

Obsessive-Compulsive Disorder in Preschool-Aged Children

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Abstract

Obsessive-compulsive disorder (OCD) presents with significant frequency in preschool-aged children. Symptom profile in young children is characterized by a predominance of compulsions, difficulties to recognize, and verbalize obsessive thoughts, developmentally-related obsessional content, and limited ability to resist and control symptoms. Comorbidity patterns observed in young children reflect developmental trends with separation anxiety and disruptive behavior disorders representing the most common comorbid conditions. These developmentally-related characteristics and the importance of family factors at preschool ages, have clinical implications for treatment and assessment. Assessment should cover diagnostic, symptom severity, functional impairment and family functioning. For very young children, it is recommended to differentiate pathological rituals from normative ritualized behavior, to use concrete examples and direct questioning, and to consider mainly behavioral observations and parent reports. Cognitive-Behavioral Therapy (CBT) with exposure response prevention (ERP) is the first line treatment of pediatric OCD, and it is well accepted by parents. Developmentally sensitive adaptations are used in intervention programs for young children, including more emphasis in ERP and parent involvement, reducing and tailoring cognitive components, and incorporating play contexts.

Keywords: Obsessive-compulsive disorder, preschoolers, young children, assessment, treatment

Obsessive-Compulsive Disorder in Preschool-Aged Children

Obsessive-compulsive disorder (OCD) is characterized by intrusive, unwanted and distress-provoking thoughts (obsessions) and/or repetitive or ritualistic behaviors (compulsions) aimed to neutralize distress; collectively such symptoms contribute to impaired functioning (American Psychiatric Association, 2013). Epidemiological studies have reported a lifetime prevalence of OCD of 1 – 2% in children and adolescents (Rapoport et al., 2000; Zohar, 1999). The prevalence of OCD in young children (under 8 years) is unclear but may be underestimated due to the difficulties this age group has in accurately reporting their distress and symptoms (Freeman et al., 2012). However, there is increasing evidence that supports the appearance of OCD presentation in young children, as early as 2 or 3 years of age (Coskun, & Zoroglu, 2009; Coskun, Zoroglu, & Ozturk, 2012). These results are concerning because although the phenomenological features of OCD are similar across the lifespan, cases with early childhood onset may present unique characteristics that have important clinical implications. Yet, this age group has been under-represented across phenomenological, assessment and treatment studies. With this in mind, the goal of the present chapter is to describe what is known related to OCD among young children.

Phenomenology

Core OCD features are shared among children, adolescents and adults although content of symptoms and presentation differs as a function of age (Geller et al., 2001; Selles, Storch, & Lewin, 2014). Some studies have suggested the existence of an early-onset OCD phenotype in which young patients present a clinical presentation different from those that experience first OCD manifestations in late adolescence or adulthood. This early-subtype would be characterized by male preponderance (Farrell, Barrett, & Piacentini, 2006; Geller et al., 2001), greater symptom severity (Lomax, Oldfield, & Salkovskis, 2009; Rosario-Campos et al., 2001), and higher comorbidity with tic disorders (Farrell et al., 2006; Geller et al.,

2001; Rosario-Campos et al., 2001). However, these results have not always been confirmed (Kenyon, & Eaton, 2015) and the question about the existence of an OCD subtype with early onset remains unclear.

Less is known regarding specific OCD features in preschool aged children and its differences with older children. Consideration of “young children” as participants presents variability across phenomenological studies, establishing age cut-off points at six (Coskun et al., 2012), eight (Garcia et al., 2009; Skriner et al., 2015) or nine years (Selles et al., 2014). In light of these different age cutoffs, we will distinguish studies as a function of age where appropriate. Among preschoolers, OCD gender distribution does not reflect the male preponderance observed in previous studies when comparing children with adolescents or adults (Farrell et al., 2006; Geller et al., 2001). Instead, OCD gender distribution shows similar percentages of males and females (e.g. Skriner et al., 2015; Selles et al., 2014), or even predominantly female samples (Garcia et al., 2009), although this may reflect differences in treatment presentation and/or diagnostic overshadowing (i.e., another diagnosis presents as more impairing/severe than OCD). Heritability rates are considerably elevated in children under six years of age with 68% of parents presenting a current or lifetime history of OCD (Coskun et al., 2012). In samples with children 8 years and under, percentages of OCD family history in first-degree relatives decreased to 16-20% (Garcia et al., 2009; Skriner et al., 2015).

