Intensive Cognitive Behavioural Treatment for Obsessive Compulsive Disorder in Children and Adolescents

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**Abstract**

Preliminary evidence for the efficacy of intensive treatments for childhood OCD is promising. This is an important area of research as traditional weekly CBT for OCD is costly, time intensive and is often challenging for families to access. This review explores the evidence base for intensive treatments for childhood OCD and following this, provides a description of a novel intensive treatment approach that combines prolonged intensive ERP sessions, similar to the one-session treatment for specific phobia, with CBT delivered over the computer via webcam (W-CBT) for one-month maintenance. Future research directions are also discussed.

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Keywords: generalized anxiety disorder; treatment; children; adolescents

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Introduction to Obsessive Compulsive Disorder in Children and Adolescents

Obsessive Compulsive Disorder (OCD) is a debilitating mental health disorder, affecting approximately 3% of children and youth (Zohar, 1999). Previously described as an anxiety disorder in past editions of the Diagnostic and Statistical Manual (DSM) of Mental Disorders, OCD is now defined under a new category “OC Spectrum Disorders” in the recently released DSM-5 (American Psychiatric Association, 2013). This substantial change to the classification of OCD is one that reflects growing evidence to support the distinctiveness of OCD from other anxiety disorders, as well as the relatedness (across symptoms, neurobiological substrates, comorbidity, and treatment response) among the newly grouped “OC-Spectrum Disorders” (see Leckman et al., 2010), including Body Dysmorphia, Hoarding Disorder, Trichotillomania, and Excoriation Disorder (or disorder of skin picking). On the basis of the DSM-5 criteria, OCD is defined by the presence of either obsessions – recurrent and persistent thoughts, urges or impulses which are experienced as intrusive, unwanted and usually associated with anxiety or distress; and/or compulsions – which are defined by repetitive and excessive behaviors or mental acts, that are performed in response to either an obsession or rigidly applied rule and are engaged in to prevent or reduce anxiety or distress. To qualify for a diagnosis, symptoms must be time consuming and/or cause clinically significant impairment. The newly revised criteria also allow for insight to be specified more broadly as either (i) good or fair insight, (ii) poor insight, or (iii) absent insight; and furthermore, allows for an OCD subtype specifier of “Tic-Related OCD” for individuals with a lifetime history of chronic tic disorder.

For most children and youth with OCD, the disorder is characterized by a wide constellation of symptoms, high comorbidity, and disruption to life across multiple domains. Comorbidity is indeed the norm in childhood OCD, with up to 80% of children affected having at least one comorbid diagnosis (Geller, Biederman, Griffin, Jones, & Lefkowitz, 1996; Lewin, Chang, McCracken, McQueen, & Piacentini, 2010; Storch et al., 2008), and as many as 50% to 60% of youth experiencing two or more other mental disorders during their lifetime (Rasmussen & Eisen, 1990). It is not surprising then that children and youth suffering OCD experience profound disruptions to family life (Amir, Freshman, & Foa, 2000; Calvocresi et al., 1995; Cooper, 1996), peer relationships (Allsopp & Verduyn, 1990), and academic attainment (Toro, Cervera, Osejo, & Salamero, 1992). Despite the high prevalence and well-documented burden, only a small minority of children with OCD receive effective treatment for their disorder, due to limitations in early diagnosis and poor access to such evidence-based treatments. Furthermore, of those who do receive treatment, only about 50% are diagnosis-free following even our best evidence-based interventions (Barrett, Farrell, Pina, Peris, & Piacentini, 2008). Treatment approaches for OCD include cognitive-behavioural therapy (CBT), which incorporates exposure and response-prevention (ERP), either alone or in combination with serotonergic (SRI) medication.

Rationale for Intensive Treatments of OCD

While weekly CBT is generally effective for OCD, there remains significant access issues for patients as CBT is not routinely delivered by many treatment providers (Goisman et al., 1993) and is expensive and time-intensive (Marques et al., 2010) – for most children, CBT for OCD can extend up to 16 weekly sessions, resulting in substantial financial and time commitments for all involved. Given the often extreme impairment and distress that is experienced by the family, combined with the need for specialised CBT, patients routinely travel to seek effective treatment for this disorder. In this regard, intensive approaches are relevant and warranted, and may be widely sought after in order to establish more speedy recovery and provide services to families who have to travel for treatment. In the case of child and adolescent OCD there is accumulating evidence to support the efficacy for this delivery of CBT, with both three-week, daily intensive treatment (14-15 sessions), and five-day intensive treatment providing favourable outcomes (10 hours therapy, 2 hours/day).

