



Cognitive behavioral therapy for pediatric obsessive-compulsive disorder: Development of expert-level competence and implications for dissemination



Martin E. Franklin^a, Hilary E. Dingfelder^a, Catherine G. Coogan^{a,*}, Abbe M. Garcia^b, Jeffrey J. Sapyta^c, Jennifer L. Freeman^b

^a University of Pennsylvania School of Medicine, United States

^b Brown University Medical School, United States

^c Duke University Medical Center, United States

ARTICLE INFO

Article history:

Received 13 August 2013

Received in revised form

13 September 2013

Accepted 14 September 2013

Keywords:

Pediatric obsessive-compulsive disorder
Cognitive behavioral therapy

ABSTRACT

Pediatric obsessive-compulsive disorder (OCD) is associated with substantial morbidity, comorbidity, family difficulties, and functional impairment. Fortunately, OCD in youth has also been found responsive to cognitive behavioral therapy (CBT) both alone and in combination with medication. This paper highlights key areas a treatment provider must be highly knowledgeable in to be considered an expert in cognitive behavioral therapy (CBT) for pediatric obsessive-compulsive disorder (OCD). We describe the areas of knowledge that must be mastered to gain expertise, as well as the more difficult to quantify personal qualities that may allow a clinician to convey this knowledge in an expert manner. We provide detailed discussions of CBT theory, assessment strategies, implications of the treatment outcome literature for clinical decision-making, and how best to navigate CBT. We also discuss what the expert needs to accomplish by engaging youth and families throughout the evaluation and treatment process.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

Obsessive-compulsive disorder (OCD) is a complex condition associated with significant morbidity, comorbidity, and functional impairment across the developmental spectrum. Efficacious cognitive behavioral therapies (CBT) have been developed that typically yield substantial and durable symptom reduction and improved functioning (for reviews see Abramowitz, Whiteside, & Deacon, 2005; Barrett, Farrell, Pina, Peris, & Piacentini, 2008; Franklin & Foa, 2011; National Institute for Health & Clinical Excellence, 2005; National Institute of Clinical Excellence, 2005; Watson & Rees, 2008), but there are subtleties to OCD's evaluation and treatment in children and adolescents that may not be readily evident to the novice practitioner. The potential impact of these factors on treatment outcome may well be offset by expert supervision and the creation of a common treatment culture built firmly upon an empirically informed understanding of OCD psychopathology and CBT theory. In our view, comprehensive understanding of the fundamentals of theory promotes the artful application of the clinical procedures in practice with OCD. Very encouraging outcomes have been achieved in randomized controlled trials across the world in

the last two decades. Whether such positive results can be achieved in clinical settings in which CBT expertise for pediatric OCD is less available than in such trials is a matter of great public health importance, since it is already clear that there is a paucity of such expertise in most clinical and community settings.

Our purpose in writing this paper is to highlight key areas within which a treatment provider must be highly knowledgeable and comfortable in order to be considered an expert in cognitive behavioral therapy (CBT) for pediatric OCD. There is preliminary evidence already that CBT can be delivered effectively by supervised clinicians working in community settings without prior expertise with pediatric OCD (e.g., Farrell, Schlup, & Boshcen, 2010; Valderhaug, Larsson, Gotestam, & Piacentini, 2007), and that adult patients treated by supervised interns and junior level clinical faculty achieved clinically meaningful and statistically significant symptom reductions on average following intensive CBT comparable to those achieved by patients of highly experienced clinicians (Franklin, Abramowitz, Furr, Kalsy, & Riggs, 2003). Notably, most of the randomized controlled trials evaluating the efficacy of CBT for pediatric OCD actually employed clinicians with a range of expertise, who had the benefit of supervision from master level clinicians with years of experience in CBT. Thus, the evidence base for CBT is built upon the assumption that master clinicians with decades of experience are not required as treatment providers in order to achieve excellent patient outcomes, and that clinicians with less

* Corresponding author. +1 2157461230.

E-mail address: coogan@mail.med.upenn.edu (C.G. Coogan).

Table 1
What the expert needs to know and accomplish.

What the expert needs to know
1. CBT theory. <i>The expert should embrace the neurobiological, cognitive, and behavioral literatures and synthesize them for patients.</i>
2. Assessment strategies. <i>Using a patient's age, relationship with caregivers, and insight into symptoms, a clinician can make decisions on the most appropriate ways to assess OCD symptoms.</i>
3. Implications of literature on clinical decision making. <i>The published literature can help a clinician make decisions on structuring treatment elements like session frequency, parental involvement, and medication use.</i>
4. How to best navigate CBT. <i>Establishing a good understanding of treatment up front, encouraging between session compliance, and understanding the subtleties of a patient's symptoms set a clear course for treatment.</i>
What the expert needs to accomplish
1. Make reliable predictions. <i>Patient perception that the therapist can anticipate OCD's next move establishes trust.</i>
2. Keep the complex simple. <i>Understanding OCD and the treatment model gives patients power over "new" symptoms. "Let it go, don't make it go."</i>
3. Foster empathy and reduce the sense of being alone. <i>Children and adolescents are often better able to relate to and profit from the stories of others their own age who have grappled with similar symptoms.</i>
4. Help patients recognize "the best way out is always through". <i>Drawing upon examples of a time a patient has persevered through difficulty in other domains can help patients when they are stuck in treatment.</i>

experience can nonetheless provide effective treatment through learning and emulating the skills of experts. This is fortunate, actually, since the paucity of CBT expertise at any level is an ongoing problem for families of youth with OCD who seek CBT beyond the academic centers that typically develop and test these protocols.

We seek here to describe the areas of knowledge that must be mastered to gain expertise; we will also comment on the more difficult to quantify personal qualities that may allow a clinician to convey this knowledge in an expert manner (see summary in Table 1). Using Malcom Gladwell's now popularized 10,000 h rule for the development of expertise of any kind (Gladwell, 2008), a practitioner who provides twenty direct contact hours of CBT for pediatric OCD per week would meet this cutoff within about ten years, provided of course that he or she is practicing correctly. Supervision of clinical cases further enhances expertise since this context provides additional cases to which to be exposed, treatments to plan and help guide, and vexing clinical conundrums to ponder. However, we encourage those who wish to remain experts to continue with at least some direct patient care, as the remoteness of the contact in clinical supervision probably dilutes learning opportunities provided therein.