Within phenotypic differences, OCD symptom profiles in young children are characterized by a predominance of compulsions, especially before six years of age (Coskun et al., 2012) although the ratio of children reporting obsessions versus compulsions is greater in studies with children until 8 years (Garcia et al., 2009). This may reflect that cognitive and verbal skills in children under six years of age are not developed sufficiently for them to recognize, comprehend, or verbalize obsessive thoughts. Likewise, obsessional content is

linked to developmentally-related interests and activities. Contamination and aggressive/catastrophic thoughts were observed as the more frequent obsessive symptoms endorsed by young children, whereas sexual, superstitious or religious themes were less common (Garcia et al., 2009; Selles et al., 2014). Regarding compulsions, washing/cleaning, ordering, repeating, and rituals involving others (e.g., asking for reassurance) are common in preschool-aged children (Garcia et al., 2009; Coskum et al., 2012; Selles et al., 2014), and the majority of children report multiple compulsions (Skriner et al., 2015). Although there are no differences in symptom severity between younger and older children, younger children did exhibit lower intensity of symptoms, but also lower capability to resist and control their compulsions (Selles et al., 2014). In this sense, in comparison to adults, children appear to use less thought control strategies (Farrell & Barrett, 2006).

Cognitive biases and processes related to OCD have been studied in pediatric samples (Barrett, & Farrell, 2003a; 2003b; Healy-Farrell & Barrett, 2006). Healy-Farrell and Barrett (2006) analyzed developmental differences in cognitive processes across children, adolescent, and adults with OCD. The group of children (from 6 to 13 years) exhibited anxious and depressive intrusive thoughts with less frequency and intensity than adolescents and adults. Also, children report less responsibility and perceived probability of harm than adults. Therefore, it appears that cognitive maturation is positively related to the development of OCD-specific biased appraisals, and hence to the increase of symptom severity.

Comorbidity patterns observed in young children reflect developmental trends. For example, Coskum et al. (2012) reported that attention deficit hyperactivity disorder (60%), separation anxiety disorder (52%), and oppositional defiant disorder (48%) were the most common comorbid conditions observed in children with OCD under the age of six. These disorders typically exhibit an early childhood onset. When studies included children under the age of 8-9 years, other anxiety disorders also emerged as frequent comorbidities (Garcia

et al., 2009; Skriner et al., 2015; Selles et al., 2014). Comorbid tic disorder rates (22-27%) are similar across studies (Coskum et al., 2012; Garcia et al., 2009; Skriner et al., 2015) and common among young children with OCD. Finally, depressive symptoms presented lower prevalence (<10%) in young children with OCD (Coskum et al., 2012; Garcia et al., 2009; Skriner et al., 2015; Selles et al., 2014) and were significantly less common than in older youth (Selles et al., 2014).

Overall, clinical presentation of OCD presents some distinctive characteristic between younger and older children. OCD presentation in young children is particularly characterized with high heritability rates, less obsessive symptoms (likely due to lesser capability to articulate them), developmental-related obsessional content, poor capability of symptom resistance and control, and high comorbidity with attention deficit hyperactivity disorder, oppositional defiant disorder, tic disorders, and separation anxiety disorder. Although some differences are better explained by the natural course of development rather than by differences in the nature of OCD between age groups (Selles et al., 2014), these differences constitute important considerations for assessment and treatment of OCD in preschool populations.

Assessment

Evidence-Based Assessment of OCD in young children requires special attention to developmental and family factors across key assessment areas (i.e., diagnostic establishment, differential diagnosis, rating of symptom severity and evaluation of impairment and family functioning) to allow an effective case conceptualization (Lewin & Piacentini, 2010).

