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Measures for Diagnosing and Measuring Severity of OCD

Symptoms in Children

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Obsessive-Compulsive Disorder (OCD) is a neurobehavioral disorder characterized by anxiety-invoking thoughts or images (obsessions) and overt behaviors or mental rituals performed to reduce the distress caused by these thoughts (compulsions). OCD has been estimated to affect up to 2–3% of children (Rapoport & Inoff-Germain, 2000; Valleni-Basile, Garrison, Jackson, & Waller, 1994), with point prevalence estimates indicating that between .25 and 1% of the pediatric population suffers from OCD at any given moment (Flament, Whitaker, Rapoport, & Davies, 1988; Heyman et al., 2003). Formerly categorized in the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision (DSM-IV-TR) (American Psychological Association, 2000) as an anxiety disorder, OCD is newly classified under the DSM-5 category “Obsessive-Compulsive and Related Disorders” (American Psychiatric Association, 2013). This change reflects empirical support for behavioral and phenomenological similarities with “OC-spectrum” disorders (Van Ameringen, Patterson, & Simpson, 2014), such as Trichotillomania (hair-pulling disorder) and Excoriation (skin-picking disorder), which are also included in this category.

Without being properly assessed and treated, childhood OCD may have deleterious long-term effects, including disruptions to normative development (e.g., Piacentini, Bergman, Keller, & McCracken, 2003) and impairments in social, academic, and family functioning (Valderhaug & Ivarsson, 2005). In addition, untreated OCD often leads to greater severity of illness and a greater risk for developing comorbid disorders. This in turn leads to increased disability costs, decreased work productivity, and increased utilization of health care services (Knapp, Henderson, & Patel, 2000). Such consequences highlight the importance of careful screening and assessment for childhood OCD, so as to minimize the long-term burden of the disorder. Several studies have clearly demonstrated the efficacy of a specific type of Cognitive Behavioral Therapy (CBT) called Exposure with Response Prevention (ERP), or ERP plus a Serotonin Reuptake Inhibitor (SRI), in treating children and adolescents with OCD (American Academy of Child and

Adolescent Psychiatry, 2012; Freeman et al., 2014), but appropriate, tailored treatment can only be provided with proper assessment.

This chapter outlines recommendations for measures that can be used to screen for and diagnose OCD, as well as to assess severity of symptoms. Factors that might affect assessment, including developmental considerations and differential diagnoses, are also discussed.

Screening for OCD

Children presenting with complaints of intrusive thoughts, recurrent worries, excessive reassurance-seeking, and repetitive rituals or behaviors should be screened for OCD (Keeley, Storch, Dhungana, & Geffken, 2007). Ideally, a comprehensive assessment with multiple informants (i.e., the child, parent(s), and possibly teachers) should be conducted to differentiate developmentally appropriate from pathological behaviors, as well as to make a distinction between possible functions of the behavior (i.e., OCD or other anxiety) (American Academy of Child and Adolescent Psychiatry, 2012). Additional information about functional assessment and developmental considerations are discussed below.

Prior to using any formal measures to assess OCD, pre-screening in the form of open-ended questions may be appropriate. Such questions might include asking about rituals or repetitive behaviors and intrusive worries. AACAP practice parameters (2012) suggest initially probing for OCD based on DSM-5 diagnostic criteria (e.g., Do you have worries that just will not go away? Do you have intrusive or unwanted thoughts, ideas, images, or urges that make you anxious and you cannot suppress?). If symptoms of OCD are endorsed in response to these questions, parent- and self-report measures are often recommended as an efficient and low-cost method of further OCD screening. Self-report measures might be helpful to gather information from parents and children who may otherwise be reticent to initially divulge symptom information directly to a provider. The measures described below are useful to gain a preliminary sense of elevated anxiety and OCD symptoms and to decide whether further assessment is warranted. These may be particularly helpful in settings such as pediatrician's offices or community mental health clinics, where children are likely to initially present with complaints about OCD symptoms.

Despite these advantages, it is important to note that self-report measures are most useful as a preliminary screen and/or to gain an initial understanding of a child's symptoms. Many of the measures described include subscales, which when scored, include clinical cut-offs. These are

useful as a guide, but should not be used alone to make a diagnosis. It is also important to interpret scores with some caution, as responses to certain questions might be unclear without further functional assessment of symptoms. In addition, many of these screening measures include both child- and parent- report versions. Discrepant reports from children and parents are common (e.g., Choudhury, Pimentel, & Kendall, 2003), but might provide important and relevant information about behaviors across settings and from varying perspectives (Villabo, Gere, Torgersen, March, & Kendall, 2012). Specific measures recommended for OCD screening, as well as the empirical findings on each measure, are described below, with psychometric properties shown in [Table 6.1](#).

Table 6.1 Pediatric OCD Measures

<i>Measure</i>	<i>Citation</i>	<i>Reporter</i>	<i>Time to administer</i>	<i>Recommended assessment age of patient</i>	<i>Purpose</i>	<i>Psychometric</i>
<i>Screening for OCD</i>						
Child Behavior Checklist (CBCL)	Achenbach (1991)	Parent	20 min	Tested in ages 1.5–5; 6–18	Screening for OCD and other behavioral and emotional problems	Good reliability and validity. Very high sensitivity and specificity. Tested in children with OCD compared to psychiatric and normal controls.

Screen for Child Anxiety Related Disorders (SCARED)	Birmaher et al. (1997)	Child and parent	15 min	Tested in ages 9–18	Screening for anxiety disorders	Good internal consistency, test-retest reliability, discriminative validity, and parent–child agreement. Tested in children referred to an anxiety/mood clinic.
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<p>Children's Florida Obsessive- Compulsive Inventory (C-FOCI)</p>	<p>Storch et al. (2009)</p>	<p>Child</p>	<p>5–10 min</p>	<p>Tested in ages 7–20</p>	<p>Symptom severity</p>	<p>Internal consistency is acceptable, construct validity and discriminant validity is supported. Demonstrated convergent and divergent validity through correlations with other OCD impairment measures but with general anxiety or depression measures. Evidence of treatment sensitivity. Tested in both clinical and community settings.</p>
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Leyton Obsessional Inventory Child Version Survey Form (LOI-CV Survey Form)	Berg, Whitaker, Davies, & Flament (1988)	Child	10 min	Tested in ages 6–18	Assesses symptoms	Demonstrated good internal consistency. Good to poor test–retest reliability bas on age. Adequate concurrent validity. Not sensitive to treatment effects. Demonstrated high false- positive rates other research Tested in a community sample of hig school studen Storch et al.'s (2011) resear found it inadequate fo the screening and assessme of pediatric OCD.
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Short Leyton Obsessional Inventory Survey Form (Short LOI-CV Survey Form)	Bamber, Tamplin, Park, Kyte, & Goodyer (2002)	Child	5 min	Tested in ages 12–16	Assesses symptoms	Adequate internal consistency, sensitivity, and specificity. Storch et al.'s (2011) research found it inadequate for the screening and assessment of pediatric OCD.
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Structured Interviews: Diagnosing OCD

Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS)	Kaufman et al. (1997)	Clinician	75–90 min per reporter	Tested in ages 7–17	Diagnostic interview	Concurrent validity, interrater reliability, and test–retest reliability are supported. Highly correlated with other pediatric diagnostic interviews and psychopathology measures. Tested in psychiatric outpatients and normal controls.
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Anxiety Disorders Interview Schedule (ADIS)	American Psychiatric Association 2013	Clinician	45–60 min per reporter	Tested in ages 7–17	Diagnostic interview	Excellent interrater agreement and test–retest reliability. In clinical samples there was low agreement between parent-report and clinician-report which may demonstrate that parent-reports are considered more by clinicians.
Mini International Neuropsychiatric Interview Child/Adol Version (MINI)	Sheehan et al. (2006)	Clinician	30 min	Tested in ages 6–17. Parent presence recommended for younger children.	Diagnostic interview	Demonstrates adequate reliability and validity. Good interrater and test–retest reliability. Concordance with the KSA has been established. Tested in outpatients and normal controls.

National Institute of Mental Health Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV)	Shaffer et al. (2000)	Clinician	70 min per reporter	Tested in ages 9–17	Diagnostic interview	No formal validity testing of this measure has occurred. Previous versions have shown moderate to good diagnostic reliability. Tested in a clinical sample. Previous versions have been tested in community sample.
<i>Assessing OCD Severity</i>						

<p>Children’s Yale–Brown Obsessive Compulsive Scale (CY-BOCS)</p>	<p>Scahill et al. (1997)</p>	<p>Clinician</p>	<p>15–45 min</p>	<p>Tested in ages 8–17</p>	<p>Current OCD symptoms and severity</p>	<p>Internal consistency is high, good interrater reliability, mixed discriminant validity, divergent validity, and convergent validity. Demonstrates sensitivity to treatment effects. Considered the “gold standard” clinician-administered measure for assessing the severity of pediatric OCD. Tested in children with OCD diagnosis.</p>
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<p>Children's Yale–Brown Obsessive- Compulsive Scale-Child Report and Parent Report (CY-BOCS-CR; CY-BOCS-PR)</p>	<p>Storch et al. (2006)</p>	<p>Child, Parent</p>	<p>15 min</p>	<p>Tested in ages 8–17</p>	<p>Current OCD symptoms and severity</p>	<p>Satisfactory reliability, convergent and divergent validity. Demonstrated concurrent validity with CY-BOCS. CY- BOCS-PR has slightly higher rates of correspondence with the CY- BOCS which may account for the clinical tendency to weigh more on the parent-report than the child report. Further psychometric analysis is needed. Tests in children with an OCD diagnosis and their parents.</p>
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The Dimensional Yale–Brown Obsessive-Compulsive Scale (DY-BOCS)	Rosário-Campos et al. (2006)	Clinician		Tested in ages 6–69	Functional relationship between obsessions and compulsions	Excellent interrater reliability and internal consistency. Demonstrated convergent and divergent validity. Limited research on its use in children and adolescents.
Clinical Global Impressions – Improvement and Severity (CGI-I, CGI-S)	Guy (1976)	Clinician	1 min	All	Global severity and clinical improvement	Has been used successfully in patients with OCD and used extensively in treatment outcome studies.
Children’s Global Assessment Scale (CGAS)	Schaffer et al. (1983)	Clinician	1 min	Tested in ages 4–16	Overall impairment	Established interrater reliability, test-retest reliability, sensitivity to change, and concurrent validity.
Global Assessment of Functioning (GAF)	APA (2000)	Clinician	1 min	All	Global impairment	Used in previous versions of the DSM corresponding diagnoses.

National Institute of Mental Health-Global Obsessive-Compulsive Scale (NIMH-GOCS)	Insel et al. (1983); Murphy et al. (1982)	Clinician	1 min	All	Overall severity	Good interrater reliability.
Clinical Intake Interview	N/A	Clinician	Variable	Any age; often a different version for children 6 and under	Unstructured interview	No psychometric Used to conceptualize case and assign initial diagnosis
Child Obsessive Compulsive Impact Scale-Revised (COIS-R)	Piacentini et al. (2007)	Parent, Child	10 min	Tested in ages 5–17	Psychosocial functioning	Good internal consistency, concurrent validity, and test–retest reliability. Sensitivity to treatment effects not yet established with this revised version. Tests in children with an OCD diagnosis.

Obsessive-Compulsive Inventory Child Version (OCI-CV)	Foa et al. (2010)	Parent, Child	15 min	Tested in ages 7–17	Assesses OCD symptoms and severity	Strong retest reliability, initial support for divergent validity and sensitivity to change. Tested in children with a primary OCD diagnosis.
Children's Obsessional Compulsive Inventory-Revised (ChOCI-R)	Uher et al. (2008)	Parent, Child	15 min	Tested in ages 9–18	Assesses symptoms	Good internal consistency, established convergent, divergent, and discriminant validity. No information on sensitivity to change and predictive validity. Tested in a clinical sample.

Family Accommodation Scale (FAS)	Calvocoressi et al. (1995, 1999)	Clinician	20 min	Tested in ages 7 to adult	Degree of family accommodation	Excellent interrater reliability, good internal consistency, convergent, and discriminant validity. Test in relatives of OCD patients. Further research of its use with families and children with OCD is needed.
Family Accommodation Scale (FAS)	Flessner et al. (2011)	Parent	10 min	Tested in ages 7–17	Degree of family accommodation	Examined psychometric of original clinician-administered version (Calvocoressi et al., 1995, 1999) with parent-report. Good convergent and discriminant validity and good internal consistency.

OCD Family Functioning Scale (OFF)	Stewart et al. (2011)	Child		Tested in ages 7–75	Family functioning	Demonstrated excellent internal consistency, adequate test-retest reliability and excellent convergent validity with Family Accommodat Scale and the Work and So Adjustment Scale. Tested OCD diagnosis children and adults.
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OCD-Specific Screening Measures

Children’s Florida Obsessive-Compulsive Inventory (C-FOCI).

The C-FOCI (Storch et al., 2009) is a brief child self-report screening measure for OCD with good psychometric properties. The measure includes two parts, a symptom checklist and a severity scale. The symptom checklist includes questions about 17 obsessions and compulsions across three categories: unpleasant thoughts and images; worries about terrible things happening; and the need to perform certain acts over and over again. The severity scale portion of the measure, which is similar to the structure of the Children’s Yale–Brown Obsessive Compulsive Scale (CY-BOCS) severity subscale, asks about the items endorsed in the symptom checklist. Questions include the amount of time occupied by the thoughts and behaviors endorsed, how much the thoughts and behaviors bother the child, amount of control over the thoughts and

behaviors, level of avoidance and interference. Though this measure has demonstrated good psychometric properties and is brief and easy to administer, additional research is needed on its validity as a screener for OCD.

