mechanisms that contribute to the expectancy-outcome association, they are not consistent with experiential bias, cognitive dissonance, or vicarious learning models.

There are a number of methodological limitations associated with the current research. First, although are sample size was sufficient for providing a preliminary analysis of correlates of treatment expectation in youth with OCD, we lacked sufficient power to explore the relationship among these variables in a multivariate fashion. Future studies will be needed to identify potential mediators and moderators of the relationships observed herein. Additionally, the present study did not ascertain respondent's rationales for expectancy ratings. Replication with larger samples would allow for examination of this information and of factors that predict how children and families view treatment. Future work could also examine the change in expectancy over time and examine expectancy of placebo/alternative treatment conditions. Further, future directions might include development of a multidimensional rating of expectancy.

Despite these limitations, the present findings have a number of implications for treatment. Perhaps most importantly, treatment expectations should be assessed and concerns sufficiently processed prior to treatment. Research suggests that mental health providers can improve outcome by enhancing treatment expectancy via the provision of positive information about treatment (Zelda Di Blasi et al., 2001). To this end, a significant portion of the initial psychotherapy sessions for pediatric intensive OCD treatment should focus on psychoeducation and "selling" the treatment procedure to ensure the child and family understand and buy-in to the procedures (Piacentini et al., 2007a). This is especially important for E/RP for OCD given the distress placed upon the child during the exposure to aversive stimuli. It is logical that the child's expectations of the cost/benefit from participating in aversive, challenging tasks may impact their participation and consequently the outcome. In cases of extremely poor expectation, techniques such as motivational interviewing could be considered (Merlo et al., 2010; Simpson, Zuckoff, Page, Franklin, & Foa, 2008). The present findings also underscore the importance of integrating parents into this process. Current psychoeducation approaches may need to be expanded to ensure that parents fully understand the treatment model and what it requires.

Taken as a whole, the present findings speak to the potential power that treatment expectations have in shaping the therapeutic process. Although this is issue has long been

explored in the adult literature, the present study provides evidence for its relevance to child and adolescent populations. It is indeed compelling to consider that baseline expectations of treatment may explain up to a third of the variance in clinical outcome for youth receiving CBT for OCD. Given that these expectations may be assessed easily and may be addressed directly at the outset of treatment, they hold promise for improving outcomes for youth with OCD.

Highlights

- We examined child, parent, and therapist expectancy for CBT for OCD
- Higher child and therapist expectations were associated with greater improvement following CBT
- Greater expectations for successful treatment was linked to lower attrition, better homework compliance, and reduced functional impairment
- Lower expectations were found in youth with depressive and externalizing symptoms and lower perceived control
- Pretreatment OCD severity did not lower expectations for CBT

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References

Achenbach, TM. Child Behavior Checklist and related instruments. In: Maruish, ME., editor. The use of psychological testing for treatment planning and outcome assessment. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc; 1994. p. 517-549.

Ahmed M, Westra HA. Impact of a treatment rationale on expectancy and engagement in Cognitive Behavioural Therapy for Social Anxiety. Cognitive Therapy and Research. 2009; 33:314–322.

APA. Diagnostic and statistical manual of mental disorders (DSM-IV-TR). Washington, D.C: American Psychiatric Association; 2000.

Arnkoff, DB.; Glass, CR.; Shapiro, SJ. Expectations and preferences. In: Norcross, JC., editor. Psychotherapy relationships that work: Therapists contributions and responsiveness to patient. New York, NY: Oxford University Press; 2002. p. 325-346.

Bandura A. Self-efficacy: toward a unifying theory of behavioral change. Psychol Rev. 1977; 84(2): 191–215. [PubMed: 847061]

Bandura A, Adams NE, Beyer J. Cognitive processes mediating behavioral change. J Pers Soc Psychol. 1977; 35(3):125–139. [PubMed: 15093]

Barrett P, Farrell L, Dadds M, Boulter N. Cognitive-behavioral family treatment of childhood obsessive-compulsive disorder: long-term follow-up and predictors of outcome. J.Am.Acad.Child Adolesc.Psychiatry. 2005; 44(10):1005–1014. [PubMed: 16175105]

Basoglu M, Lax T, Kasvikis Y, Marks IM. Predictors of improvement in obsessive-compulsive disorder. Journal of Anxiety Disorders. 1988; 2:299–317.