Diagnosis Establishment

Identifying OCD symptoms and conceptualizing those according diagnostic criteria can be difficult due to the limited capability of young children to report obsessive symptoms and their underlying relationships with compulsions, rituals or avoidance responses. The

Anxiety Disorders Interview Schedule—Parent/Child versions (ADIS-C/P; Silverman & Albano 1996) is a widely used clinician-administered interview for diagnosing anxiety and related disorders in children and adolescents. The ADIS-C/P has demonstrated validity and inter-rater reliability in young children (Rapee, Kennedy, Ingram, Edwards & Sweeney, 2005). A widely used semi-structured interview for preschooler ages is the *Affective Disorders and Schizophrenia for School-Age Children—Present and Lifetime Version* (KSADS-PL, Kaufman et al., 1997). It is usually administered jointly to the child and parents, and assesses the presence of several common childhood disorders. Although parents are the main information source when assessing young children, the non-observable nature of obsessions may challenge parental reports of their child's obsessional thoughts. Thus, many times obsessive symptoms may be inferred by child behavior (APA, 2013). For example, children could verbalize obsessions during exposure exercises or obsessions could be inferred by observing specific situations that are avoided by children (Freeman et al., 2012).

Differential Diagnosis

Several issues gain special relevance when making OCD differential diagnosis in young children. In daily life, preschoolers are involved in several normative ritualized behaviors related to self-care, meal- and bed-time routines, arranging personal possessions, etc. (Evans, Milanak, Medeiros, & Ross, 2002). Therefore, it may be difficult to differentiate this normal behavior from pathological rituals present in OCD. Time spent, ritual function, interference with other activities, and distress— which are often provoked by ritual interruption— are important to consider when determining the adaptive or pathological nature of these behaviors (Choate-Summers et al., 2008). Also, due to young children's difficulties in describing the functional role of their compulsions, these may be perceived as very similar to other repetitive behaviors such as those presented in autism spectrum or tic disorders. For instance, to differentiate from autism spectrum disorder, such behaviors are

gauged as being ego-dystonic and distressing for children with OCD (Neil & Sturmey, 2014). In addition, testing the presence of language delays and examining the difficulties these behaviors may cause in social relationships and restricted interests are recommended (Lewin & Piacentini, 2010). Also, a small percentage of youth have onset of obsessive-compulsive symptoms secondary to streptococcus, termed PANDAS (pediatric autoimmune neuropsychiatric disorders associated with streptococcus). PANDAS is characterized by a history of streptococcal infection, early abrupt onset, and an episodic course of symptoms (Murphy, Gerardi, & Leckman, 2014; Swedo, Leonard, & Rapoport, 2004). Specialized medical exploration, identifying drastic changes in symptom severity, and assessing characteristics of the symptoms, should guide clinicians to consider a PANDAS diagnosis (Murphy, et al., 2014).

Assessing severity, impairment and family functioning

Due to the constraints of administering standardized measures to young children (i.e., poor insight, cognitive and literacy skills, etc.), the use of semi-structured clinical interviews, clinician-rated measures, and parent reports would be recommended for best practice (Johnco & Lewin, 2016). In addition, although there is a wide variety of research-based tools to assess different dimensions of OCD—including symptoms and severity, functional impairment, and family behavior (Iniesta-Sepúlveda et al., 2014)—there is a lack of research assessing psychometric properties of specific OCD measures in children under seven years. To assess severity, Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS; Scahill et al. 1997) is a well-established measure for OCD in youth (Storch et al., 2004; 2005). It is a clinician-administered semi-structured interview that includes a Symptom Checklist and a 10-item Severity Scale. Due to several barriers for its use in young children (understanding obsessions and compulsion definitions, use anchors to rate time, distress, control, etc.), administration of the CY-BOCS relies primarily on parent report. Freeman et al. (2012)

reported some developmentally sensitive modifications for the CY-BOCS in order to facilitate its application in children from 5 to 8 years. They administered the Compulsions checklist prior to the Obsessions checklist, making it easy to identify potential obsessions. Specific obsession and compulsion descriptions were tailored using child-friendly expressions (e.g., *don't like touching sticky things* instead of *bothered by sticky substances or residues*). With these modifications, Freeman, Flessner, and Garcia (2011) observed that the complete scale and the Compulsion scale were valid and reliable for clinical and research purposes; however, the Obsession subscale should be administered with caution in this age group.