Leyton Obsessional Inventory – Survey Form (LOI-CV, survey form) and Survey Form, Short Version (LOI-CV, Survey Form, Short Version).

Based on the LOI-CV card-sorting task (Berg, Rapoport, & Flament, 1986), the LOI-CV survey form (Bamber, Tamplin, Park, Kyte, & Goodyer, 2002; Berg, Whitaker, Davies, Flamentm & Rapoport, (1988) includes 20 OCD symptom items, which are rated as present or absent. A short version of the LOI-CV survey form includes 11 items. Both versions of the scale also assess interference of endorsed symptoms. Though initially validated in a large epidemiological study (Berg et al., 1988; Flament et al., 1988), further examination by Storch and colleagues (2011) suggest that the LOI-CV survey form and the LOI-CV short form do not have adequate psychometric properties to be used as a screening instrument or a symptom severity assessment measure in youth with OCD. Based on these findings, this measure should be used with significant caution.

Other Measures

As outlined by the AACAP practice parameters (2012), other non-OCD specific measures may also be useful to assess symptoms of OCD and other anxiety. Examples of such measures include the Child Behavioral Checklist (CBCL) (Achenbach 1991), n 118-item parent-report measure of behavioral and emotional problems in children, and the Screen for Anxiety Related Disorders – Revised (SCARED-R) (Muris et al. 1999), a 66-item child- and parent-report questionnaire that assesses for symptoms of several anxiety disorders.

Diagnosing OCD

If concerns about OCD persist after initial screening, further information should be gathered through a clinical interview in order to determine whether a diagnosis of OCD is warranted. The most comprehensive type of clinical interview is a structured interview. In contrast with screening measures, structured interviews are much more detailed and include diagnostic categories other than OCD and anxiety disorders. Structured interviews are designed as a valid and reliable method for assessing psychiatric disorders and assigning appropriate diagnoses. They allow for

consistent administration across youth and systematic gathering of parent, child and combined reports of symptoms. Furthermore, clinician judgment in structured interviews minimizes errors when compared to self- or parent-report measures. In addition, structured interviews assess for comorbid disorders, which might be relevant in making differential diagnoses and recommendations for treatment.

In spite of the strengths of structured interviews, there are also several disadvantages (Lewin & Piacentini, 2010). First, structured interviews are costly to administer, both in terms of materials and clinician time. The briefest interviews take a minimum of 30 minutes, but most interviews approach closer to 90 minutes in administration time. In addition, administration of structured interviews requires a trained clinician or administrator, which is not always feasible in community settings. Structured interviews are most frequently used in research studies during which incorporating sufficient time and training is more feasible.

Though individual attributes of common structured interviews are discussed below, there are some components that are consistent across interviews. First, the child and parent are each interviewed, often separately. Second, most of these interviews are specific to DSM-IV diagnoses, with a DSM-5 version in development. Third, though assessment may focus on OCD if that is the reason for the referral, anxiety disorders and other childhood psychiatric disorders will also be assessed. Though input from multiple parties is important (i.e., parent, child), clinical judgment is ultimately used to make final decisions regarding diagnoses. A summary of diagnostic interviews and their psychometric properties is included in [Table 6.1](#).

Structured Interviews

Anxiety Disorders Interview Scheduled for DSM-IV – Child and Parent Version (ADIS-C/P).

The ADIS is a clinician-administered structured interview (Silverman & Albano, 1996), which was developed based on DSM-IV diagnostic criteria. It takes approximately 45–60 minutes to administer. The ADIS primarily focuses on diagnosing anxiety disorders, though it also includes screening questions for other disorders (e.g., mood disorders, disruptive behavior disorders). Individual disorders are assessed by preliminary screening questions, which, if endorsed, are followed up by more detailed questions. Typically, parents and children are interviewed separately and the clinician combines information obtained from both interviews to make a diagnosis. Diagnoses are determined by symptom endorsement and a clinician severity rating

(CSR) higher than 4 (range: 0–8). Overall, the ADIS has excellent psychometric properties (Silverman, Saavedra, & Pina, 2001; Wood, Piacentini, Bergman, McCracken, & Barrios, 2002). Given its focus on anxiety disorders and OCD, the ADIS is often considered the strongest measure for clinical assessment and treatment outcome research among youth with OCD (Lewin & Piacentini, 2010). However, its lengthy administration makes it less feasible for some settings.

Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS-PL).

The K-SADS-PL (Kaufman, Birmaher, Brent, & Rao, 1997) is a semi-structured diagnostic interview with excellent psychometric properties that assesses for current and lifetime symptoms of a wide range of childhood disorders. As with the ADIS, the K-SADS-PL is typically administered to the child and parent separately. Clinician judgment is used to make final diagnoses and impairment ratings. The interview begins with a 10–15 minute unstructured introductory interview, during which the clinician collects clinical and demographic information and builds rapport with the child. Similar to the ADIS, the K-SADS-PL includes screener questions, which allow the clinician to skip the supplemental questions if the screener questions are not endorsed. Unlike the ADIS, the structure of the K-SADS-PL is such that all screener questions are administered first, followed by the appropriate diagnostic supplements. These diagnostic supplements include Affective Disorders, Psychotic Disorders, Anxiety Disorders, Behavioral Disorders, and Substance Abuse, Eating, and Tic Disorders. Diagnoses are then scored as “definite,” “probable” or “not present.” Given the nature of this comprehensive diagnostic interview, the K-SADS-PL is lengthy to administer and requires substantial clinician training. Typically, administration takes up to 90 minutes with each reporter (i.e., parent, child), making it less feasible for use in many clinical settings.

Mini International Neuropsychiatric Interview (MINI-KID).

The MINI-KID (Sheehan et al., 2010) is a brief structured diagnostic interview that assesses for psychiatric disorders in children and adolescents aged 6–17 years. It is designed to assess current symptoms of psychopathology for 24 disorders including OCD, social anxiety, GAD, depression, tics, and other possible psychiatric disorders. Unlike the ADIS and K-SADS-PL, the MINI-KID can be administered to the child and parent together, rather than separately. The interview is organized such that the clinician only proceeds with asking additional symptom questions for the disorder if screening questions are endorsed. Because the child and parent are both present during

the interview, discrepancies are addressed as they arise, with clinical judgment being used for final decisions. Unlike the longer ADIS and K-SADS-PL, the MINI-KID only takes approximately 30 minutes to administer, which makes it a more feasible alternative to longer structured interviews. The MINI-KID has demonstrated adequate reliability and validity and is highly concordant with diagnoses found on the K-SADS-PL. Perhaps as a result of its brevity, the MINI-KID does provide less disorder subtyping and tends to identify more cases of disorders (possible “false-positives”) than the K-SADS-PL. However, Sheehan and colleagues (2010) suggest that rather than the MINI-KID overestimating some disorders, it is also possible that the K-SADS-PL underestimates some conditions due to fatigue effects (i.e. interviewees know that endorsing additional symptoms will generate additional questions and lengthen the interview further).