What is it that CBT experts need to know, and know well? Additionally, what do they need to be able to accomplish in their work with patients and families in order to properly convey the hopeful optimism that is needed to address a disorder that so many families find disruptive and difficult to understand? First we will discuss some observations our research team has made in the context of the Pediatric OCD Treatment Studies (POTS I, Franklin et al., 2003; POTS Team, 2004, POTS II; Franklin et al., 2011; Freeman et al., 2009, 2011; and POTS Jr., Freeman et al., 2012, 2013), specifically those having to do with site effects. The presence of a significant site effect in POTS I led us as a group to design the subsequent studies in such a way as to create a common culture for conducting CBT. Below that we provide detailed discussions within the following content areas of knowledge: (a) CBT theory; (b) assessment strategies; (c) implications of the treatment outcome literature for clinical decision-making; and (d) how best to navigate CBT. We discuss thereafter how best to set the tone for engaging youth and families throughout the evaluation and treatment process – we refer to this section as "What the Expert Needs to Accomplish." Although by no means an exhaustive list, in our view these areas constitute the most important aspects of clinical care with youth

suffering from OCD that are likely to face clinicians in the delivery of CBT for this often challenging condition.

2. POTS I site effects and their implications

As reported in the POTS I primary outcome paper (POTS Team, 2004), a site effect for treatment outcome was identified in that multicenter trial such that the effects of monotherapy with CBT or pharmacotherapy differed at the two sites that treated most of the patients. This effect was considerably more pronounced for CBT alone than for pharmacotherapy and was not at all evident in the CBT plus pharmacotherapy arm of the study; these observations raised important questions about the more subtle aspects of CBT implementation given that each site was using the same treatment manual and there were no significant differences between the sites' patients in terms of pre-treatment severity, comorbidity, etc. In light of this observation and given that our research group was funded to conduct another multi-site randomized controlled trial shortly after POTS I was completed (POTS II; Franklin et al., 2011), it was important to create a common approach to implementation of the protocol that would reduce inter-site differences in outcome. Cross-site supervision was increased and emphasized; a list of common and uncommon exposure suggestions was created and updated regularly in a drive accessible to all of the study therapists to permit less experienced clinicians to benefit from some of the recommendations of the most experienced subspecialists on the POTS Team. The importance of "selling" the treatment model to patients and families was also emphasized in training and in supervision, since optimism about outcome was thought to be essential to engagement and compliance, especially between sessions. As will be discussed in detail below, supervisors also encouraged therapists to "push the envelope" with exposure once the patient and family had committed to the model; this advice focused on creating challenging exposures but also strongly emphasizing the importance of complete response prevention once the patient had moved beyond initial stages of trial exposures and low-level practices designed to teach the model and foster optimism. Much of what we taught in the POTS II and POTS Jr. studies as far as creating a common culture focused on maximizing patient outcomes is described below; we are pleased as well that analysis of primary outcomes from both of those studies did not reveal site effects in terms of treatment outcome (Franklin et al., 2011, 2013).

3. What does the expert need to know?

3.1. CBT theory

Patients and families often ask about the origins of OCD at the very beginning of the evaluation and treatment process, largely because they believe that knowledge of these origins will dictate treatment decisions. Indeed, the increased recognition of the relevance of neurobiology in OCD has reached the popular literature, and accordingly many of our prospective patients wish to know about the "chemical imbalance" that they have read about as the cause of the disorder. The etiology of OCD, however, is far from definitive, with several neuroanatomical, neurochemical, and psychological theories proposed; the neurobiology of the obsessional process and changes in glucose metabolism in implicated brain regions following CBT has been observed (e.g., Baxter et al., 1992). That said, the factors associated with etiology may or may not be the factors associated with maintenance and, moreover, it is highly unlikely that a single cause, genetic or otherwise, will ever be found for a disorder as complex and heterogeneous as pediatric OCD.

In discussing these complex brain-behavior relationships and learning-based approaches to understanding the functional

relationship between obsessions and compulsions, we usually invoke *Mowrer's two-factor theory* (1939, 1960), which posits that intrusive, spontaneous, and involuntary obsessions give rise to anxiety, and that compulsions are executed responses designed specifically to reduce it. Thus, in order to connect this learning-based theory to the neurobiological evidence base, we cast the obsessions in OCD as unwanted, neurobiologically mediated events associated with negative affect or discomfort. However, completion of the compulsions can, and indeed should, be considered according to two-factor theory to be semi-volitional, in that they are intentional responses designed to reduce obsessional distress or unpleasant emotional discomfort. Accordingly, exposure to the situations that provoke obsessions or discomfort without engaging in compulsions to reduce that urge will eliminate the negative reinforcing effects of the intentional behavior, and thus eventually reduce the frequency and intensity of these thoughts or sensations. Indeed, habituation to urges to engage in compulsions appears to occur over time, and subsequent reductions in the frequency and intensity of obsessions and urges to ritualize are consistently observed (*Himle & Franklin, 2009*). Medical metaphors may also help convey these relationships to patients, and the expert clinician may even inquire about whether the patient knows anyone in their lives with diabetes, for example. Usually the patient can identify someone suffering from diabetes, which then allows the clinician to explain that although the etiology of Type I diabetes is clearly biological – a pancreas that is not functioning as it should, essentially – the course of diabetes can clearly be influenced by changing certain behaviors such as improving diet and exercise, keeping track of symptoms, and following doctors' recommendations regarding medication and behavioral change strategies.

With respect to the role of cognition in pediatric OCD, our clinical presentation and practice does include attention to OCD-relevant dysfunctional beliefs, but fundamentally it is our view that exposure provides the optimal context to change these mistaken beliefs, and thus we emphasize it throughout our work with OCD patients and in our discussions with patients and families about CBT and its rationale. Efforts are often made to “externalize” OCD and its fear messages, and to encourage the patient to view OCD's threats as testable hypotheses rather than as facts. Such discussions are readily incorporated into exposures but can also precede exposures in order to set the stage for optimal outcomes; it is also imperative to process the outcomes following exposure, especially as that discussion relates to evidence for and against the hypotheses that were tested in exposure.

In summary, the expert should embrace the neurobiological, cognitive, and behavioral literatures and synthesize them for patients, perhaps in an attempt to undo some of the damage that flowed from the theory of mind-body dualism proposed by Descartes and other philosophers struggling to understand these complex relationships without access to the technology to examine them properly. When it comes to biology versus behavior, there is no right or wrong here: the brain is implicated, cognition plays a role, behavior matters, they all clearly interact, and there is a role for various theoretical accounts to explain scientific observations at multiple levels of analysis. The expert should be above guild issues, and should remain in the service of integrating the various scientific literatures in order to promote patient understanding and treatment buy-in, since the road to follow next is almost always an arduous one.