Other relevant areas to assess include functional impairment and family functioning. Level of impairment is crucial to determine the pathological nature of the child's behavior, and also constitutes a critical measure to gauge real change after treatment. The *Child Obsessive Compulsive Impact Scale-Revised* (COIS-R; Piacentini et al., 2007) assesses functional impairment related to OCD in children and adolescents across four domains: School Activities, Social Activities, Daily Living Skills, and Family Activities. Although a parallel version is available for parents and children, the parent version is preferred in working with young children (e.g., Freeman et al., 2014). Assessing the beliefs, behaviors, and attitudes of the family related to OCD is of particular importance in cases of young children. The presence of OCD in children affects family functioning and leads parents to develop high levels of distress and conflict, as well as blame, which can influence treatment response to CBT (Peris & Piacentini, 2013). Moreover, most families exhibit accommodation behaviors to OCD symptoms. Family accommodation includes a broad range of actions, in which family members facilitate the child's avoidance or compulsion performance. Through family accommodation, parents may help children complete rituals, modify family routines and activities, or provide reassurance and objects needed for compulsions (Caporino et al.,

2012; Storch et al., 2007a). Accommodation should be assessed and considered an intervention target, since it contributes to the perpetuation of anxiety and symptoms via negative reinforcement (Rudy, Storch, & Lewin, 2015). The *Family Accommodation Scale for Obsessive–Compulsive Disorder* (FAS, Calvocoressi et al., 1995, 1999) is a clinician-administered scale that assesses the level of accommodation to OCD symptoms exhibited by relatives of family members, and distress generated by accommodation. The FAS has been widely used in OCD treatment studies with preschool-aged children (Freeman et al., 2014; Lewin et al., 2014a; Rosa-Alcázar et al., 2017). Also, the *Parental Attitudes and Beliefs Scale* (PABS; Peris et al., 2008) is a parent-report that can be used to assess accommodation, as well as other attitudes or emotional reactions to one’s child’s OCD symptoms, although psychometric properties of this measure has only been evaluated in one study.

Treatment

Cognitive-Behavioral Therapy (CBT), including exposure response prevention (ERP), is a well-established treatment approach for OCD in children and adolescents (Geller, March & AACAP, 2012). In recent meta-analytic studies regarding the treatment effectiveness for pediatric OCD, CBT exhibited large treatment effects, which was superior to pharmacological monotherapy (McGuire et al., 2015; Sánchez-Meca, Rosa-Alcázar, Iniesta-Sepúlveda, & Rosa-Alcázar, 2014). CBT is not only recommended as the first line of treatment in pediatric OCD (Geller et al., 2012), but also generally well accepted by parents, and preferred over medication (Lewin et al., 2014b).

Based on clinical lore and research findings about the influence of family behaviors and attitudes on the emergence and development of OCD in childhood— and the critical consequences it has on family relationships and interactions— standard CBT interventions have been modified to include structured parental involvement (Farrell & Barrett, 2007; Waters, Barrett, & March, 2001). Cognitive-Behavioral Family-Based Treatments (CBFT)

has demonstrated efficacy in RCTs (e.g., Barrett, Farrell, & March, 2004; Storch et al., 2007b) and superiority to interventions with limited parental involvement (Rosa-Alcazar et al., 2015). For very young children with OCD, this approach is considered to be the standard of care, and includes developmental sensitive adaptations to address the unique requirements of the preschooler populations (Freeman & Garcia, 2009; Freeman et al., 2014; Lewin et al., 2014a). The core element in CBFT programs for OCD include exposure with response prevention, which is usually accompanied by psychoeducation, parent training, and child tools meant to facilitate ERP and treatment adherence.

Intervention Components

Psychoeducation

Psychoeducation for parents usually involves explaining the OCD neurobiological model, correcting misattributions related to the disorder, and introducing the treatment rationale (Choate-Summers et al., 2008). The anxiety cycle is explained to parents so they understand that— although compulsions relieve distress caused by obsessions in the short term— obsessive thoughts always reappear, forcing the child to engage in compulsions even more frequently. The parent’s understanding of the treatment rationale is crucial since they will be active providers of core CBT components. Depending on the child’s developmental stage, a simplified psychoeducation could be provided to them. The concept of “being the boss” of OCD is usually introduced (Choate-Summers et al., 2008). Clear examples, visual elements, and metaphors are employed to facilitate understanding. With children from 3 to 5 years, psychoeducation may not provide additional benefits, but instead it could be useful to use this time to increase ERP practice time (Lewin et al., 2014a).