NIMH Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV).

The NIMH-DISC-IV (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) is a highly structured clinical interview that assesses over 30 DSM-IV and ICD-10 psychiatric disorders in children and adolescents. Categories of diagnoses assessed include anxiety disorders (including OCD), mood disorders, schizophrenia, disruptive behavior disorders, substance use disorders, and miscellaneous disorders (e.g., eating disorders, tic disorders). Unlike the structured interviews described above, the NIMH-DISC-IV was designed to be administered by nonclinicians. Initially designed for large-scale epidemiological studies, it has also been used as a screening tool and in clinical studies. To minimize training, questions are relatively short and simple and designed to be read verbatim by the interviewer. “Stem” questions, which ask about symptoms in broad terms, are asked of every respondent. Any symptoms that are endorsed are followed up by contingent questions that probe around frequency, duration and intensity. If a clinically significant number of diagnostic criteria are endorsed, questions about age of onset, impairment and treatment history are also asked. Overall, the NIMH-DISC-IV is an inexpensive and convenient structured interview that requires minimal training and can be administered by “lay interviewers.” However, because it was developed for large epidemiological studies, it may not be as useful for making difficult differential diagnoses and does not have a specific emphasis on OCD or anxiety disorders. Administration time is approximately 70 minutes per reporter (e.g., parent, child), which is about equivalent to other structured interviews, such as the ADIS-C/P.

Unstructured Clinical Interview

An alternative to a structured diagnostic interview is an unstructured clinical interview. Unstructured, open-ended intake interviews are more commonly used in clinical settings than in research. They are briefer and less expensive than structured interviews and require less training and many of the same benefits. Unstructured interviews aim to conceptualize the case and take into consideration treatment history, family factors and the patient's symptoms (Lewin & Piacentini, 2010). Typically, an unstructured interview involves gathering information about the presenting problem and the role it has played in the patient's family history, developmental history, educational history, and other developmentally appropriate categories (e.g., substance use, employment history) (Jones, 2010). Ideally, questions about these areas should lead to "diagnostic clues," which a clinician should use to assign a diagnosis (Jones, 2010). In addition, questions about impairment are typically asked both to develop treatment goals and to help with patient motivation to engage in treatment. Strengths include faster administration and less clinician training, but minimizing time and training also leads to some disadvantages when using unstructured interviews. Because questions are not standardized, the clinician is entirely responsible for formulating relevant questions for each client and assigning an appropriate diagnosis based on this information. This may increase the likelihood of a diagnosis being missed or not being assessed, leading to overall lower diagnostic accuracy. Despite some of the drawbacks, unstructured interviews are the most frequently used diagnostic tool in clinical settings, but should ideally be augmented by additional measures and reports.

Assessing OCD Severity and Impairment

Once OCD has been identified as the working diagnosis, a number of additional measures are available to assess severity and impairment due to OCD symptoms (see [Table 6.1](#) for psychometric properties). Though a formal assessment typically occurs during the first session, assessment of symptoms is an ongoing process throughout treatment.

Clinician-administered

Children's Yale–Brown Obsessive Compulsive Scale (CY-BOCS).

The CY-BOCS (Scahill, Riddle, McSwiggin-Hardin, & Ort, 1997) is the child version of the adult Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) and is considered the “gold standard” measure of OCD. Though its administration typically takes between 30 and 60 minutes, the CY-BOCS is highly recommended for use in clinical settings to diagnose and assess OCD.

The CY-BOCS includes a semi-structured list of common OCD symptoms called the CY-BOCS Symptom Checklist (CY-BOCS-SC). The first section includes a checklist of possible obsessive symptoms divided into categories, such as contamination and aggressive obsessions. Clinicians administering this measure should ask whether items on the checklist bother the child. Ideally, clinicians should also question how these obsessions map on to the second section of the measure, which is a checklist of common compulsive symptoms. As described in more detail in the “Functional Assessment” section below, both the obsessions and compulsions checklists are organized in topographical categories, but should be considered functionally as well. Gallant et al. (2008) demonstrated initial psychometric support for the CY-BOCS-SC, but research on the reliability and validity of the symptom checklist is otherwise limited.

Following the checklist portion of the measure, the third and fourth sections ask about the frequency, interference, distress, ability to resist and perceived control of obsessive and compulsive symptoms. Each of these categories is rated on a five-point Likert-type scale ranging from 0 (none) to 4 (extreme), except for the perceived control category, which is rated from 0 (complete control) to 4 (no control). Summed scores range from 0 to 20 on each subscale (obsessions severity and compulsions severity) and 0 (subclinical) to 40 (extreme) on the total scale. The CY-BOCS can be administered jointly with the child and parent or separately, depending on the clinician's judgment of developmental appropriateness. Psychometrics properties of the CY-BOCS obsessions and compulsions subscales and total score are excellent in school-age children and adolescents (Scahill et al., 1997; Storch et al., 2004). Preliminary findings on the reliability and validity of the CY-BOCS among younger children (ages 5–8) demonstrate adequate psychometric properties, except for the Obsessions subscale, which should be interpreted with caution (Freeman, Flessner, & Garcia, 2011).

In terms of its clinical utility, change in CY-BOCS score is among the most frequently used measures of symptom improvement and outcome in clinical trials. Ideally, many measures should

be used together to measure symptom change and severity, but a 25–50% CY-BOCS reduction, often used to denote “treatment responder” status in research studies, might also be a useful clinical cut-off for judging improvement (Lewin & Piacentini, 2010).

Clinical Global Impressions (CGI) Scale: Improvement and Severity (CGI-I and CGI-S).

The CGI (Guy, 1976) is a brief, stand-alone assessment of overall clinical improvement and severity based on symptoms observed and impairment reported. Both the CGI-I and CGI-S include a seven-point clinician-rated scale, with the severity scale regarding level of mental illness and the improvement scale regarding change in symptoms during treatment. Though the CGI-I and CGI-S are not specific to OCD, they have been used successfully in patients with OCD (Garvey et al., 1999; Perlmutter et al., 1999) and are consistent with CY-BOCS severity scores (Lewin et al., 2014).

Children’s Global Assessment Scale (CGAS).

The CGAS (Shaffer et al., 1983) is a child-focused measure of global impairment and functioning based on the adult “Global Assessment Scale (GAS) (Endicott, Spitzer, Fleiss, & Cohen, 1976). Scores range from 1 (lowest functioning) to 100 (highest) and are assigned by a clinician. A hybrid of the CGAS and GAS, the Global Assessment of Functioning (GAF) (American Psychological Association, 2000), scale is a 100-point measure of functioning for all ages that was formerly tied to DSM diagnoses (Schorre & Vandvik, 2004), but is not included in DSM-5.

NIMH Global Obsessive-Compulsive Scale (NIMH Global OCS).