3.2. Assessment strategies

Individuals suffering from OCD experience intrusive, unwanted thoughts or images that generate marked distress. These obsessions are coupled with repetitive behaviors or mental acts known as compulsions, which are performed in an attempt to reduce obsessional

distress and/or to prevent the occurrence of dreaded yet unrealistic outcomes (e.g., death of a loved one due to patient's failure to pray sufficiently). Identification of the patient's core symptoms is essential for effective treatment. The goal of assessment of the OCD symptoms specifically is to identify the specific internal and external cues that trigger anxiety or distress, avoidance behaviors, and rituals. The evaluator also needs to explore key aspects of the patients' beliefs about OCD (e.g., the degree to which the individual views the obsessions and compulsions as senseless) and their perceived consequences of refraining from rituals and avoidance. Below we discuss our approach to evaluation in youth, with emphasis on enhancing the validity of the data gathered.

Treatment of pediatric OCD typically begins with two or three sessions of symptom assessment and psychoeducation. In our view, this should include: (1) a comprehensive evaluation of current OCD symptoms; (2) review of current OCD symptom severity and associated functional impairment; and (3) evaluation of comorbid psychopathology. The strengths of the individual and their family should also be evaluated, as well as the family's current knowledge of OCD and its treatment, the patient's treatment history, and everyone's readiness to engage in a treatment that is designed intentionally to be challenging. In our clinical work and in multi-site clinical trials we ask patients and/or families, depending on the age and emotional maturity of the patient, to complete self-report measures of relevant domains (e.g., OCD symptom severity, OCD-related functional impairment, family accommodation, comorbid psychopathology) prior to the intake visit and then pre-reviewed to provide an initial sense of where to start. Prominent comorbidities or other problem areas revealed through this process can then be surveyed in greater detail through the use of structured or semi-structured diagnostic interviews (e.g., Anxiety Disorders Interview Schedule for Children; ADIS-C; *Silverman & Albano, 1996*).

One of the first decisions to be made is whether to conduct the intake interview with the patient alone, with parent and child together, or with separate interviews of parent and child. Developmental level plays a key role here: most of the time we recommend that young children should be interviewed with parent(s) present and, if reticence or shyness is interfering with the development of rapport, perhaps the interview could be shifted initially to asking questions of the parent in the presence of the child instead of the other (preferred) method of asking questions of the child in the presence of the parent. Experts with sufficient knowledge of development should also have an easier time engaging the child, meeting them at the proper developmental level, and taking advantage of contextual cues (e.g., clothing that provides information about the child's interests, knowledge of child's grade in school) to draw them into the discussion. Sometimes this “drawing-out” process can appear to the parent(s) as being off task, but the importance of accessing the child's report of obsessional content and external cues for rituals or avoidance behavior make it in our view time very well spent. Teenagers may need some time alone with the therapist to discuss content that is difficult to bring up in front of parents (e.g., sexual or violent obsessions). Teens may be reluctant to engage in such discussions out of concern that their descriptions will result in embarrassment or increased parental scrutiny, so it is important to remind both parents and teens that the interview process works best if teens feel safe that what they say to the therapist will not be revealed to the parents without the teen's permission if there are no immediate safety concerns raised. Expert clinicians may be more willing to set such ground rules up front with parents which, in turn, likely yields more accurate data from the participating teens. Regardless of developmental level, expert evaluators may also be better able to judge on the fly the quality of the interaction between parent(s) and child, which can also inform whether the interview's validity would improve with some additional time alone with the child.

Prior to initiating the formal assessment of OCD symptoms, the evaluator should define obsessions and compulsions clearly, using specific examples if the patient has difficulty grasping the key concepts. Expert providers usually find ways to seamlessly weave into such discussions information from the empirical literature regarding the prevalence, nature, and treatment of OCD, which may increase patient and family willingness to disclose specific symptoms. The interview process with an expert often feels more conversational and informal than it might with a less experienced provider, and the information provided in real time is used to further shape the way questions are subsequently phrased and the metaphors that are used to demonstrate key concepts.

It is crucial to set the stage properly for CBT by documenting past and current OCD symptoms and current symptom severity, which we do via the clinician administered Children's Yale Brown Obsessive Compulsive Scale (CY-BOCS; Scahill et al., 1997). The clinician should be aware of the implications of the CY-BOCS symptom severity score, which ranges from 0 to 40 (higher scores indicating greater severity); a cut score of 16 is usually sufficiently severe to warrant inclusion in treatment studies, and scores of 30 or greater are considered especially severe. This information can be used to inform treatment decisions such as CBT session frequency. Experts can smoothly integrate information gleaned from the CY-BOCS interview into discussions of the implications of OCD symptom subtype, presence or absence of specific feared consequences, the patient's placement on the continuum of insight, etc., which allows for provision of information during the assessment to presage any more formal presentation of treatment recommendations.

OCD's high rate of comorbidity with other disorders, as well as the similarity between the diagnostic criteria for OCD and other disorders, pose some important areas for consideration. Expert clinicians must be sufficiently aware of the nature of repetitive behaviors and focused interests in youth with autism spectrum disorders, lest the formal similarity of these symptoms to obsessions and compulsions obscure key functional differences between them. We encourage the clinicians we supervise to be mindful of the possibility that the information provided to the screener who scheduled the intake after a very brief assessment may or may not reflect the clinical nuances of the case, and that they should remain open to the possibility that OCD is not the primary diagnosis or the proper diagnosis at all.

It is also important to recognize that the content of obsessions in OCD may be quite bizarre, as in the delusions of schizophrenia, but bizarreness in and of itself does not preclude a diagnosis of OCD. For example, one of our patients suffered from intrusive images that pieces of her "essence" would be forever lost if she came into physical contact with individuals who she felt were undesirable. This patient spent a great deal of time at night checking in the mirror to see whether or not she was turning into another person, yet she did not report other symptoms of formal thought disorder, such as loose associations, hallucinations, flat or grossly inappropriate affect, and thought insertion or projection. The unusual nature of these symptoms did not throw off the expert clinician, who educated the patient about the nature of these symptoms, the importance of understanding their functional relationship, and then continued on with what proved to be a very successful course of EX/RP.

Conclusion of an evaluation conducted by an expert often provides an opportunity to review what has already been discussed throughout the intake with respect to symptom severity and topography, the presence and implications of other symptoms, family dynamics and, based on this information, the recommended course of action. This process should be dynamic and interactive, as true experts are certainly authoritative but are rarely authoritarian when it comes to summarizing their observations and interacting with the patient and family about what should, or could, come next.

There is an element of normalization that often takes place in an evaluation with an expert – a sense that these symptoms have been encountered many times before, are readily understood, and can be treated successfully – that can be very helpful in instilling hope and allowing the patient and family to feel comfortable sharing important information about OCD and related symptoms with the clinician.