Parent involvement

Given the anxiety-provoking nature of exposure treatment and developmentally-related difficulties of young children, family is required to guide the child, promote their

child's engagement across the intervention process, and practice treatment components. Therefore, parents are included in a structured way as active agents in treatment sessions and provided a set of strategies to help them comprehend, manage and improve their child's obsessive compulsive symptoms (Choate-Summers et al., 2008; Freeman & Garcia, 2009). The purpose of this is so parents gradually become the child's primary 'coaches' in treatment by administering treatment practices during and between sessions. The success of parent inclusion in enhancing the efficacy of CBT depends mostly on the extent to which exposure practice is facilitated (Taboas, McKay, Whiteside, & Storch 2015). In this sense, parents should be trained with three primary goals: 1) to guide homework ERP exercises, 2) to reduce family accommodation, and 3) to facilitate the engagement in ERP using behavior management techniques. Other family focused techniques to reduce parental anxiety, hostility and criticism, and to improve problem solving skills, are commonly included in family-based protocols (Barmish & Kendall, 2005). However, adding non-exposure-focused parent components (e.g., emotional management techniques) may reduce the exposure dose in-session and provide less effective alternatives to manage anxiety and distress (Taboas et al., 2015).

In order to assist their child in the completion of exposures and facilitate between-session practice, parents are trained by the clinician to be the child's "coach". During in-session exposures, parents learn how to implement ERP, monitor anxiety, support their child and tolerate their own distress (Anderson, Freeman, Franklin, & Sapyta, 2015). At the beginning, the therapist leads the exposures, while parents observe. By learning how the clinician handles OCD symptoms in the context of ERP tasks and how they encourage the child, parents become gradually more confident to conduct exposures independently.

Family accommodation should be directly targeted in the early stages of treatment and thereafter, preferably as the first form of exposure (Lewin et al., 2014a). With

accommodation, parents prevent the child from experiencing distress provoked by feared stimuli (e.g., open the doors to avoid that child touching ‘contaminated’ objects), impeding both the habituation process in daily-life situations and learning that feared outcomes do not occur. Studies have observed that family accommodation predicts worse symptom severity and treatment response (Rudy, Lewin, Geffken, Murphy, & Storch, 2014; Wu et al., 2016). During treatment, parents are encouraged to systematically abstain from participating in compulsions and facilitating avoidance of anxiety-provoking situations. They are instructed to use more adaptive responses instead of accommodation.

Given this, parents need to be trained in behavioral management techniques— such as differential attention, time out, and extinction— to cope with child’s oppositional behavior and tantrums, and to improve the child engagement in treatment exercises. It is important that parents learn how to use these strategies. For example, time out should be applied to cope with disruptive behavior, but not as a punishment for engaging in compulsive behavior (Labouliere et al., 2014). Also, parents are trained to model adequate coping strategies to the child in presence of fear stimuli instead compulsions or avoidance (Freeman & Garcia, 2009). Finally, child participation and completion of exposures is usually rewarded through a token economy program and social reinforcement.

ERP and Complementary Child Tools

ERP is the primary active ingredient of the intervention for young children (as well as older children and adolescents) with OCD (Conelea & Freeman, 2015). During ERP trials, feared situations are gradually and systematically confronted and escape responses (compulsions and avoidance) are impeded. Allowing adequate time for exposures, the habituation process is activated and the child learns that feared outcomes do not occur.