Bednar RL. Persuasibility and the power of belief. Personnel and Guidance Journal. 1970; 48:647–652.

Borkovec TC, Nau SD. Credibility of analogue therapy rationales. Journal of Behavior Therapy and Experimental Psychiatry. 1972; 3:257–260.

Chambless DL, Tran GQ, Glass CR. Predictors of response to cognitive-behavioral group therapy for social phobia. J Anxiety Disord. 1997; 11(3):221–240. [PubMed: 9220298]

Curry J, Rohde P, Simons A, Silva S, Vitiello B, Kratochvil C, Reinecke M, Feeny N, Wells K, Pathak S, Weller E, Rosenberg D, Kennard B, Robins M, Ginsburg G, March J. Predictors and moderators of acute outcome in the Treatment for Adolescents with Depression Study (TADS). J Am Acad Child Adolesc Psychiatry. 2006; 45(12):1427–1439. [PubMed: 17135988]

de Haan E, van Oppen P, van Balkom AJ, Spinhoven P, Hoogduin KA, Van Dyck R. Prediction of outcome and early vs. late improvement in OCD patients treated with cognitive behaviour therapy and pharmacotherapy. Acta Psychiatr Scand. 1997; 96(5):354–361. [PubMed: 9395153]

Di Blasi Z, Harkness E, Ernst E, Georgiou A, Kleijnen J. Influence of context effects on health outcomes: a systematic review. Lancet. 2001; 357(9258):757–762. [PubMed: 11253970]

Elkin I, Yamaguchi JI, Arnkoff DB, Glass CR, Sotsky SM, Krupnick JL. Patient-treatment fit and early engagement in therapy. Psychotherapy Research. 1999; 9:437–451.

Festinger, LA. A theory of cognitive dissonance. Oxford, England: Stanford Univeristy Press; 1957.

Flood AB, Lorence DP, Ding J, McPherson K, Black NA. The role of expectations in patients' reports of post-operative outcomes and improvement following therapy. Med Care. 1993; 31(11):1043–1056. [PubMed: 7694013]

Frank JD. The dynamics of the psychotherapeutic relationship; determinants and effects of the therapist's influence. Psychiatry. 1959; 22(1):17–39. [PubMed: 13634275]

Frank JD. The influence of patients' and therapists' expectations on the outcome of psychotherapy. Br J Med Psychol. 1968; 41(4):349–356. [PubMed: 4936798]

Friedman HJ. Patient-expectancy and symptom reduction. Arch Gen Psychiatry. 1963; 8:61–67. [PubMed: 13963122]

Goldstein AP. Patient's expectancies and non-specific therapy as a basis for (un) spontaneous remission. J Clin Psychol. 1960; 16:399–403. [PubMed: 13706630]

Goodman WK, Price LH, Rasmussen SA, Mazure C, Fleischmann RL, Hill CL, Heninger GR, Charney DS. The Yale-Brown Obsessive Compulsive Scale. I. Development, use, and reliability. Arch.Gen.Psychiatry. 1989; 46(11):1006–1011. [PubMed: 2684084]

Greenberg RP, Constantino MJ, Bruce N. Are patient expectations still relevant for psychotherapy process and outcome? Clin Psychol Rev. 2006; 26(6):657–678. [PubMed: 15908088]

Guy, W. ECDEU Assessment Manual for Psychopharmacology. Rockville, MD: National Institute for Mental Health; 1976. Clinical Global Impressions; p. 218-222.Vol. Revised DHEW Pub. (ADM)

Henn RF 3rd, Kang L, Tashjian RZ, Green A. Patients' preoperative expectations predict the outcome of rotator cuff repair. J Bone Joint Surg Am. 2007; 89(9):1913–1919. [PubMed: 17768186]

Horvath AO, Luborsky L. The role of the therapeutic alliance in psychotherapy. J Consult Clin Psychol. 1993; 61(4):561–573. [PubMed: 8370852]

Ilardi SS, Craighead WE. The role of nonspecific factors in cognitive-behavior therapy for depression. Clinical Psychology: Science and Practice. 1994; 1:138–156.