The NIMH Global OCS (Insel et al., 1983) is a clinician-rated index of illness severity and functional impairment. Each scale is a single-item composite rating of illness severity ranging from 1 (normal) to 15 (very severe). A rating of 7 is the clinical severity threshold for the diagnosis of OCD. The measure has good interrater reliability and psychometric properties and is useful as a brief measure of OCD symptom severity and change.

Child/Parent Report

Child- and parent-report measures recommended for screening are reviewed above. The following measures are useful throughout treatment for OCD rather than during initial screening. At the beginning of treatment, some families are more comfortable completing self-report measures than

divulging information to a clinician in a clinician-administered interview, which helps to combat under- (or over-) reporting that sometimes occurs (Merlo, Storch, Murphy, Goodman, & Geffken, 2005). Child and parent-report measures are also useful because they can easily be re-administered throughout treatment to see if there is a change in symptoms and impairment. However, findings from self-report measures must be interpreted with some caution. First, individual response style may affect assessment of symptoms on self-report measures (Merlo et al., 2005). In addition, self-report questionnaires may be confusing or difficult to understand. Respondents may not pay close attention or may underestimate impairment if questions are not phrased in a clearly applicable manner (Merlo et al., 2005).

Child Obsessive-Compulsive Impact Scale – Revised (COIS-R).

The COIS-R (Piacentini, Peris, Bergman, Chang, & Jaffer, 2007), based on the original COIS (Piacentini et al., 2003), measures OCD-specific functional impairment across several domains. Parallel child- and parent-report versions assess academic, social, and family impairment. Questions address specific activities with which OCD may interfere (e.g., “Taking tests or exams,” “Getting ready for bed at night”). Responses are rated on a four-point Likert scale, with 0 indicating “not at all” and 3 indicating “very much.” Factor analysis of the parent-report version resulted in a four-factor solution including OCD-related impairment in daily living skills, school, social, and family/activities (Piacentini et al., 2007). Findings on the youth report produced a three-factor solution, including school, social, and activities (Piacentini et al., 2007). Both the parent- and child-report versions demonstrated good psychometric properties. The COIS is a useful measure for establishing target areas for functional improvement and assessing changes in impairment throughout the course of treatment.

Obsessive Compulsive Inventory – Child Report (OCI-CV).

The OCI-CV (Foa et al., 2010) is a 21-item self-report measure that assesses child OCD symptom presence and dimensionality. Based on the OCI-Revised (OCI-R) (Foa et al., 2002) adult OCD measure, the OCI-CV has six factorially derived subscales, including doubting/checking, obsessions, hoarding, washing, ordering and neutralizing (Foa et al., 2010). Scores from each of these subscales are totaled to yield a total score. Individual items are rated on a three-point response scale (0 = never to 2 = always). Though the OCI-R includes frequency and distress ratings for each question, the OCI-CV only includes frequency ratings. Both Foa and colleagues (2010) and Jones and colleagues (2013) demonstrated adequate psychometric properties for the

use of the OCI-CV to measure OCD symptom severity in children. Foa et al. (2010) also found that the OCI-CV demonstrates similar sensitivity to change as the CY-BOCS, meaning that re-administration of the OCI-CV later in treatment would be a useful method of measuring improvement. Despite its utility in this regard, the OCI should ideally be used in conjunction with other measures of OCD severity and treatment outcome from multiple reporters.

Children's Yale–Brown Obsessive Compulsive Scale – Child-Report and Parent-Report (CY-BOCS-CR and -PR).

Though the CY-BOCS was originally developed as a clinician-administered measure (described above), child self-report and parent-report versions have also been developed with slight changes to wording specific to the reporter (Storch et al., 2006). Psychometric properties for the CYBOCS-CR and CYBOCS-PR are adequate (Storch et al, 2006). These self- and parent-report versions are most useful when brevity, minimizing clinician time, and assessing current severity are priorities. However, clinician administration is preferred in order to use the CY-BOCS for functional assessment and as a tool for treatment planning.

Children's Obsessional Compulsive Inventory-Revised (ChOCI-R).

The ChOCI-R (Uher, Heyman, Turner, & Shafran, 2008), revised from the original CHOCI (Shafran et al., 2003), measures OCD symptom severity and content in youth. Parallel child- and parent-report versions allow for a more complete assessment of the youth's symptoms. The ChOCI is structured similarly to the CY-BOCS, with an initial list of 10 common compulsions, followed by a list of 10 common obsessions. Responses to these items are on a three-point scale ranging from 0 (not at all) to 2 (a lot). Each subscale (compulsions and obsessions) yields a score ranging from 0 to 20. Total scores are calculated by adding the compulsions and obsessions scores together (range 0–40). Also similar to the CY-BOCS, the symptom lists are followed by severity questions for compulsions and obsessions, which are each rated on a five-point scale. Severity items include time spent with the symptoms, interference with functioning, distress, resistance, control and avoidance. Severity scores are calculated by summing the item responses for obsessions (range 0–24), compulsions (range 0–24), and total (range 0–48). A confirmatory factor analysis resulted in poor factor loadings for the resistance items for both obsessions and compulsions. As a result, Uher et al. (2008) provide equivalent summed scores for the measure with and without resistance items, allowing researchers and clinicians to choose the 10- or -12-item version of the ChOCI.

The ChOCI-R was developed as a brief, self-report alternative to the CY-BOCS and is suggested for use as a routine measurement of OCD severity in clinical practice. In mild to moderate cases, Uher et al. (2008) found that the CHOCI might be better than the CY-BOCS at differentiating between mild symptoms and normative behaviors. However, the CY-BOCS is better at discriminating among severe cases. Given its brevity and good psychometric properties, the CHOCI is a time efficient alternative to clinician-administered interviews for mild to moderate cases. However, additional research on sensitivity to change on this measure is needed.

Dimensional Yale–Brown Obsessive-Compulsive Scale (DY-BOCS).

The DY-BOCS (Rosário-Campos et al., 2006) is a dimensional measure of OCD. Given that OCD is such a heterogeneous disorder, attempts have been made to better understand symptom patterns that may apply across individuals. For example, several factor analytic studies have suggested common dimensions such as symmetry/ordering and contaminating/cleaning (e.g., Mataix-Cols, Rosário-Campos, & Leckman, 2005). A dimensional measure allows clinicians to ask more specific questions about these common symptom dimensions and to better understand the functional relationship between obsessions and compulsions (discussed in more detail in the “Functional Assessment” section below). Rosário-Campos and colleagues (2006) developed and examined the psychometric properties of the DY-BOCS in a combined child and adult sample, which yielded good psychometric properties. However, data on the psychometric properties of this scale have not been examined in a youth-only sample. Further research is needed to determine whether this is a useful measure for assessing symptom dimensions in children with OCD.