Within intervention models for 5 to 8 year-old children, cognitive techniques are developmentally tailored and focus is placed on ERP exercises. . The goal of cognitive

training is essentially the OCD externalization (Choate-Summers et al., 2008), the idea is that the child perceives OCD as something separate and independent from himself. In other words, the disorder is presented as a “mean” character that tries to make the child do things that he does not want to do. A common resource used to facilitate externalization is to allow the child to choose a funny or scary name for OCD and to then draw their OCD monster (Freeman & Garcia, 2009). ERP is introduced as a way to “fight back” against the OCD, using child-friendly explanations such as “don’t listen to the lies of OCD”, “do the opposite of what OCD says”, or simply “say no! to OCD”. Metaphors and clear examples are usually used to illustrate the habituation process, to explain that although fighting against OCD is hard at first, with practice it will be easier soon (e.g., like when you are learning to ride a bike). Also, the idea that the clinician and parents are on the child’s same team, and that they will be supported during the entire process in sessions and at home is empathized. Regarding approaches for children under five years of age, cognitive techniques are almost eliminated; however, some simple self-instructions (e.g., don’t listen to OCD) or positive self-talk (Lewin et al., 2014a) are maintained. In addition, exposures are implemented within a developmentally appropriate play context— using games, cartoon characters, toys, ‘fun’ exposure tasks, etc. New applications also include computer games to enhance the child’s treatment understanding and engagement (Comer et al., 2014).

A fear thermometer is the most common tool employed to monitor anxiety while developing a hierarchy and doing ERP tasks. In the case of young children, its use may be too complicated. Some children are not able to use rating scales, whereas others may have a dichotomous perception of anxiety occurrence (present vs. absent). Adaptations usually include the use of short rating scales (no more than three points), images (faces expressing different levels of distress), or manipulatives (items with different sizes representing high, low or none anxiety) (Choate-Summers et al., 2008).

Finalizing and Relapse Prevention

The last sessions of treatment are usually employed to work on a relapse prevention plan. Parents and children are instructed on how to proceed in cases where symptoms reappear or new symptoms emerge. They are encouraged to use all the strategies that they learned (recognizing OCD, keeping doing exposures, not engaging accommodation, etc.) and come back for booster sessions, if necessary. This approach is not unique to young children with the exception perhaps of enhanced focus on parents.

Empirical Support for CBFT in very young children

In recent years, evidence on the effectiveness of CBFT in children from 3 to 8 years has grown (see Table 1). Overall, treatment protocols converge— including psychoeducation, ERP, and parent involvement— varying in the emphasis placed on cognitive elements (Freeman & Garcia, 2009; Ginsburg, Burstein, Becker, & Drake, 2011; Lewin et al., 2014a; Rosa-Alcázar et al., 2017). CBFT has demonstrated superiority to relaxation training in a RCT (Freeman et al., 2008) and in a multicenter RCT in children from 5 to 8 years (Freeman et al., 2014). In younger children (3-5 years), Lewin et al. (2014a) reported significantly greater effectiveness for twice-weekly family-based ERP relative to a treatment as usual (TAU) condition. In Lewin et al. (2014), cognitive strategies were minimized, placing emphasis in augmenting ERP practice and reducing family accommodation, given the cognitive limitations of very young children. More recently, a preliminary evaluation suggested the feasibility and preliminary efficacy of a parent only-intervention; no significant differences were observed between a CBFT— including children in sessions— and a parent-only training condition (Rosa-Alcázar et al., 2017). Also, an internet-based approach has yielded promising results (Comer et al, 2014; 2016), and no significant differences were observed in the efficacy, treatment engagement and satisfaction between clinic- and internet-based conditions (Comer et al., 2016). In video teleconferencing sessions and interactive

online activities, non-face-to-face interventions may contribute in addressing access barriers to trained mental health providers for this population. In addition to their effectiveness, family approaches for OCD in young children were well-accepted and parents showed a desire to participate actively in the treatment of their child's intervention (Lewin et al., 2014b; Rosa-Alcázar et al., 2017).

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Challenges Unique to this Population

Developmental factors and the important role of family in the course, assessment and treatment of OCD for preschooler ages makes it necessary to consider the challenges that are unique to this population across the therapeutic process.