Jensen PS, Irwin RA, Josephson AM, Davis H, Xenakis SN, Bloedau L, Ness R, Mabe A, Lee B, Traylor J, Clawson L. Data-gathering tools for "real world" clinical settings: a multisite feasibility study. J.Am.Acad.Child Adolesc.Psychiatry. 1996; 35(1):55–66. [PubMed: 8567613]

Kazdin AE, Wilcoxon LA. Systematic desensitization and nonspecific treatment effects: A methodological evaluation. Psychological Bulletin. 1976; 83:729–758. [PubMed: 12523]

Kovacs M. The Children's Depression, Inventory (CDI). Psychopharmacol.Bull. 1985; 21(4):995–998. [PubMed: 4089116]

Krell HV, Leuchter AF, Morgan M, Cook IA, Abrams M. Subject expectations of treatment effectiveness and outcome of treatment with an experimental antidepressant. J Clin Psychiatry. 2004; 65(9):1174–1179. [PubMed: 15367043]

Lax T, Basoglu M, Marks IM. Expectancy and compliance as predictors of outcome in obsessive-compulsive disorder. Behavioural Psychotherapy. 1992; 20:257–266.

Lewin AB, De Nadai AS, Park J, Goodman WK, Murphy TK, Storch EA. Refining clinical judgment of treatment outcome in obsessive-compulsive disorder. Psychiatry Res. 2011; 185(3):394–401. [PubMed: 20846725]

Lewin, AB.; Piacentini, J. Obsessive-Compulsive Disorder in Children. In: Sadock, BJ.; Sadock, VA.; Ruiz, P., editors. Kaplan & Sadock's Comprehensive Textbook of Psychiatry. 9 ed.. Vol. Vol. 2. Philadelphia: Lippincott, Williams & Wilkins; 2009. p. 3671-3678.

Liossi C, White P, Franck L, Hatira P. Parental pain expectancy as a mediator between child expected and experienced procedure-related pain intensity during painful medical procedures. Clin J Pain. 2007; 23(5):392–399. [PubMed: 17515737]

Mahomed NN, Liang MH, Cook EF, Daltroy LH, Fortin PR, Fossel AH, Katz JN. The importance of patient expectations in predicting functional outcomes after total joint arthroplasty. J Rheumatol. 2002; 29(6):1273–1279. [PubMed: 12064846]

March JS, Parker JD, Sullivan K, Stallings P, Conners CK. The Multidimensional Anxiety Scale for Children (MASC): factor structure, reliability, and validity. J.Am.Acad.Child Adolesc.Psychiatry. 1997; 36(4):554–565. [PubMed: 9100431]

Merlo LJ, Storch EA, Lehmkuhl HD, Jacob ML, Murphy TK, Goodman WK, Geffken GR. Cognitive behavioral therapy plus motivational interviewing improves outcome for pediatric obsessive-compulsive disorder: a preliminary study. Cogn Behav Ther. 2010; 39(1):24–27. [PubMed: 19675960]

Mondloch MV, Cole DC, Frank JW. Does how you do depend on how you think you'll do? A systematic review of the evidence for a relation between patients' recovery expectations and health outcomes. CMAJ. 2001; 165(2):174–179. [PubMed: 11501456]

Montgomery GH, Tomoyasu N, Bovbjerg DH, Andrykowski MA, Currie VE, Jacobsen PB, Redd WH. Patients' pretreatment expectations of chemotherapy-related nausea are an independent predictor of anticipatory nausea. Ann Behav Med. 1998; 20(2):104–109. [PubMed: 9989316]

Newman MG, Fisher AJ. Expectancy/Credibility Change as a Mediator of Cognitive Behavioral Therapy for Generalized Anxiety Disorder: Mechanism of Action or Proxy for Symptom Change? Int J Cogn Ther. 2010; 3:245–261. [PubMed: 21132075]

Peris TS, Bergman RL, Asarnow JR, Langley A, McCracken JT, Piacentini J. Clinical and cognitive correlates of depressive symptoms among youth with obsessive compulsive disorder. J Clin Child Adolesc Psychol. 2010; 39(5):616–626. [PubMed: 20706915]

Piacentini J, Bergman RL, Chang S, Langley A, Peris TS, Wood JJ, McCracken J. Controlled Comparison of Family Cognitive Behavioral Therapy and Psychoeducation/Relaxation-Training for Child OCD. (Under Review). Unpublished Unpublished manuscript.

Piacentini, J.; Langley, A.; Roblek, T. Overcoming Childhood OCD: A Therapist's Guide. New York: Oxford University Press; 2007a.