Assessing Family Accommodation and Family Functioning

Another important area to consider when assessing and treating OCD among youth is the role of the family. This may include family member involvement in rituals or overall impairment in family functioning. Providing reassurance and physically assisting in rituals, such as washing, are common types of parental involvement in OCD-related behaviors (e.g., Rettew, Swedo, Leonard, Lenane, & Rapoport, 1992). In addition, children’s OCD symptoms may serve as significant stressors for parents, resulting in increased parental accommodation and negative affect (Futh, Simonds, & Micali, 2012). Further, parent accommodation has been found to mediate the relationship between OCD symptom severity and functional impairment, suggesting that it may

be a critical target for treatment (Caporino et al., 2012). Overall, it is important to assess both the stressors caused by a child's OCD symptoms, as well as the role the parent may be playing in reinforcing symptoms.

Family accommodation refers to the extent to which family members (i.e., parents and siblings) alleviate a youth's symptoms by changing schedules, routines or partaking in rituals (Storch et al., 2007). Theoretically, family accommodation negatively reinforces a youth's symptoms by temporarily reducing OCD-related anxiety. Treatment studies have shown that, likely as a result of this negative reinforcement cycle, family accommodation has an adverse impact on treatment outcome (e.g., Garcia et al., 2010; Merlo et al., 2009).

Assessment Tools

Family Accommodation Scale (FAS).

The FAS (Calvocoressi, Lewis, Harris, & Trufan, 1995; Calvocoressi et al., 1999) is a 13-item clinician-administered measure of family accommodation (Calvocoressi et al., 1995; Calvocoressi et al., 1999). Although the FAS was originally designed and tested as a clinician-administered measure, most studies have used the FAS as a family or parent-report measure. The FAS has been widely used for adults and youth with OCD and has excellent psychometric properties (e.g., Flessner et al., 2011; Merlo, Lehmkuhl, Geffken, & Storch, 2009; Peris et al., 2008; Storch et al., 2007), as shown in [Table 6.1](#). The FAS consists of nine questions that assess the degree to which family members have accommodated the child's OCD symptoms in the last month and four items that assess the level of impairment or distress experienced by the family as a result of the need to accommodate. Items are rated on a five-point Likert-type scale ranging from 0 (none/never) to 4 (every day) and are summed to yield a total score. Example questions include, "Has ritual time increased when you have not participated?" and "How often did you modify the family's routine due to the patient's symptoms?" The majority of families of youth with OCD report some degree of accommodation to the youth's symptoms (Storch et al., 2007). Family accommodation is related to higher OCD symptom severity and functional impairment (Caporino et al., 2012; Lebowitz, Vitulano, & Omer, 2011; Storch et al., 2007), and reductions in accommodation are associated with better OCD treatment response among children (Merlo et al., 2009; Piacentini et al., 2011).

A recent investigation of the FAS factor structure further supports its validity as a parent-report measure (FAS-PR) (Flessner et al., 2011). The FAS-PR consists of two factor-analytically derived subscales, including parental involvement in the child's compulsions and family avoidance of OCD-related triggers (Flessner et al., 2011). Though studies have yet to directly compare clinician-administered and family-report versions of the FAS, using the clinician-administered version may be better suited for probing about behaviors that the family may recognize as accommodation. The parent-report measure is likely better suited to settings where brevity and minimizing clinician time is a priority. As demonstrated by findings in clinical trials (e.g. Garcia et al., 2010; Merlo et al., 2009) assessing and reducing family accommodation is crucial for improving treatment outcome among youth with OCD.

OCD Family Functioning Scale (OFF Scale).

The OFF Scale (Stewart et al., 2011) is a 42-item self-report measure of OCD-related functional impairment. The measure contains 3 subscales including a family functioning impairment subscale, a symptom-specific impairment subscale, and a family role-specific impairment subscale. The family functioning impairment subscale asks about frequency of OCD-related impairment with response options including 0 (never), 1 (monthly), 2 (weekly), and 3 (daily). Scores for this subscale are calculated by summing the scores of all items (range 0–63). The other subscales contain the same response options, but are scored as dichotomous variables, with a response of 0 (never) being considered a negative response and a score of 1 (monthly), 2 (weekly), or 3 (daily) being considered a positive response. Both the self-report and family-member-report (in the case of children, typically a parent) versions of the measure contain questions about family functioning impairment at the time of scale completion and during the “worst ever” OCD severity.

Findings from the development of this measure suggest that individuals with OCD and their relatives differentially rate the impact of OCD in various areas of family functioning (Stewart et al., 2011). Such discrepancies highlight the need to carefully assess areas of impairment from multiple perspectives and plan treatment goals accordingly. Though this is a promising measure of OCD-related impairment in family functioning, additional research needs to be conducted to replicate findings, examine sensitivity to change and to further examine the use of this scale among children.

Functional Assessment

The most critical factor to assess when planning for treatment of pediatric OCD is the functional relationship between obsessions and compulsions. All of the OCD measures discussed in this chapter can be used as part of a functional assessment to acquire an understanding of the patient's symptoms. These measures identify symptoms while the clinician works to interpret and investigate meaningful connections between them. A functional assessment of symptoms will further guide treatment since ERP, the empirically supported treatment for OCD, is dependent on the relation between obsessions and compulsions (Freeman et al., 2014).

To complete a thorough functional assessment, the patient's core obsessional fears must first be investigated. Research suggests two core dimensions linked to OCD obsessions: harm avoidance and incompleteness (Ecker & Gönner, 2008; Pietrefesa & Coles, 2009; Summerfeldt, 2004). Harm avoidance includes symptoms of exaggerated evasion of potential harm to one's self or others. The patient's obsessional content can be the fear of consequences, sensitivity to threats, and a sense of responsibility over preventing a possible catastrophic incidence. Generally, children with harm avoidance will report that "something bad might happen" if they do not complete their compulsions. Within harm avoidance, there are common subtypes of feared outcomes including scrupulosity, aggression and contamination concerns. Given the highly idiosyncratic nature of these fears, individualized functional assessment is particularly important. Unlike harm avoidance, incompleteness is not connected to fears of potential consequences. Children often cannot verbalize these specific obsessions other than feeling uncomfortable, distressed, or "not just right." The child will engage in their compulsions until the feeling of "completeness" or "perfection" is achieved. By categorizing the child's symptoms into these two core dimensions, the clinician will have a better understanding of the function that these behaviors serve. Children may present with both types of these core obsessions or just one.

To gain an effective understanding of symptoms, clinicians must establish a distinction between symptom topography and symptom function (Conelea, Freeman, & Garcia, 2012). Topography refers to what the behavior looks like during observation or while experiencing it (e.g., hand washing, repeating, ordering). Symptom topography plays a role in setting the scene with specific stimuli for exposure tasks. Function describes what drives the behavior within its context, including the antecedents and consequences of that behavior (e.g., just right, harm avoidance, attention). Symptom topography and symptom function should remain two separate entities, as

they are often mistakenly fused during the assessment process. The following is an example of how the distinction between topography and function can be applied: a child is observed hand washing and seeking reassurance from his caregiver after throwing out the trash. The clinician completes a functional assessment and concludes that these compulsions (e.g., hand washing, reassurance-seeking) are related to the same core fear of harm avoidance related to illness; specifically, these behaviors are thought to prevent the child from contracting an illness. Even though the compulsions of hand washing and reassurance-seeking differ topographically, they both serve the same function of harm avoidance. Additionally, it is important to be cognizant that compulsions that are topographically the same across patients (i.e., the same behavior) do not necessarily serve the same function. For instance, ritualistic hand washing may occur for either harm avoidance or incompleteness purposes.