In the first examination of an intensive treatment for OCD in youth, Franklin, Tolin, March, and Foa (2001) described a case study of a 12-year old boy with severe OCD who responded well to intensive CBT – resulting in subclinical symptoms at post-treatment. He was also asymptomatic by 3-month evaluation, following 15 sessions delivered daily for three weeks. Storch et al. (2007) conducted the first and only randomised controlled trial to date of intensive CBT, examining the efficacy of daily delivery of 14 sessions (90 minutes) of family-based CBT over
three weeks, relative to weekly CBT, in a sample of 40 children and youth with OCD aged 7 to 17 years. Intensive CBT was as effective as weekly CBT, with those in intensive CBT significantly less severe on clinician global impression severity ratings at post-treatment, relative to children in weekly CBT. At post-treatment, 75% of children and youth in intensive and 50% in weekly treatment met remission criteria; moreover, 90% of children and youth in intensive CBT versus 65% of those in weekly CBT were considered treatment responders. More recently, Storch et al. (2010) applied this same intensive treatment (14 daily sessions) to children and youth deemed partial responders or non-responders to medication (n=30) in an open clinical trial. Eighty percent of the sample was considered improved at post-treatment and at 3-month follow-up; overall, they experienced a 54% mean reduction in symptoms. Moreover, 57% were deemed in remission at post-treatment and 54% were remitters at follow-up.

Taken together, these studies provide good evidence for the efficacy and feasibility of daily intensive CBT delivered over three-weeks, providing one option to families hoping to achieve more rapid improvements. However, for those families residing in areas that are under-served, or in rural and remote regions, three-weekly intensive treatments continue to be expensive when taking into account accommodation costs and parental leave from work for accessing specialised treatment.

To address geographical barriers to treatment, Fernandez, Storch, Lewin, Murphy, and Geffken (2006) reported the successful treatment of a 13-year old girl who resided 4 hours from their specialist clinic, with 5-sessions of daily CBT, followed by a further 5 weekly sessions delivered either by phone or face-to-face. The family chose to stay with relatives in a nearby city for the 5 days of intensive treatment (1 hour commute daily) in order to access evidence-based specialised CBT. The young girl responded favourably after 5 sessions, achieving Children’s Yale-Brown Obsessive Compulsive Scale (CY-BOCS; Scahill et al., 1997) scores within normal range, and by 12-weeks following intensive treatment the child and mother reported normal functioning. In an effort to maximise accessibility of evidence-based CBT for paediatric OCD, Whiteside, Brown, and Abramowitz, (2008) and Whiteside and Jacobsen, (2010) have developed and trialled a 5 day approach, incorporating 10 sessions of CBT into one week. In an uncontrolled case series with three adolescents, Whiteside et al. (2008) reported a mean reduction in symptoms of 56% for the three youth in this study. The study provided encouraging findings suggesting that 5-day intensive treatment was tolerated by children and families, and was effective in reducing OCD severity. Following on from this preliminary study, Whiteside and Jacobsen (2010) more recently described an uncontrolled open trial of 5-day intensive treatment for 16 youth aged 10 to 18 years. A total of 10 sessions were scheduled over 5 days, with 2 sessions a day (morning and afternoon), ranging from 50 to 75 minutes each. Outcomes demonstrated significant reduction in symptoms on the CY-BOCS from pre- to post-treatment, and from post-treatment to 5-month follow-up. At post-treatment, youth had experienced a mean reduction of 38% on the CY-BOCS; however, by follow-up treatment had resulted in a mean reduction of 59% based on CY-BOCS scores. These results suggest that 5-day intensive treatment is a promising option for out-of-town clients needing to access specialised care, and provides promise that a week-long treatment is an adequate dose. Whilst initial patient response at post-treatment is less impressive than those reported by Storch et al. (2007) and Storch et al. (2010) following three-week intensive sessions, youth in this trial caught up by 5-months follow-up, with outcomes generally consistent with larger trials of 3-weekly intensive (Storch et al., 2007) and more standard weekly CBT (The Pediatric OCD Treatment Study (POTS) Team, 2004).