Piacentini J, Peris TS, Bergman RL, Chang S, Jaffer M. Functional impairment in childhood OCD: development and psychometrics properties of the Child Obsessive-Compulsive Impact Scale-Revised (COIS-R). J.Clin.Child Adolesc.Psychol. 2007b; 36(4):645–653. [PubMed: 18088221]

POTS. Cognitive-behavior therapy, sertraline, and their combination for children and adolescents with obsessive-compulsive disorder: the Pediatric OCD Treatment Study (POTS) randomized controlled trial. JAMA. 2004; 292(16):1969–1976. [PubMed: 15507582]

Price M, Anderson P, Henrich CC, Rothbaum BO. Greater expectations: using hierarchical linear modeling to examine expectancy for treatment outcome as a predictor of treatment response. Behav Ther. 2008; 39(4):398–405. [PubMed: 19027436]

Scahill L, Riddle MA, McSwiggin-Hardin M, Ort SI, King RA, Goodman WK, Cicchetti D, Leckman JF. Children's Yale-Brown Obsessive Compulsive Scale: reliability and validity. J.Am.Acad.Child Adolesc.Psychiatry. 1997; 36(6):844–852. [PubMed: 9183141]

Silverman WK, Saavedra LM, Pina AA. Test-retest reliability of anxiety symptoms and diagnoses with the Anxiety Disorders Interview Schedule for DSM-IV: child and parent versions. J.Am.Acad.Child Adolesc.Psychiatry. 2001; 40(8):937–944. [PubMed: 11501694]

Simpson HB, Zuckoff A, Page JR, Franklin ME, Foa EB. Adding motivational interviewing to exposure and ritual prevention for obsessive-compulsive disorder: an open pilot trial. Cogn Behav Ther. 2008; 37(1):38–49. [PubMed: 18365797]

Steketee G, Siev J, Fama JM, Keshaviah A, Chosak A, Wilhelm S. Predictors of treatment outcome in modular cognitive therapy for obsessive-compulsive disorder. Depress Anxiety. 2011; 28(4):333–341. [PubMed: 21308884]

Storch EA, Bjorgvinsson T, Riemann B, Lewin AB, Morales MJ, Murphy TK. Factors associated with poor response in cognitive-behavioral therapy for pediatric obsessive-compulsive disorder. Bull Menninger Clin. 2010a; 74(2):167–185. [PubMed: 20545494]

Storch EA, Larson MJ, Muroff J, Caporino N, Geller D, Reid JM, Morgan J, Jordan P, Murphy TK. Predictors of functional impairment in pediatric obsessive-compulsive disorder. J Anxiety Disord. 2010b; 24(2):275–283. [PubMed: 20056376]

Storch EA, Lewin AB, De Nadai AS, Murphy TK. Defining Treatment Response and Remission in Obsessive-Compulsive Disorder: A Signal Detection Analysis of the Children's Yale-Brown Obsessive Compulsive Scale. J Am Acad Child Adolesc Psychiatry. 2010c; 49(7):708–717. [PubMed: 20610140]

Storch EA, Murphy TK, Geffken GR, Soto O, Sajid M, Allen P, Roberti JW, Killiany EM, Goodman WK. Psychometric evaluation of the Children's Yale-Brown Obsessive-Compulsive Scale. Psychiatry Res. 2004; 129(1):91–98. [PubMed: 15572188]

Vogel PA, Hansen B, Stiles TC, Gotestam KG. Treatment motivation, treatment expectancy, and helping alliance as predictors of outcome in cognitive behavioral treatment of OCD. J.Behav Ther Exp.Psychiatry. 2006; 37(3):247–255. [PubMed: 16460667]

Weisz, JR.; Southam-Gerow, MA.; Sweeney, L. The Perceived Control Scale for Children. Los Angeles: University of California; 1998.

Westra HA, Dozois DJ, Marcus M. Expectancy, homework compliance, and initial change in cognitive-behavioral therapy for anxiety. J Consult Clin Psychol. 2007; 75(3):363–373. [PubMed: 17563153]

Wilkins W. Client's expectancy of therapeutic gain: evidence for the active role of the therapist. Psychiatry. 1973a; 36(2):184–190. [PubMed: 4715844]

Wilkins W. Expectancy of therapeutic gain: an empirical and conceptual critique. J Consult Clin Psychol. 1973b; 40(1):69–77. [PubMed: 4569703]

Table 1

Clinical correlates of treatment expectancy.