Conelea and colleagues (2012) propose a building block approach to administering the CY-BOCS checklist to better understand function. They advise to first collect information about the topography of symptoms. Once that is obtained, the next step is to connect specific obsessions to their corresponding compulsions. This is completed through understanding symptom topography versus symptom function and through asking functional assessment questions. Such questions may include: “If you didn’t [do compulsion], what do you worry could happen? Do you feel like you will just keep feeling uncomfortable, like something is ‘not just right’ or ‘incomplete’?” and “When you have [obsession], what makes it better/go away/reduces your anxiety?” (Conelea et al., 2012: 115). These focused questions can help elucidate functional relationship between obsessions and compulsions. The end result is a map of the child’s symptoms starting with core obsession themes (harm avoidance or incompleteness) and the specific obsessions associated with them. These obsessions are then linked to compulsions that are associated with relieving anxiety from that fear. For example, one section of a map may contain the core obsession of harm avoidance, the specific obsession of getting oneself ill, and the associated compulsions of reassurance-seeking, hand washing, and avoidance of the trashcan. Given the idiosyncratic nature of OCD symptoms, investigative questions should not only be used in the assessment but throughout treatment.

A functional assessment is not only essential to the overall assessment of OCD, but can also aid in treatment planning and the use of ERP. Once the relationships between obsessions and compulsions are established, a treatment plan with meaningful exposures can be designed to best meet the child’s individual needs. More specifically, a clinician can tailor an exposure to the individual patient to activate the appropriate fear structure and promote habituation through

response prevention. For instance, exposures around harm avoidance (e.g., contamination) with hand washing will be much different than exposures around “not just right” feelings for hand washing. The assessment process of OCD should be ongoing and the clinician should constantly assess for functional relationships to optimize the patient’s treatment.

Clinical Considerations for Using OCD Measures with Children and Adolescents

Developmental Considerations

Obsessive-compulsive symptom expression can differ across age groups, which may be in part to due to developmental factors, such as cognitive maturation. Thus, developmental differences in symptom expression should be taken into account when using measure to assess pediatric OCD. In children, compulsions without expressed obsessions are common, and the compulsive behaviors themselves may be different than those observed in adolescents or adults (Freeman et al., 2012). For instance, early-onset cases tend to have increased sensory phenomena-related compulsions, such as the need to touch or tap things until they feel “just right” (Rosário-Campos et al., 2001). Young children with OCD, unlike older children or adults, may be unable to distinguish obsessional thoughts from other, nonintrusive recurring cognitions or images. Additionally, they may not understand or be able to identify the connection between obsessional thoughts and subsequent compulsions, or to verbally express this pattern to others. It is also important for assessors to be cognizant about typical developmental rituals when evaluating for pediatric OCD. Younger children will often have routines around bedtime, meals, and dressing that may look similar to compulsions. Generally, typical developmental routines do not result in interference or create significant distress for the child when interrupted (American Academy of Child and Adolescent Psychiatry, 2012). It might be helpful for an assessor to question whether such routines have an impact on family functioning and what happens if a child’s routine is disrupted (e.g., child’s emotional and/or behavioral response including duration and severity). Interviewers may also need to assess and help parents differentiate between rigid temperaments and compulsive behaviors (Freeman et al., 2012).

Based upon their experience assessing young children in the Pediatric Obsessive Compulsive Disorder Treatment Study for Young Children (POTS Jr), Freeman and colleagues (2012) provide assessment modifications to help facilitate obtaining accurate information for assessing younger children with OCD. These modifications may also be useful with other patients, such as those with cognitive delays, autism, or limited insight. When administering the CY-BOCS, youth and

parents may find it easier to report on compulsions first, since these behaviors are typically observable and children tend to be more aware of them. Interviewers can then use information about the reported compulsions to gather more information about obsessions. For example, an assessor may ask the following sequence of questions to better understand a child's obsessions: "You said that you check to see if your brother is okay several times a day, but you are not sure how much you worry about something bad happening to your brother. Do you usually check on your brother when you're worried about him? Are there times you check on him when you aren't worried? Do you ever worry about him and not check?" Caregivers may also provide support during the assessment to help rephrase questions into more understandable language for their own child. Using concrete examples can often be helpful since children may have difficulty understanding questions related to thoughts or concepts about time or estimating time. Freeman and colleagues (2012) recommend integrating psychoeducation into the assessment process to ensure families understand the definitions of obsessions and compulsions and to help differentiate between behaviors that are and are not OCD symptoms. Lastly, it is important to be mindful of children's shorter attention spans and manage time appropriately. If using a structured interview, clinicians may choose a shorter interview, such as the MINI, and prioritize additional measures that assess OCD specifically, such as the CY-BOCS.

Differential Diagnoses

Many other childhood disorders have behaviors that are topographically similar to OCD, which may make differential diagnoses challenging for children with OCD. Additionally, many of these disorders are often comorbid with childhood OCD. In general, one should tailor the use of assessment measures to consider the context in which the symptoms occur, the function of the symptoms, and the history of symptoms. For instance, ritualized eating behaviors, touching or tapping, "just right" symptoms, and reassurance-seeking may topographically look like OCD but may reflect a different condition. Behavioral observations and utilizing other diagnostic tools as described earlier may be especially useful when seeking diagnostic clarity. Lastly, ongoing evaluation of symptoms in the context of therapeutic interactions may be necessary to determine an accurate diagnosis. The discussion below provides an overview of common overlapping symptoms with OCD and more specific considerations for differentiating OCD from other

disorders when administering OCD measures. When deciding a differential diagnosis, it is important for assessors to keep in mind that individuals with OCD often have other psychiatric conditions, so it is possible that these conditions are comorbid with OCD.

Generalized Anxiety Disorder (GAD).

GAD and OCD are highly comorbid and share phenomenological overlap, making it challenging to differentiate between the two disorders in youth (Comer, Kendall, Franklin, Hudson, & Pimentel, 2004; Lewin & Piacentini, 2010). Both obsessions in OCD and worry in GAD encompass repetitive cognitive activity that is perceived as uncontrollable and intrusive. Unfortunately, there is limited research examining the difference between worry and obsessions in youth samples; however, adult literature suggests that OCD obsessions are less likely to have a specific, identifiable trigger, tend to have an imaginal form, and are associated with a greater sense of responsibility or attached significance to the cognition (Comer et al., 2004). The content of GAD worries in children are typically related to everyday experiences (e.g., school, weather, performance, safety, health), whereas OCD obsessions can have more unusual content (e.g., scrupulosity, sexual, aggression) (Lewin & Piacentini, 2010).