Whilst these preliminary studies demonstrate promise, with outcomes on par with traditional weekly CBT (Storch et al., 2007; Whiteside & Jacobsen, 2010) these one-week to three-week approaches continue to work on a model of one- to one and one-half hour session delivery (daily or twice daily), and continue to lead to significant time and financial burdens for out-of-town clients. An alternative approach is to provide even fewer sessions but of longer duration (up to three and half hours), such as the one-session treatment (OST) approach which was developed for the treatment of specific phobias (Ollendick et al., 2009; Öst, Svensson, Hellström, & Lindwall, 2001). OST is considered a well-established treatment for paediatric specific phobia, and incorporates in vivo exposure, cognitive challenging, participant modelling, reinforced practice and psychoeducation, into a single intensive session that is maximized to 3 hours (For a detailed description of OST please refer to the Specific Phobia paper of this series). This prolonged, three-hour session, allows for a number of ERP exercises to be conducted on masse in one session, and arguably provides more opportunity for extinction of fear– conceivably through more rapid and continuous exposure to feared stimuli and greater consolidation of learning. Given that OCD can at times occur almost exclusively in the home environment (King, Ollendick, & Montgomery, 1995), a potential shortfall of an
intensive model of therapy for OCD, might be poor generalisation of outcomes across settings following completion of the intensive treatment. A novel approach to address this potential limitation may be combining intensive therapy with web-CBT (Skype) booster sessions over a period of weeks following treatment, to generalise gains.

**Description and Evidence-Base: Intensive Treatments for OCD**

Our team is currently completing a controlled, multiple-baseline pilot trial in order to evaluate the effectiveness of an intensive treatment for pediatric OCD, blending 2 x 3.5 hour massed ERP sessions spaced up to one week apart. Sessions could also be offered over 2 consecutive days if necessary, followed by 4x 1 hour weekly e-therapy (Skype) sessions. To illustrate this novel intensive approach we present a case study of an 11-year old boy with severe OCD who received intensive CBT through our current trial.

**Case Study:** Ben (not his real name), an 11-year old Caucasian boy presented with numerous obsessions and compulsions. He was fearful of becoming contaminated by germs, bodily waste (e.g., feces and urine) and odors from food products. His compulsions included excessive hand washing, constantly sniffing his hands for odors, removing all his clothes before using the toilet, and washing his feet after using the toilet due to fears he had stepped in urine. He also feared that he would break electrical equipment (e.g., laptop or Ipod) because he had not dried his hands properly after washing them. Further, Ben reported fears of losing personal items, and was fearful of offending others, and as such engaged in excessive checking and confessing rituals.

**Pre Treatment Assessment:** At pre treatment Ben received a principal diagnosis of OCD (clinician severity rating [CSR] = 7) and a secondary comorbid diagnosis of Generalised Anxiety Disorder (GAD) (CSR = 5) on the Anxiety Disorder Interview Schedule for DSM-IV; Parent Version (ADIS-IV-P; Silverman & Albano, 1996) and a total score of 30 (within the Severe range) on the CY-BOCS (Scahill et al., 1997).

**Family Psychoeducation Session:** A one-hour psychoeducation session was provided to Ben and his family prior to the intensive ERP treatment sessions. This session focused on education about the cycle of OCD, monitoring of symptoms, the role of the family accommodation, the nature of exposure therapy, the rationale for intensive treatment (i.e., to provide a kick start to overcoming OCD) and parental contingency management. In this session, the clinician also worked with Ben to develop exposure hierarchies for each different symptom subtype that would help guide the intensive sessions (e.g., Checking, Contamination, Confessing) (refer to Table 1 for an example hierarchy).

