

# Obsessive-Compulsive Disorder: An Overview

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In this article, which is the first in a three-part series, the authors provide an overview of the current state of our knowledge of the phenomenology, etiology, and diagnosis of OCD. The DSM-IV criteria for OCD are presented and explicated. Disorders that are commonly comorbid with OCD (e.g., major depressive disorder, other anxiety disorders, Tourette's disorder) are described. The authors also discuss disorders such as body dysmorphic disorder that may be related to OCD and are often termed OCD spectrum disorders. OCD is likely to have multiple causes and the authors discuss behavioral, neuroanatomical, and neurochemical theories of OCD. Two treatments have demonstrated efficacy in OCD, cognitive-behavioral therapy and pharmacotherapy with serotonergic reuptake inhibitors, and the authors discuss how these treatments may work in light of what is known about the etiology of the disorder. The different subtypes of OCD that have been proposed are described along with their implications for treatment. The article concludes with a discussion of diagnosis that provides specific guidance for the clinician on how to assess a patient for possible OCD. The next two articles in this series will cover cognitive-behavioral and medication treatment in detail. (*Journal of Psychiatric Practice* 2000;6:3-17)

**KEY WORDS:** obsessive-compulsive disorder, tic disorder, PANDAS, cognitive-behavioral therapy, serotonergic reuptake inhibitors, subtypes

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Once thought rare, obsessive-compulsive disorder (OCD) is now recognized to be a fairly common disorder with a lifetime prevalence as high as 2%-3% (i.e., two to three times more common than schizophrenia).<sup>1,2</sup> OCD is typically a chronic disease,<sup>3,4</sup> and is associated with significant suffering and functional impairment.<sup>5-7</sup> Because of its prevalence, chronicity, and disabling nature, OCD was identified by the World Health Organization as one of world's top ten causes of illness-related disability.<sup>8</sup> Thus, it is important for mental health professionals to know how to diagnose and treat OCD. In this article, the first of a three-part series, we provide an overview of OCD and give pointers on how to diagnose it. The next two articles in this series, "The Role of Cognitive-Behavioral Therapy for OCD" by Simpson and Kozak and "Pharmacotherapy for OCD" by Fallon and Mathew will review the best treatments for OCD in adults (see March and Leonard 1998<sup>9</sup> and March and Mulle 1998<sup>10</sup> for a discussion of OCD treatment in children and adolescents).

## THE PHENOMENOLOGY OF OCD

### Symptoms, Onset, and Course

OCD is a disorder of protean manifestations. It is characterized by intrusive and distressing thoughts, urges, or images (i.e., obsessions) and by repetitive behaviors or mental acts (i.e., compulsions) aimed at reducing the distress caused by obsessions. The DSM-IV criteria for OCD are shown in Table 1.<sup>11</sup>

Although all patients with OCD have obsessions and/or compulsions, the specific content of obsessions and compulsions can vary greatly between patients. As a result, obsessive and compulsive content has been grouped into different symptom categories. Obsessions have been divided into the categories of aggressive, contamination, sexual, hoarding/saving, religious, symmetry, somatic, and/or miscellaneous obsessions; compulsions have been divided into washing, checking, repeating, counting, ordering, hoarding, mental and/or miscellaneous compulsions.<sup>12, 13</sup> Examples of different types of obsessions and compulsions are given in Table 2. In addition to differing in content, obsessions and compulsions can also vary in their associated affect. For example, a patient with obsessive fears that a catastrophic event has occurred may be riddled with fear, a patient with symmetry obsessions

**Table 1. DSM-IV Diagnostic Criteria for Obsessive-Compulsive Disorder\***

**A. Either obsessions or compulsions:**

*Obsessions as defined by (1), (2), (3), and (4):*

- (1) recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress
- (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
- (3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action
- (4) the person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind (not imposed from without as in thought insertion)

*Compulsions as defined by (1) and (2):*

- (1) repetitive behaviors (e.g., hand-washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
- (2) the behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent or are clearly excessive

**B.** At some point during the course of the disorder, the person has recognized that the obsessions or compulsions are excessive or unreasonable. **Note:** This does not apply to children.

**C.** The obsessions or compulsions cause marked distress, are time consuming (take more than 1 hour a day), or significantly interfere with the person's normal routine, occupational (or academic) functioning, or usual social activities or relationships.

**D.** If another Axis I disorder is present, the content of the obsessions or compulsions is not restricted to it (e.g., preoccupation with food in the presence of an Eating Disorder; hair pulling in the presence of Trichotillomania; concern with appearance in the presence of Body Dysmorphic Disorder; preoccupation with drugs in the presence of a Substance Use Disorder; preoccupation with having a serious illness in the presence of Hypochondriasis; preoccupation with sexual urges or fantasies in the presence of a Paraphilia; or guilty ruminations in the presence of Major Depressive Disorder).

**E.** The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.

*Specify if:*

**With Poor Insight:** if, for most of the time during the current episode, the person does not recognize that the obsessions and compulsions are excessive or unreasonable.