3.3. Implications of the treatment outcome literature for clinical decision-making

Experts should be expected to be highly knowledgeable about the pediatric OCD treatment outcome literature of course, and a review of that literature reveals, as noted above, that there is empirical support for the efficacy of CBT, SSRI pharmacotherapy, and their combination in the treatment of OCD across the developmental spectrum. The POTS I and II studies (Franklin et al., 2011; POTS Team, 2004) are the largest published trials available in pediatric OCD, and collectively support the efficacy of CBT as an initial treatment and also as an augmentative approach in youth who had evidenced a partial response to SSRIs. Combined treatment fared best on average in the POTS I study, although a site effect in that trial suggested that CBT monotherapy may be comparable to combined treatment in some settings. Barrett, Healy-Farrell, and March (2004) and Barrett, Farrell, Dadds, and Boulter (2005) found clinically relevant, statistically superior, and durable outcomes for family-based CBT conducted either individually or in a group format when compared to waitlist; Bolton and Perrin (2008) also found a behavioral program that emphasized exposure superior to waitlist. Cognitively oriented programs, conducted either in brief or as a full protocol, were each found superior to a waitlist control condition (Bolton et al., 2011); no direct comparison of the behavioral versus the cognitively oriented protocols has been undertaken as yet in pediatric OCD. Piacentini et al. (2011) recently found family-based CBT to be superior to relaxation control condition (REL), which raised the bar as far as CBT's efficacy is concerned, but also addressed a theoretical issue of whether it is best to confront situations that provoke distress or to teach anxiety management strategies instead. These findings were convergent with those reported by Freeman et al. (2008), who also found an advantage for family-based CBT compared to REL in very young children.

Our experience with the families of patients with OCD is that they often come to intake and initial treatment visits with many questions, as well as a working knowledge of said literature. Indeed, one parent came to their intake assessment visit with printouts of these and other published pediatric OCD clinical trials hole-punched and housed in a labeled binder, replete with detailed notes in the margins of each study. In the eyes of this and most other parents of youth suffering from OCD, the expert's credibility can be greatly enhanced or compromised by their answers to parents' questions. In short, the expert should be able to summarize the literature on the various questions raised and acknowledge openly when certain topics have not received empirical attention to date, but also introduce the scientific findings as an excellent starting point to generate educated guesses about likely treatment outcomes, yet not guarantees of any specific results. Below we briefly summarize the literature on some of the essential decision points regarding CBT for pediatric OCD in order to help improve families' understanding of what to expect and to build confidence in the approach as well as the provider. Toward that end, it is often useful to have findings from the key studies summarized and available in PDF or Powerpoint to walk through if issues come up that are of particular relevance in specific cases.

Published randomized studies of CBT for OCD conducted with youth have each included parents at least to some extent in

treatment (e.g., Barrett et al., 2004; de Haan, Hoodgum, Buitelaar, & Keijsers, 1998), although a direct comparison of CBT with and without a family component using an otherwise identical protocol has yet to be conducted in pediatric OCD. Higher family dysfunction has been associated with poorer long-term outcome in a recent study (Barrett et al., 2005), and family accommodation of OCD symptoms specifically has been found to compromise outcome (Peris et al., 2008). Accordingly, it is important clinically to assess family environment and to include a more comprehensive family treatment component especially when the family is very directly involved in the patient's rituals (e.g., reassurance seeking) or when family psychopathology threatens generalizability of treatment gains to the home environment. Regardless of these factors, greater family involvement in treatment is essential with very young patients (Freeman et al., 2007, 2011).

Families will sometimes ask whether it is more important that their child confronts situations that provoke distress or to refrain from compulsions and avoidance, and we encourage experts facing this question to draw upon the adult literature to help form an educated guess for families. In a seminal study, Foa, Steketee, Grayson, Turner, and Latimer (1984) randomly assigned patients with washing rituals to intensive treatment (15 daily 2-h sessions conducted over three weeks) by (1) exposure only (EX), (2) response prevention only (RP), or (3) their combination (EX/RP). On average, patients in each condition were found to be improved at both post-treatment and follow-up, but EX/RP was consistently superior to the single-component treatments both at post-treatment and at follow-up. Accordingly, we recommend that exposure and response prevention should be implemented concurrently, although with children it may be especially important to implement these procedures more gradually than one might with adults. Experts can also convey this information to patients who are struggling with one of these two components of the treatment in an effort to encourage them to refrain from rituals more consistently or be more ambitious in planning and seeking out opportunities to do intentional exposures during and between sessions.

With respect to CBT session frequency, the adult and the pediatric OCD literatures provide support for the efficacy of intensive treatment, which typically involves daily sessions over the course of approximately one month, as well as for more widely spaced sessions (e.g., Abramowitz, Foa, & Franklin, 2003; Franklin et al., 1998). An RCT in pediatric OCD found no difference between intensive and weekly treatment (Storch et al., 2007), which then improves confidence with respect to being flexible about the number of sessions recommended per week. Clinically, we suggest that therapists take into account motivational factors, developmental level of the patient, psychiatric comorbidity, need for a faster response, and cost when determining session frequency. Less frequent sessions may be sufficient for highly motivated patients with mild to moderate OCD symptoms who readily understand the importance of daily exposure homework exercises, whereas patients with very severe symptoms or who are experiencing difficulty completing EX/RP tasks between sessions might benefit more from a more intensive visit schedule. Further, once the rationale for the visit schedule is presented in a cogent and empirically informed manner, the expert clinician can modify the schedule in either direction depending on the emergence of good (e.g., excellent between session compliance) and poor (e.g., persistent family accommodation) prognostic indicators of outcome.

With respect to the relative and combined efficacy of CBT and medication, an early open trial (de Haan et al., 1998) found twice weekly CBT superior to clomipramine for pediatric OCD, although no control condition or combined treatment arm was employed in this small study. Asbahr et al. (2005) found comparable post-treatment outcomes for CBT and sertraline but better maintenance of gains for CBT. In the POTS I study, a RCT involving 112 patients

in which sertraline and weekly CBT were compared to each other and to combined treatment and pill placebo, an additive effect for combined treatment was detected (POTS Team, 2004). However, the site effect found in that study, namely in which one site found robust and comparable outcomes for CBT alone versus combined treatment, raised questions about the generalizability of the overall combined treatment effect. Clinically, then, experts may well be recommending combined treatment or possibly pharmacotherapy prior to CBT initiation when patients present with factors (e.g., high family accommodation, significant psychiatric comorbidity) that would suggest some concerns about the potential for optimal response to CBT alone. POTS II (Franklin et al., 2011) indicated that augmentation in SSRI partial responders with the full CBT protocol (14 sessions over 12 weeks) delivered by study psychologists was superior to medication maintenance (MM) alone, but that a brief form of CBT delivered by study psychiatrists failed to separate from MM. These data are informative with respect to advising families about whether combined treatment may be necessary; they are also unequivocal in indicating that the addition of CBT does not compromise the outcome of medication alone.