Additionally, individuals with GAD may engage in compulsive-like behaviors, such as reassurance-seeking, which may be difficult to differentiate from compulsions in OCD. Comer and colleagues (2004) suggest that considering frequency, rigidity, quality, and function in compulsive behavior may be useful clinical considerations for making a differential diagnosis between OCD and GAD. One might find that OCD compulsions occur at a higher rate and are more rigid than GAD behaviors. For instance, children with GAD may seek reassurance around a variety of possible bad outcomes (e.g., Will I get sick? What if I get dehydrated and have to go to the hospital? What if I get sick and I can't call you because your cell phone battery is dead?) in contrast to repeated reassurance around the same feared outcome (e.g., Will I get sick?). Children with OCD may also require specific answers from another person (e.g., *I promise* you won't get sick) instead of a more general answer (e.g., You won't get sick). The quality of compulsive behavior should also be assessed. Children with GAD may be more likely to provide a feared outcome and make more logical connections between compulsive behaviors and feared outcomes (e.g., checking to ensure they wrote down the assignment correctly in order to not get a bad grade) as opposed to children with OCD who may have looser logical connections (e.g., erasing their name on their homework to prevent something bad from happening to their friend). Lastly, Comer and colleagues suggest considering the function of compulsive behaviors. Youth with

GAD may be more likely to engage in certain behaviors to prevent the occurrence of a bad outcome, whereas youth with OCD may be more likely to engage in compulsive behaviors to relieve their immediate distress related to the thoughts of a bad event happening. While these guidelines may be helpful for differential diagnoses, it is important to note that empirical evidence to support such differences remains elusive (Comer et al., 2004).

Tic Disorders.

A tic is a sudden rapid, recurrent, and nonrhythmic motor movement or vocalization (American Psychiatric Association, 2013). Differentiating tics from compulsions is often difficult and is further complicated by their common co-occurrence with OCD, up to 30% (American Psychiatric Association, 2013; Lewin & Piacentini, 2010). A simple tic can more easily be distinguished from compulsions due to the brevity of the tics and nature (e.g., eye blinking, kick, throat clearing); however, complex tics are often longer in duration, may combine multiple simple tics, and often seem purposeful. Observing the behavior alone is often insufficient to determine whether a movement is a tic or compulsion. OCD rituals and complex tics may topographically look the same, such as repeated tapping. Distinguishing these behaviors in children is further complicated by the fact that youth have more difficulty describing their internal experiences and obsessional content, if present.

On a broad level, compulsions typically occur as a neutralizing agent to an obsession, whereas tics do not. Tics are usually preceded by premonitory sensory urges and compulsions are preceded by obsessions (American Psychiatric Association, 2013). Assessment, therefore, should focus on the description of the experience prior to the behavior (e.g., tic or compulsion) and how the individual responds to not engaging in the behavior. Lewin and Piacentini (2010) provide guidelines to help assessors differentiate these two processes through understanding the function of the symptom, as well as what would happen if the child refrained from engaging in the symptom (see [Table 6.2](#)). Additionally, a child's history should be taken into consideration, such as whether the child has a history of clear OCD symptoms or tics without anxiety. To assess tic severity and impairment, the Yale Global Tic Severity Scale (YGTSS) (Leckman et al., 1989) is a clinician-administered scale that has excellent psychometric properties.

Table 6.2 Differentiating Tics from Compulsions

<i>Assessment</i>	<i>Compulsion</i>	<i>Tic</i>
Trigger/preceding internal process	Obsession	Premonitory sensory urge
Function of the symptom or behavior	Relief of anxiety or distress	Reduction in urge or sensation
Restraint from symptom or behavior (e.g., what happens if you do not [tap the side of the chair]?).	<ol style="list-style-type: none"> 1. Harm avoidance (e.g., something bad might happen) 2. Increased distress (e.g., “I’d be upset /uncomfortable”) 3. Sense of incompleteness (e.g., does not feel right) 	<ol style="list-style-type: none"> 1. Increase in urge (e.g., urge would get stronger) 2. No outcome (e.g., nothing would happen) 3. Uncontrollable (e.g., cannot stop it, it would be too hard to control) 4. Sense of incompleteness (e.g., does not feel right)

Autism Spectrum Disorders.

Autism Spectrum Disorders (ASD) can be challenging to determine a differential diagnoses from OCD, especially in young children, due to the core symptoms of repetitive behaviors and fixated interests. Obtaining a thorough developmental history assessing for other symptoms associated with ASD (e.g., deficits in social communication and interactions) is critical. Additionally, stereotypic behaviors in ASD are generally related to gratification and pleasure, whereas compulsions are typically ego dystonic and function to reduce anxiety or uncomfortable feelings (American Academy of Child and Adolescent Psychiatry, 2012). For example, a child with ASD may spin repeatedly for enjoyment or because he “likes it,” whereas, a child with OCD may spin because he feels like he has to in order to prevent something bad from happening or to make an uncomfortable feeling go away. If a differential diagnosis is unclear, practitioners may consider referring the child for a more comprehensive evaluation by a developmental specialist.

Other differential disorders.

Psychosis is sometimes a differential diagnosis from OCD, and it is not uncommon for more severe OCD to mimic schizophrenia spectrum diagnoses (Lewin & Piacentini, 2010). The “stretchy logic” and magical thinking found in OCD may present similarly to a psychotic process; however, psychosis in childhood is quite rare (American Academy of Child and Adolescent Psychiatry, 2012). Given that insight may be lacking in youth with OCD, it may be hard to distinguish these processes in early development. Treatment response and the manifestation of symptoms over time (e.g., emergence of other positive or negative psychotic symptoms) can assist in differentiating a psychotic process. Eating disorders, particularly Anorexia Nervosa, involve obsessional thinking and ritualistic behaviors. However, the content of such thinking and behaviors is related to body disturbance, food consumption, and weight, rather than other content areas found in OCD (e.g., avoidance of food due to contamination). Other disorders, such as trichotillomania (Hair-Pulling Disorder) and Body Dysmorphic Disorder, classified in DSM-5 under Obsessive-Compulsive and Related Disorders may result in diagnostic confusion for some children. For further descriptions of differential diagnoses, please refer to DSM-5 (American Psychiatric Association, 2013).

Conclusions

Overall, the measures and considerations included in this chapter highlight the importance of carefully assessing OCD – from initial suspicion of symptoms to the completion of treatment. Identifying OCD symptoms and providing appropriate referrals for treatment is important in minimizing the possible long-term negative consequences of pediatric OCD. Furthermore, monitoring symptoms throughout treatment will improve treatment planning and outcomes. Though further research is needed to refine existing measures and to more thoroughly understand the functional relationship of symptoms, using a combination of the measures described above will provide important guidelines and information for clinicians and referring providers.

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