	Treatment Expectancy			Mean (SD)
	Parent	**Child**	**Therapist**	
Parental OCD Symptoms	−.29*	−.17	−.17	5.7 (7.7)
Number of Comorbid Diagnoses	−.17	−.33*	−.21	1.0 (.90)
Baseline CY-BOCS	−.23	−.20	−.10	24.7 (4.8)
Child Depression Inventory	−.27*	−.35**	−.34**	7.1 (1.7)
MASC	−.17	−.12	−.06	15.8 (−.16)
CBCL – Internalizing	−.07	−.18	−.13	9.4 (−.29)
CBCL – Externalizing	−.03	−.39**	−.34*	11.4 (−.07)
COIS-R Child Rated	−.29*	−.31*	−.26*	15.4 (1.5)
COIS-R Parent Rated	−.05	−.24*	−.11	22.4 (.56)
Perceived Control	−.09	.30*	.38**	71.0 (12.4)
% CY-BOCS Change at Wk 14[1]	.15 (.17)	.23 (.38**)	.42 (.44)**	−38.7 (31.5)
Wk 14 CGI-Severity[1]	−.17 (−.20)	−.34* (−.37**)	−.35* (−.29)*	2.9 (1.3)
Wk 14 CGI-Improvement[1]	−.10 (−.10)	−.52 (−.52)***	−.56 (−.42)***	2.4 (1.1)

[1]Correlations coefficients for: Treatment completers [N = 41] (last observation carried forward).

*$p < .05$,

**$p < .01$,

***$p < .001$

CY-BOCS = Children's Yale Brown Obsessive-Compulsive Scale; CDI = Children's Depression Inventory; COIS-R = Child Obsessive Compulsive Impact Scale – Revised; MASC = Multidimensional Anxiety Scale for Children; CBCL = Child Behavior Checklist; CGI = Clinician Global Impression; OCD = Obsessive Compulsive Disorder

Table 2

Hierarchical logistic regression model with completion of treatment as the dependent variable.

Variables	χ^2 (df)	Nagelkerke R^2	B (Std. Error)[a]	Wald [a]
1st Block	2.2(2)	.07		
Baseline CYBOCS			.15 (.11)	1.9
Baseline CDI			−.14 (.09)	2.3
2nd Block	6.6(5)*	.28		
Child Expectancy			−.88 (.47)	3.5*
Parent Expectancy			.15 (.50)	.09
Therapist Expectancy			.10 (.48)	.04

[a] Coefficients reported are for the final model,

* $p < .05$

CY-BOCS = Children's Yale Brown Obsessive-Compulsive Scale; CDI = Children's Depression Inventory

Table 3

Hierarchical linear regression analysis: Expectancy as a predictor of CGI-Improvement and Week 14 CY-BOCS[1].

Variables	F	$R^2\Delta$	Beta	*p*
Dependent variable = CGI-Improvement				
1st Block	1.4	.02		
Baseline CY-BOCS			.23	.16
Baseline CDI			.03	.85
2nd Block	6.7	.31***		
Baseline CY-BOCS			.19	.18
Baseline CDI			−.12	.45
Child Expectancy			−.40	.01
Parent Expectancy			.12	.41
Therapist Expectancy			−.30	.05
Dependent variable = Post Treatment CYBOCS				
1st Block	2.8*	.11		
Baseline CY-BOCS			.33	.04
Baseline CDI			.02	.93
2nd Block	4.4**	.32		
Baseline CY-BOCS			.32	.03
Baseline CDI			−.17	.28
Child Expectancy			−.17	.30
Parent Expectancy			−.07	.66
Therapist Expectancy			−.35	.02

[1] Based on Last Observation Carried Forward (LOCF) for CY-BOCS (Children's Yale Brown Obsessive-Compulsive Scale) and CGI-I (Clinician Global Impression - Improvement); CDI = Children's Depression Inventory;

* $p < .05$,

** $p < .01$,

*** $p < .001$ (for F-test of each block)

Table 4

Correlations between treatment expectancy and homework compliance

	Parent Expectancy	Child Expectancy	Therapist Expectancy
Homework for Week 2	−.05	.07	.06
Homework for Week 3	.21	.30*	.40**
Homework for Week 4	.14	.38**	.45***
Homework for Week 8	.01	.30*	.34**
Homework for Week 14	.44**	.41**	.30*

* $p < .05$,

** $p < .01$,

*** $p < .001$