When interacting with our pediatric OCD families we often attempt to make the conversations referred to above as fluidly as possible, again with an eye on engaging everyone in the process of thinking about the treatment and its details seriously. We reinforce families for asking germane questions about the rationale for various treatment decisions by telling them that the issues they raised were of sufficient importance to have warranted formal investigation by the scientific community; when possible, showing families the results of the very investigations they themselves suggested deepens engagement in the process, and further sets the stage for the interactive treatment process to follow.

3.4. How best to navigate CBT

Although a detailed description of CBT for pediatric OCD is precluded here by space considerations, there are some key elements of treatment that must be set up and implemented correctly to give the treatment the best possible chance of being successful. We have found that experts may be more effective in setting the proper foundation for treatment, rather than rushing into exposures without being fully informed. Several elements should be well established in the treatment relationship and discussions up front: first, although treatment should be collaborative in nature, it must be guided by the clinician's thorough understanding of the theoretical model, the manual's fundamental principles, and the clinician's working knowledge of the patient. A clear plan should be explicated and agreed to up front, and in our view a sufficiently detailed hierarchy of situations likely to evoke a little, some, a lot, and a great deal of distress across the key obsessional themes is needed. An analogy we often begin with at this stage is that "OCD is like Hawaii," in that there is typically a big island of greatest concern but often several smaller ones, each of which can be subdivided into low, medium, and high levels of anxiety.

Using the information gathered during assessment is imperative in teasing out obsessional themes, associated rituals, and the areas of greatest anxiety and functional impairment, which in turn should be used to dictate where exposures should begin. We usually recommend "taking one island at a time" and "doing the best you can in the meantime" with obsessional themes that have yet to be targeted: for example, if a patient has obsessional fears of blasphemy as well as fears of contamination and of academic perfectionism, we attempt to generate three separate hierarchies, each broken down as described above using the "Fear Thermometer" Likert scale to improve resolution. The clinician should encourage the patient to participate in exposures in session (with or without parent(s) present depending on developmental and other factors

discussed above) and to complete assignments between sessions that are related to the themes addressed in session.

Experts know well that good adherence is typically not difficult to achieve during session, but CBT will rise or fall depending on between session compliance (see [Simpson et al., 2011](#) in adult OCD for empirical support for this assertion). Accordingly, it is imperative to promote between session compliance by providing clear instructions in the theoretical rationale for response prevention as well as practical advice as to how best to refrain from ritualizing when anxiety is high. The goal is to walk the fine line between acknowledging the difficulty of completing exposure tasks with enthusiastic support for efforts, even when those efforts are only partially successful, along with emphasis on moving toward “behaving as if you don’t have OCD.” We expect partial success in the beginning of treatment and let patients and families know this up front; however, we also caution that if we all settle for partial improvements without complete response prevention we run the risk of compromising treatment outcome since OCD is still being “fed” via negative reinforcement. Although clearly encouraging adherence, experts are usually keenly aware of the degree to which they can control patient compliance between sessions. It is wiser instead to view the task at this point as one of making patients aware of the consequences of their choices, and encouraging parents to take the same view. Efforts on the part of the therapist and perhaps especially of parents to “make them do it” are highly likely to be counterproductive, and can compromise alliances critical to encourage progression up the treatment hierarchy.

Trained therapists are likely to be able to identify overt compulsions and avoidance behavior, but experts may be better attuned to subtle forms of avoidance such as allowing others to open doors in public places to avoid having to touch door handles, wearing slip-on shoes to avoid touching laces, and using drinking straws to avoid contact with a glass. Such forms of avoidance behaviors may be so ingrained in a patient as to have escaped their attention, so querying the patient about such behaviors must be done collaboratively and in the spirit of the treatment itself, rather than confrontationally. Experts promote patient engagement and interest in the process of better understanding their own functioning, and reinforce the patient whenever they themselves notice such subtle symptom presentations.

OCD’s heterogeneity poses one of the chief challenges that clinicians face in developing expertise: indeed, there are enough OCD “subtypes” organized around various obsessional themes and associated compulsions to make it difficult at times to establish commonality. Even within obsessional subtypes, relevant threat cues vary: these cues may be tangible objects in the environment (e.g., contaminated surfaces) or thoughts, images, or impulses experienced internally. Most youngsters with OCD experience fear in reaction to specific environmental cues (objects, persons, or situations); however, they will also have his/her own unique threat cues. For example, individuals who fear contamination from toilets may differ as to whether all toilets are feared or only those open to the public. The therapist needs to gather specific information about cues that elicit the patient’s distress in order to identify the basic sources of the fear; experts are also careful to closely monitor patient functioning during exposure to generate their own hypotheses about subtle distinctions amongst threat cues that can then be brought to bear in modifying the treatment hierarchy. For example, an expert therapist noticed less fear on the part of a patient touching a trash can in a Monday session than might have been anticipated given the hierarchy developed some weeks previously; when queried by the therapist, who had a hypothesis yet did not share it because he wanted the patient to discover it himself, the child noted that the building was probably unoccupied over the weekend and thus any “live germs” in the can would probably have died already. The therapist asked the patient what should

be done to modify the exposure plan given this observation, and the patient deftly noted that the popular restaurant in the building’s lobby was probably opened on Saturday and Sunday. Thus, the exposure shifted to the restaurant, which afforded an opportunity to work at a higher altitude on the stimulus hierarchy.

The majority of individuals with OCD can articulate feared consequences that could ensue if they fail to perform their rituals. However, some patients have only a vague notion a negative consequence (e.g., bad luck), and others still report no feared catastrophes at all, but report only discomfort instead. Data from the DSM-IV field trial indicated that approximately two thirds of OCD patients could clearly identify consequences that would follow from refraining from rituals other than emotional distress ([Foa et al., 1995](#)); this number is likely even lower in children and adolescents. Thus, it is important to identify the specific details of the patient’s feared consequences in order to plan an effective treatment program, since these consequences must be directly targeted in exposure and ritual prevention exercises. For patients whose symptoms appear to be more discomfort or disgust-based, it is important to summarize the literature on this topic (e.g., [McKay, 2006](#); [Olatunji, Wolitzky-Taylor, Willems, Lohr, & Armstrong, 2009](#)), which consistently suggests that habituation will likely take place more slowly than it would with specific anxiety-based feared consequences that can be readily disconfirmed via exposure. By doing this, the therapist is resetting expectations more realistically, and perhaps reducing the likelihood of patient frustration when exposures do not work as initially anticipated.