Limited abstraction and meta-cognitive capabilities not only impedes preschoolers' ability to express, identify and differentiate obsessive thoughts, but also hinders their awareness towards the functional relationship between obsessions and compulsions. Therefore, the understanding of the disorder and treatment rationale is very poor or non-existent in young children. A lack of insight (Lewin et al., 2010), and low capability to control and resist their compulsions (Selles et al., 2014) usually translates to limited motivation and treatment engagement. It is common for preschoolers to cry, have tantrums or outbursts when compulsions or avoidances are impeded. Likewise, oppositional disorder and ADHD (Coskum et al., 2012) are the most common comorbid conditions in young children with OCD. Disruptive behaviors derived from these conditions also contribute to complicated treatment implementation and compliance. When children are forced to do exposures or are punished for not participating in them, it is likely that they do not want to continue with the treatment and their oppositional behavior gets worse (Choate-Summers et al, 2008). In this sense, parent-training allows parents to learn how to engage with their child effectively during treatment, by using rewards and being supportive in exposure tasks.

As parents play a key role in the intervention process, their attitudes about the disorder and treatment may affect treatment success. First, high rates of heritability (Coskun et al., 2012) are indicative of a high probability for very young children with OCD to live within an environment where OCD behaviors may be supported (Choate-Summers et al., 2008). Parent's beliefs and attitudes toward OCD and psychotherapy may determine how their child respond to OCD symptoms. For example, parents can mistakenly believe that their child's behavior is part of either the normative developmental process, related to oppositional behavior, or that the child is "sick". Thus, parents could fail to seek appropriate treatment, or implement punitive or permissive parenting practices that may negatively affect the course of the disorder (Johnco & Lewin, 2016). Likewise, parents of young children may experience high levels of anxiety and/or distress due to the child's suffering; thus, it is common for parents to engage in accommodation behaviors (Freeman et al., 2003). When reducing accommodation, it is common that parents experience guilt feelings for allowing their child to suffer and cry, rather than take actions to reduce their distress. Many parents want to prevent their children from provoked suffering by exposures (and to reduce their own distress) and allow for some treatment inconsistencies— such as giving their child breaks from exposures at home, or finalizing ERP trials before the habituation occurs. To reduce potential inconsistencies in treatment, parents also receive an "exposure" during ERP trials, in which they learn to cope with their own anxieties (Freeman & Garcia, 2009). In order to avoid OCD symptoms exacerbation, treatment should help parents in tolerating their own distress and teach them to be more confident when exposing their children to feared situations (Choate-Summers et al., 2008).

Summary of Recommendations and Resource List

The fully developed presentation of OCD can be observed in preschool-aged children, causing high levels of impairment and potential for a chronic course, if untreated. Early

detection and treatment are warranted to limit the impact of the disorder in future academic, social and family life.

Table 2 presents recommendations and resources for assessment and treatment of OCD in young children. Obsessions and compulsions are usually difficult to identify as such in young children. Compulsions should be differentiated from normal ritualized or rigid behavior common to this age. Also, given the repetitive and rigid nature of OCD rituals — and the difficulty to determine if they are triggered by intrusive thoughts— differential diagnosis from ASD and tics disorders deserves special attention. In addition, the low capability of young children to report symptoms and distress makes it necessary for behavioral observation and parent reports to become main pillars of the assessment. Obsessions should be inferred frequently while observing the child’s specific fears and avoidance behavior. Although scarce, evidence based-assessment measures for OCD have been adapted and validated for the preschooler clinical population and are essential to achieve accurate and objective case conceptualization, as well as for monitoring treatment change.

Research on the effectiveness of CBFT for OCD in young children is a growing field and has demonstrated that family interventions including ERP are superior to active psychological control conditions. Parent involvement is the critical adaption, in relation to standard CBT (which we believe should also include substantial family involvement), and should focus on parent’s role of becoming “ERP coaches” and reducing family accommodation. Parallel behavioral interventions, targeting disruptive behavior, is also necessary to allow the application of specific OCD treatment techniques. Treatment should be implemented with a child-friendly approach, by using metaphors, clear examples, by playing, and allowing children to better understand why the intervention is needed— as well as their role throughout treatment. In addition, cognitive elements should be minimized for younger children, and focus should be placed in behavioral change mechanisms.