**Table 1: Example Exposure Hierarchies for Multiple Symptoms of OCD**

<table>
<thead>
<tr>
<th>E/RP Steps</th>
<th>Contamination</th>
<th>Checking</th>
<th>Confessing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Touch door handles, shoes, garbage – no washing hands or sniffing!</td>
<td>To pack my bag and not check.</td>
<td>No more saying sorry when I bump into things!</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Use toilets without taking shirt off. No washing hands as soon as I enter the house.</td>
<td>When leaving a desk or table do not look underneath table or chairs.</td>
<td>Don’t say thank you or please – and no apologizing or confessing!</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>Get hands dirty &amp; smelly (vegemite/sauce/mud), quick wash, no smelling!</td>
<td>Use moist hands on my iPod and iPad.</td>
<td>Leave my clothes on the floor and not confess or apologize.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>Use toilet without taking any clothes off.</td>
<td>Use moist hands to touch the TV, the computer and the laptop.</td>
<td>Make a mistake in my homework and not confess or apologize.</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Use toilet in bare feet without washing feet afterwards.</td>
<td>Leave my school bag zip half open when I walk to school – no checking!</td>
<td>Think a mean remark and not confess or say sorry!</td>
</tr>
</tbody>
</table>

**E/RP GOALS**

- Only wash hands after toileting, no more sniffing!
- No more checking my bag, with mum, or at home!
- No more confessing!

**Intensive ERP Sessions and E-Therapy:** The two intensive ERP sessions followed the format of OST (3 hours of gradual exposure, modeling, reinforcement of approach behaviour and cognitive challenges; Davis III, Ollendick,
During hour one the clinician provided Ben with a review of psychoeducation about OCD, discussed the symptoms of OCD, the cycle of OCD, and taught Ben cognitive strategies, such as how to ‘boss back’ OCD. The second and third hour of the intensive session involved ERP and particularly focused on Ben’s fears of contamination – his most severe symptoms. During the session, ERP tasks were repeated multiple times until Ben’s anxiety reduced substantially at the end of each task. At the completion of the session Ben’s progress was reviewed with his parents and together they generated ERP tasks to continue practicing between sessions. The second intensive session was carried out 4 days later. The clinician and Ben spent the 3 hours engaging in numerous ERP tasks across his symptom presentations (hour one targeted contamination; hour two targeted checking; hour three targeted confessing and reassurance seeking), and examining the accuracy of Ben’s obsessional beliefs through a series of behavioural experiments. Again at the conclusion of the session Ben’s progress was reviewed with his parents and ERP tasks for the following week planned. Following Ben’s two intensive sessions, the clinician contacted Ben once a week for a 1-hour session of web-based CBT (delivered using Skype) over 4 weeks. During these sessions the clinician would review Ben’s progress, complete one exposure task and then plan ERP homework practice.

Post Assessment. Ben’s post assessment was carried out following the web-CBT (Skype) sessions. Ben reported no longer having to check, he indicated that he only washed his hands after using the toilet and stated that he no longer confessed or sought reassurance. On the basis of the ADIS-P, Ben no longer met criteria for OCD, and his CSR rating for GAD was 3 (subclinical). His CY-BOCS score was 5 indicating subclinical/normal range for OCD.

Future Directions

OCD in childhood represents a severe and complex mental health problem that is frequently characterized by high levels of family involvement, child and family distress and dysfunction, and impairment across all domains of a child’s life. Treatments for OCD are effective for most children and youth, but not all, and tend to be lengthy, costly, requiring substantial commitment from parent and children, and are often only provided in specialist clinics. Given the debilitating nature of OCD, coupled with the need for expert CBT, the development of effective, intensive modes of CBT could be of major benefit to children and families. To date there is evidence for the efficacy of three-week intensive CBT (Storch et al., 2007; Storch et al., 2010), and preliminary studies to suggest that 5-day intensive treatment (Whiteside & Jacobsen, 2010) may also be both feasible and effective. Recent work is also being conducted by our group to explore the effectiveness of an even briefer model, utilizing fewer but longer duration exposure sessions, combined with e-therapy to address the needs of families who need to travel to seek treatment. Whilst the preliminary work reviewed here is indeed promising, there is a need for large, randomized controlled trials to determine the efficacy of these innovative, intensive modes of treatment, as well as to establish important moderators and mediators of response. Childhood OCD is a heterogeneous disorder, with widely varying symptom presentations, diverse comorbidities, and typically follows a fluctuating course. The possibility of having numerous evidence-based treatment options for meeting the unique clinical needs of individual children and their families is the vision for the future. Establishing an evidence-base for intensive treatments is an important step in achieving this goal.

References