4. What does the expert need to accomplish?

The training mantra of “watch one, do one, teach one” may not apply to learning and then mastering the treatment of OCD in children and adolescents, largely because a quintessential case from which to generalize may not exist. Pediatric OCD psychopathology studies indicate that patients exhibit multiple clusters of distinct OCD patient profiles, with additional variability along the continuum of obsessional theme, associated rituals, degree of passive avoidance, level of insight, comorbid symptoms, and the developmental continuum, which makes it difficult to transfer knowledge from one subcluster to the next without a wealth of prior clinical exposure. These “tree-level” variables contribute to the nuance of OCD evaluation and CBT implementation, and highlight the need to see a high volume of cases in order to grow proficient with understanding OCD in its many manifestations. At the same time, there are enough commonalities that cut across these cases, “forest-level” variables if we may extend the metaphor a bit more, that render the individual experiences with specific cases part of a broader mosaic upon which the expert can draw in order to get to the essence of the matter quickly. Experts need to be well versed in both the forest and the trees, and convey this knowledge with confidence as well as with a healthy respect for families’ suffering. Below we emphasize some of the key goals that an expert is seeking to accomplish in their interaction with families.

4.1. Make reliable predictions

The expert clinician must develop a sufficiently thorough understanding of the theoretical model and its specific application in individual patients – both forest and trees, as it were – that they can assist patients in anticipating what OCD symptoms and challenges are likely to arise next. Making reliable predictions about what OCD will do is a surefire way to garner the patient’s faith in the therapist and in their understanding of the disorder, and that faith often translates into confidence that the chosen exercises are being devised in collaboration with someone who knows the

disorder extremely well. It was well into the first author's career as a CBT provider focusing on OCD when a young patient delivered a compliment that underscores what we view here as the goal for developing expert competency: after the author had asked a question in an intake about what the patient's OCD would require of her next after she'd washed her hands and yet had to turn off the contaminated bathroom faucet with a now decontaminated hand, the patient whispered so her parents could not hear, "Are you one of us?" Patient perception that the clinician has developed a comprehensive knowledge of OCD that would allow him or her to anticipate its next several moves goes a long way toward developing the trust necessary to move forward with an inherently difficult regimen.

4.2. *Keep the complex simple*

"Let it go, don't make it go," is what the first author has used as a 7-word summary of the many volumes written to describe the desired approach to obsessions in EX/RP. Establishing the core concepts in OCD first is crucial to be able to then boil it all down to its most basic elements. Obsessions give rise to anxiety, compulsions reduce it, passive avoidance is a way to prevent one's OCD from being triggered in the first place, and rituals and avoidance serve the same function, which is to provide temporary relief in the short run that ultimately strengthens OCD in the long run. Treatment, then, hinges on modifying this key maintaining factor, i.e., removing OCD's main sources of fuel, which are rituals and avoidance. Patients need to be able to bring their specific symptoms competently through this conceptual model, and expert clinicians will encourage patients to stretch even beyond their own current symptoms to be able to classify obsessions, compulsions, passive avoidance behaviors, and their likely functions for symptoms that they had once and have now faded, even for symptoms that they have never had. Knowledge is power, and the patient must be sufficiently knowledgeable that they can quickly recognize OCD and then apply the principles learned in CBT in real time. The appropriate action is often no action at all, and this point needs to be driven home: anything done in the service of reducing obsessional distress in the moment will perpetuate OCD, so the focus goes instead toward going about one's business, directly confronting the anxiety rather than running away from it. Developing a working model of OCD and the application of CBT is empowering to patients and in turn improves patient confidence in the efficacy of the treatment procedures, even when anxiety persists or gets worse immediately because of the steadfast refusal to fix it. Every possible scenario of OCD can be put through this basic conceptualization, which robs OCD of the power to overwhelm patients with "new" symptoms. "There are no new symptoms – only new disguises" is one way of making this point clearly, and getting patients to understand this can encourage them to use the treatment procedures that flow from the conceptual model more confidently and more quickly, which in turn will reduce the amount of compulsions that get "missed" and thus contribute to obsessional frequency and intensity down the line. We have used a "Where's Waldo" metaphor for our younger patients to relay this point: OCD is present in disguise on each page, so the importance of identifying the common elements will make the search easier and the implementation of CBT procedures more immediate.

4.3. *Foster empathy and reduce the sense of being alone*

Years of experience treating OCD allows for the collection of a seemingly endless supply of clinical vignettes that can be drawn upon to help teach during the treatment. Children and adolescents are often better able to relate to and profit from the stories of others their own age who have grappled with similar symptoms, and

thus the clinician should make generous use of such opportunities. These clinical tales are often most valuable at "stuck points" in treatment, such as when patients are declining to move forward with difficult exposures. Those of us who have treated thousands of OCD patients can readily recall those who exhibited similar reluctance, and thus are able to respond to the patient with a profound sense of empathy rather than with irritation or disappointment. An expert therapist can weave in the clinical vignettes seamlessly in an effort to move the treatment forward – "Your OCD seems like it's really yelling at you pretty loudly right now. . . I once knew a kid who went through something really similar. . ." The expert can modify the outcome depending on their judgment of patient's motivation in the moment, readiness to change, and confidence in the conceptual model and in the treatment procedures that flow directly from it.

4.4. *Help them recognize that "The best way out is always through"*

Expert therapists are likely more comfortable delivering the bad news about CBT, which is essentially that it will require a great deal of effort, there are times when it may not seem possible or worthwhile to endure, and that OCD is a formidable opponent that will not give up easily. Those with a great deal of clinical experience are perhaps more comfortable embracing the possibility of failure, which allows for a more honest and direct dialog with patient and family in discussing expectations about treatment course and progress, regardless of its valence. The experts we have encountered seem typically uncomfortable with overselling the treatment, since setting up unrealistic expectations to encourage a patient to try CBT may well backfire when the patient is hitting a plateau or feels unable or unwilling to move forward. Therapists with a great deal of experience may be more adept at embracing this common difficulty using metaphors tailored to the patient's interests and learning history, and better able to draw upon information gleaned from those seemingly off-task conversations at the beginning of the treatment (e.g., "So tell me about something you're really good at") to hit these key teaching points in treatment. For example, a young man who loved basketball was confronting the most anxiety-provoking rung on his contamination hierarchy, which was proving to be extremely difficult during the first exposure session devoted to that item (public toilets). The therapist, sensing the patient's loss of resolve in the presence of intense, panic-like symptoms, asked the patient about his experiences of learning how to shoot a jump shot from 18 feet away from the basket. The therapist then asked the patient (who by this time was hyperventilating) to recall whether his grade school basketball coaches initiated practice with 18 foot jump shots or whether they started in closer to teach good form. "Good form first," the patient replied. The therapist then asked about whether the first opportunities in practice to shoot 18 foot jump shots were as easy as shooting from 5 feet away. "Of course not, especially when you're not being guarded!," the patient replied. The therapist then asked the patient to recall whether shooting 18 foot jump shots unguarded ever got easier, knowing full well that the patient was an accomplished player who had already mastered this skill. "Sure it did, and then we worked up to taking them in practice with the big guys running at us full speed." Grasping the metaphor at this point, the patient said, "And I suppose that right now the anxiety is the big guy running at me full speed as I line up the shot." "Something like that," the therapist smiled and replied. The patient's next move, which he was capable of making now that the treatment procedures had been clarified in language he readily understood and now his anxiety had been modulated at least somewhat (he was still of course sitting on a public bathroom floor), was to proclaim, "Well, we can always make a ball fake and take it straight to the rim!" which he