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Table 1. Empirical studies evaluating CBFT for OCD in young children

Study	N	Mean	Design	Treatment Implementation	Child focused elements	Parent focused elements	Findings
		Age (yrs)					
Freeman et al. (2008)	16	7.11	RCT CBFT vs. RT	Clinic-based	Psychoeducation, Externalizing OCD, and ERP	Psychoeducation, behavior management training, parental ERP coaching, reducing accommodation, hostility and criticism, and problem solving	50% remitters ^a in CBFT vs. 20% remitters in RT
Ginsburg et al. (2011)	7	6.00	Case series	Clinic-based	Psychoeducation ERP	Psychoeducation, behavior management training, parental ERP coaching, reducing accommodation, and anxiety-enhancing behaviors, and problem solving	14.3% remitters ^a 85.71% responders ^b
Freeman et al. (2014)	59	7.40	Multicenter RCT CBFT vs. RT	Clinic-based	Psychoeducation, Externalizing OCD, and ERP	Psychoeducation, behavior management training, parental ERP coaching, reducing accommodation, hostility and criticism, and problem solving	72% responders ^b in CBFT vs. 41% responders in RT
Lewin et al. (2014a)	17	5.76	RCT FB-ERP vs. RT	Clinic-based	ERP, and positive self-talk	Psychoeducation, behavior management training, parental ERP coaching, and reducing accommodation.	58.8% remitters ^a in FB-ERP vs. 0% remitters in TAU
Comer et al. (2014)	5	6.50	Case series	VTC-delivered	Psychoeducation, Externalizing OCD, and ERP	Psychoeducation, behavior management training, parental ERP coaching, reducing accommodation, hostility and criticism, and problem solving	20% remitters ^a 60% responders ^b

Comer et al. (2016)	22	6.65	RCT VTC-CBFT vs. Clinic-based CBFT	VTC-delivered Clinic-based	Psychoeducation, Externalizing OCD, and ERP	Psychoeducation, behavior management training, parental ERP coaching, reducing accommodation, hostility and criticism, and problem solving	63.3% remitters ^c VTC-CBFT vs. 60% remitters in Clinic- based CBFT
Rosa-Alcázar et al. (2017)	20	6.62	Non-randomized comparison CBFT vs. PT	Clinic-based Parent-only	Psychoeducation, Externalizing OCD, and ERP	Psychoeducation, behavior management training, parental ERP coaching, and reducing accommodation.	70% remitters ^a in CBFT vs. 60% in PT

N: sample size in the posttest for each group, RCT: randomized controlled trial, CBFT: cognitive-behavioral family-based treatment,

ERP: exposure with response prevention, VTC: video conferencing, PT: parent training.

^a Post-treatment CY-BOCS score ≤ 12

^b *Much or very much improved* on CGI

^c No OCD diagnosis

Table 2. Recommendations and resources for assessment and treatment OCD in young children

Recommendations and Resources for Assessment

- Differentiate pathological rituals from normative ritualized behavior, attending time, interference, and distress.
- Make differential diagnosis from repetitive behaviors presented in ASD and tics disorders
- Assess compulsions first, by using concrete examples and direct questioning.
- When children do not clearly articulate obsessions, these may be inferred by observing avoidance behavior and the child's reactions in ERP task.
- Consider behavioral observations and parent reports as the main resource of information.
- Some OCD-specific evidence-based measures to assess OCD and related responses in young children are:
 - For symptoms and severity, *Children's Yale Brown Obsessive Compulsive Scale (CY-BOCS*; Scahill et al., 1997).
 - For family accommodation, *Family Accommodation Scale (FAS*; Calvocoressi et al., 1999)
 - For functional impairment, *Child Obsessive Compulsive Impact Scale-Child and Parent Versions (COIS-C/P* ; Piacentini & Jaffer 1999)

Recommendations and Resources for treatment

- Use CBT that focuses on ERP and reducing family accommodation
 - Include parent-training to guide and assist children in exposures, to reduce family accommodation and to learn behavior management strategies.
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- Minimize focus on cognitive components of the intervention, especially in children under five years.
 - Make child tools developmentally sensitive to young children (e.g., externalize drawing an OCD monster, fear thermometer with images or manipulatives, etc.)
 - Apply treatment strategies within an appropriate play context (fun exposures, using toys, video games, etc.).
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