proclaimed with enthusiasm as he touched the toilet seat directly. A less experienced therapist might not have gathered this information up front in the first place, nor felt comfortable making use of it at this pivotal stuck point. However, the ability to do so can be fostered in less senior clinicians, in part by having the expert treat cases while being observed so that the treatment manual and its myriad principles and rules can be more readily brought to life. We vigorously encourage incorporating this teaching strategy into supervision whenever possible.

5. Next steps in dissemination

The efficacy of CBT for pediatric OCD is now firmly established, and significant strides have been made recently into exploring its effectiveness in more clinical contexts as well. Next stage research into the effectiveness of this treatment must now move more vigorously (and rigorously) toward dissemination. Models of how to achieve good clinical outcomes have been tested initially – the supervision of supervisors model examined by Valderhaug et al. (2007), for example – but larger, randomized studies constitute the next step in establishing CBT for pediatric OCD as a treatment that can be delivered outside the academic context without significant decline in response rates, symptom reduction, and functional improvement. From an implementation science perspective one could think about randomization of clinics or perhaps even patients within clinics to treatment by trained (by not yet expert) clinicians who either have or do not have access to regular expert supervision. In such a trial there could also be a fading of the outside supervision access in subsequent years to determine whether the treatment could be sustained successfully within the agency without the added and non-generalizable expense of academic partnership in treatment implementation. An implementation study such as this one would allow researchers to examine patient, therapist, supervisor, and setting variables that are associated with effective and durable patient outcomes, which in turn could spawn the next stage studies of remediating modifiable factors known to compromise treatment. In taking on any efforts at dissemination and implementation it will also be important to view the process as bidirectional, in that the clinical settings and agencies that are being trained in empirically supported treatments have valuable information to share with the training site with respect to aspects of treatment that may be more or less feasible or preferred by the clientele seen in these settings. For example, patients being seen in community settings may on average come to fewer treatment appointments than those who are treated in randomized controlled trials, which then may necessitate modification of treatment procedures that would allow therapists to begin the most powerful procedures, namely exposure plus response prevention in the case of pediatric OCD, sooner rather than later.

Clinical sites trained in CBT via the models explicated above might then be incorporated into stepped care approaches in which patients outcomes with the least expensive and onerous treatment models available (e.g., on-line OCD programs, bibliotherapy) could be attempted prior to referral to these clinical sites; patients who fail to respond to either form of intervention could then be sent on to expert sites for more intensive care developed ideographically based on therapists' and supervisors' clinical judgment regarding individual patients' reasons for non-response (e.g., between session non-compliance, intolerance of intense emotion, significant and impairing psychiatric comorbidity). A comprehensive approach such as this could make treatments more widely available, reduce wait times at subspecialty clinics, and thereby reduce illness burden for patients and families seeking assistance for OCD.

References

- Abramowitz, J. S., Foa, E. B., & Franklin, M. E. (2003). Exposure and ritual prevention for obsessive-compulsive disorder: effects of intensive versus twice-weekly sessions. *Journal of Consulting and Clinical Psychology, 71*, 394–398.
- Abramowitz, J. S., Whiteside, S. P., & Deacon, R. J. (2005). The effectiveness of treatment for pediatric obsessive-compulsive disorder: a meta-analysis. *Behavior Therapy, 36*, 55–63.
- Asbahr, F. R., Castillo, A. R., Ito, L. M., Latorre, M. R. D. O., Moriera, M. N., & Lotufo-Neto, F. (2005). Group cognitive-behavioral therapy versus sertraline for the treatment of children and adolescents with obsessive-compulsive disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 1128–1136.
- Barrett, P. M., Farrell, L. J., Dadds, M., & Boulter, N. (2005). Cognitive-behavioral family treatment of childhood obsessive-compulsive disorder: long-term follow-up and predictors of outcome. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 1005–1014.
- Barrett, P. M., Farrell, L., Pina, A., Peris, T. S., & Piacentini, J. (2008). Evidence-based psychosocial treatments for child and adolescent obsessive-compulsive disorder. *Journal of Clinical Child and Adolescent Psychology, 37*, 131–155.
- Barrett, P., Healy-Farrell, L., & March, J. S. (2004). Cognitive-behavioral family treatment of childhood obsessive-compulsive disorder: a controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 46–62.
- Baxter, L. J., Schwartz, J. M., Bergman, K. S., Szuba, M. P., Guze, B. H., Maziotta, J. C., et al. (1992). Caudate glucose metabolic rate change with both drug and behavior therapy for obsessive-compulsive disorder. *Archives of General Psychiatry, 49*, 681–689.
- Bolton, D., & Perrin, S. (2008). Evaluation of exposure with response-prevention for obsessive compulsive disorder in childhood and adolescence. *Journal of Behavior Therapy and Experimental Psychiatry, 39*, 11–22.
- Bolton, D., Williams, T., Perrin, S., Atkinson, L., Gallop, C., Waite, P., et al. (2011). Randomized controlled trial of full and brief cognitive-behaviour therapy and wait-list for paediatric obsessive-compulsive disorder. *Journal of Child Psychology and Psychiatry, 52*, 1269–1278.
- de Haan, E., Hoodgum, K. A. L., Buitelaar, J. K., & Keijsers, G. (1998). Behavior therapy versus clomipramine in obsessive-compulsive disorders in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 1022–1029.
- Farrell, L. J., Schlup, B., & Boshcen, M. J. (2010). Cognitive-behavioral treatment of childhood obsessive-compulsive disorder in community-based clinical practice: clinical significance and benchmarking against efficacy. *Behaviour Research and Therapy, 48*, 409–417.
- Foa, E. B., Kozak, M. J., Goodman, W. K., Hollander, E., Jenike, M. A., & Rasmussen, S. (1995). DSM-IV field trial: obsessive compulsive disorder. *American Journal of Psychiatry, 152*, 90–96.
- Foa, E. B., Steketee, G., Grayson, B., Turner, M., & Latimer, P. (1984). Deliberate exposure and blocking of obsessive-compulsive rituals: immediate and long-term effects. *Behavior Therapy, 15*, 450–472.
- Franklin, M. E., Abramowitz, J. S., Furr, J., Kalsy, S., & Riggs, D. S. (2003). A naturalistic examination of therapist experience and outcome of exposure and ritual prevention for OCD. *Psychotherapy Research, 13*, 153–167.
- Franklin, M. E., & Foa, E. B. (2011). Treatment of obsessive compulsive disorder. *Annual Review of Clinical Psychology, 7*, 229–243.
- Franklin, M. E., Kozak, M. J., Cashman, L. A., Coles, M. E., Rheingold, A. A., & Foa, E. B. (1998). Cognitive-behavioral treatment of pediatric obsessive-compulsive disorder: an open clinical trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 412–419.
- Franklin, M. E., Sapyta, J., Freeman, J. B., Khanna, M., Compton, S., & March, J. S. (2011). Cognitive behavior therapy augmentation of pharmacotherapy in pediatric obsessive compulsive disorder: the pediatric OCD treatment study II randomized controlled trial. *Journal of the American Medical Association, 306*, 1224–1232.
- Freeman, J. B., Choate-Summers, M., Garcia, A. M., Moore, P. S., Sapyta, J. J., Khanna, M. S., & Franklin, M. E. (2009). The pediatric obsessive-compulsive disorder treatment study II: rationale, design and methods. *Child and Adolescent Psychiatry and Mental Health, 3* <http://dx.doi.org/10.1186/1753-2000-3-4>
- Freeman, J. B., Choate-Summers, M. L., Moore, P. S., Garcia, A. M., Sapyta, J. J., Leonard, H. L., et al. (2007). Cognitive behavioral treatment for young children with obsessive compulsive disorder. *Biological Psychiatry, 61*, 337–343.
- Freeman, J., Garcia, A., Benito, K., Conelea, C., Sapyta, J., Khanna, M., et al. (2012). The pediatric obsessive compulsive disorder treatment study for young children (POTS Jr.): developmental considerations in the rationale, design, and methods. *Journal of Obsessive Compulsive and Related Disorders, 1*(4), 294–300.
- Freeman, J. B., Garcia, A. M., Coyne, L., Ale, C., Przeworski, A., & Leonard, H. L. (2008). Early childhood OCD: preliminary findings from a family-based cognitive-behavioral approach. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*, 593–602.
- Freeman, J., Sapyta, J., Garcia, A., Compton, S., Khanna, M., Flessner, C., & Moore, P., (2013). Family-Based Treatment of Early Childhood OCD: The Pediatric OCD Treatment Study Junior (POTS Jr.) Randomized Controlled Trial. Manuscript submitted for publication.
- Freeman, J., Sapyta, J., Garcia, A., Fitzgerald, D., Khanna, M., Choate-Summers, M., et al. (2011). Still struggling: characteristics of youth with OCD who are partial responders to medication treatment. *Child Psychiatry and Human Development, 42*(4), 424–441.
- Gladwell, M. (2008). *Outliers*. New York: Little, Brown and Company.

- Himle, M. B., & Franklin, M. E. (2009). The more you do it, the easier it gets: exposure and response prevention for OCD. *Cognitive and Behavioral Practice*, 16, 29–39.
- McKay, D. (2006). Treating disgust reactions in contamination-based obsessive-compulsive disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, 37, 53–59.
- Mowrer, O. A. (1939). A stimulus–response analysis of anxiety and its role as a reinforcing agent. *Psychological Review*, 46, 553–565.
- Mowrer, O. A. (1960). *Learning theory and behavior*. New York: Wiley.
- National Institute for Health and Clinical Excellence. (2005). *Obsessive compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder*. London, UK: NICE.
- Olatunji, B. O., Wolitzky-Taylor, K. B., Willems, J., Lohr, J. M., & Armstrong, T. (2009). Differential habituation of fear and disgust during repeated exposure to threat-relevant stimuli in contamination-based OCD: an analogue study. *Journal of Anxiety Disorders*, 23, 118–123.
- Pediatric OCD Treatment Study Team. (2004). Cognitive–behavioral therapy, sertraline, and their combination for children and adolescents with obsessive-compulsive disorder: the Pediatric OCD Treatment Study (POTS) randomized controlled trial. *Journal of the American Medical Association*, 292, 1969–1976.
- Peris, T. A., Bergman, R. L., Langley, A., Chang, S., McCracken, J. T., & Piacentini, J. (2008). Correlates of accommodation of pediatric obsessive-compulsive disorder: parent, child and family characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry*, 47, 1173–1181.
- Piacentini, J., Bergman, L., Chang, S., Langley, A., Peris, T., Wood, J. J., et al. (2011). Controlled comparison of family cognitive behavioral therapy and psychoeducation/relaxation training for child obsessive-compulsive disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 50, 1149–1161.
- Scahill, L., Riddle, M. A., McSwiggin-Hardin, M., Ort, S. I., King, R. A., Goodman, W. K., et al. (1997). Children's Yale-Brown Obsessive Compulsive Scale: reliability and validity. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 844–852.
- Silverman, W. K., & Albano, A. M. (1996). *Anxiety disorders interview schedule for DSM-IV: child version*. San Antonio: Graywind Publications Incorporated.
- Simpson, H. B., Maher, M. J., Wang, Y., Bao, Y., Foa, E. B., & Franklin, M. (2011). Patient adherence predicts outcome from cognitive–behavioral therapy in obsessive-compulsive disorder. *Journal of Consulting and Clinical Psychology*, 79, 247–252.
- Storch, E., Geffken, G., Merlo, L., Mann, G., Duke, D., Munson, M., et al. (2007). Family-based cognitive–behavioral therapy for pediatric obsessive-compulsive disorder: comparison of intensive and weekly approaches. *Journal of American Academy of Child and Adolescent Psychiatry*, 46, 469–478.
- Valderhaug, R., Larsson, B., Gotestam, K. G., & Piacentini, J. (2007). An open clinical trial of cognitive–behaviour therapy in children and adolescents with obsessive-compulsive disorder administered in regular outpatient clinics. *Behaviour Research and Therapy*, 45, 577–589.
- Watson, H. J., & Rees, C. S. (2008). Meta-analysis of randomized, controlled trials for pediatric obsessive-compulsive disorder. *Journal of Child Psychology and Psychiatry*, 49, 489–498.