*\*Reprinted with permission from DSM-IV, p. 422-3<sup>11</sup>*

and compulsions may report an inner discontent unless objects are aligned "just right,"<sup>14</sup> and a patient with hoarding compulsions may experience feelings of overwhelming loss if things are discarded.<sup>15</sup> Many patients have multiple obsessions and multiple compulsions; and a patient's primary obsessions and compulsions can change over time.<sup>16</sup>

OCD usually begins in adolescence or early adulthood, although it can start in childhood. Onset after age 50 is rare. There is no large gender difference in the lifetime prevalence of OCD, but its onset is typically earlier in males than females (for a review, see Antony et al. 1998<sup>2</sup>). Most patients have a chronic waxing and waning course, although some have a deteriorating and others have an episodic course.<sup>3,4</sup> Skoog and Skoog<sup>4</sup> examined the course

of illness in 144 patients with OCD (most of whom did not receive treatment) for up to 40 years; although 83% of the patients improved to some extent during follow-up (with complete recovery in 20% of the patients), nearly half of the sample had clinically relevant symptoms of OCD for more than 30 years.

**Comorbidity**

In epidemiological and clinical samples, OCD is often associated with other psychiatric disorders.<sup>2, 17</sup> Psychiatric disorders commonly comorbid with OCD include major depressive disorder (MDD), dysthymia, and other anxiety disorders (i.e., social phobia, specific phobia, generalized anxiety disorder, and panic disorder). For example, in epidemiological surveys at seven international

sites,<sup>17</sup> the comorbidity of OCD with lifetime MDD ranged from 16.7%–60.3%; the comorbidity of OCD with another lifetime anxiety disorder ranged from 24.5%–69.6%. In clinical samples, the comorbidity of OCD with current and lifetime MDD has been found to be as high as 61% and 85%, respectively.<sup>18</sup> In addition, tic disorders (including Tourette's disorder) have been reported in 7%–59% of patients with OCD.<sup>3,19,20</sup> In child and adolescent samples, tic disorders and attention-deficit/hyperactivity disorder often co-occur with or precede OCD, and disruptive behavior disorders and learning disorders are common.<sup>9,10</sup>

Not only are certain other Axis I disorders common in OCD, but patients with other Axis I disorders often have comorbid OCD. In particular, there appears to be a relationship between eating disorders and OCD.<sup>21</sup> For example, Thiel et al. found that 37% of 93 patients with anorexia nervosa or bulimia nervosa also met criteria for OCD.<sup>22</sup> The prevalence of OCD in patients with schizophrenia or schizoaffective disorder is also high (7.8%–31.7% in recent studies); the prevalence of obsessive-compulsive symptoms (i.e., subthreshold OCD) is even higher.<sup>23,24</sup>

Diagnosing Axis II personality disorders in the presence of a chronic, relatively early onset Axis I disorder like OCD is problematic for many reasons, including the difficulty of determining cause and effect and of differentiating milder OCD symptoms from certain personality traits. However, the Axis II disorders most frequently diagnosed in patients with OCD are avoidant, dependent, histrionic, schizotypal, and obsessive-compulsive personality disorder (OCPD). The prevalence rates for these comorbid personality disorders vary widely depending on the study; on average, avoidant personality disorder is diagnosed more often, and OCPD less often, than the others.<sup>25</sup>

### OCD Spectrum Conditions

Some researchers (e.g., Hollander 1993<sup>26</sup>) have proposed that certain Axis I disorders are specifically related to OCD because they are characterized by obsessive thinking and/or compulsive behaviors and have an illness course, family history, neurobiology, and/or treatment response like OCD. These so-called "OCD spectrum disorders" include body dysmorphic disorder (BDD), hypochondriasis, eating disorders (e.g., anorexia nervosa and bulimia nervosa), impulse control disorders (e.g., pathological gambling, trichotillomania), Tourette's disorder, and sexual disorders (e.g., paraphilias). Evidence supporting this hypothesized relationship with OCD varies depending on the disorder and on the criteria used to define a spectrum disorder. To date, phenomenological and treatment studies provide the strongest support for a relationship between BDD and OCD,<sup>21</sup> while family studies suggest that some forms of OCD are etiologically related to Tourette's disorder.<sup>27</sup>

**Table 2. Examples of Different Types of Obsessions and Compulsions in Patients with OCD\***

A patient with *aggressive obsessions* had intrusive fears that he would harm others; this led him to avoid potentially hazardous situations whenever possible (e.g., driving) and to perform *checking rituals* to try to reassure himself that he had not already caused harm (e.g., excessively checking documents at work, mentally reviewing conversations for misinformation he might have given, listening hourly to the news for accidents he might have inadvertently caused).

A patient with *contamination obsessions* feared contracting a fatal illness when she touched anything that was not sterile; this led to elaborate *washing rituals* (e.g., handwashing with antibacterial soap for more than 2 hours per day until her hands were red and raw, cleaning items bought in the grocery store with bleach) and avoidance of public places (e.g., bathrooms, restaurants, swimming pools).

A patient with *sexual obsessions* had near constant intrusive images of having sex with his mother and grandmother; in response to these intrusions, he performed different *mental compulsions*, including repeating special prayers in a set manner and mentally repeating certain words and images.

A patient with *symmetry obsessions* felt extreme discomfort if things were not in the right place or if things were not done properly; this led to *ordering and arranging rituals* (e.g., spending hours aligning objects in his home) and to *repeating rituals* (e.g., re-reading the same passage in a book for hours, rewriting letters if a dot over an "i" was not perfectly centered).

A patient with *hoarding obsessions and compulsions* could not bear objects going to waste to the point that she couldn't even walk past a public trashcan without finding some object to bring home; unable to discard any of her accumulated objects, she rented increasing amounts of storage space once her own home was full to bursting, eventually becoming bankrupt in the process.

*\*Note: Many OCD patients have multiple obsessions and compulsions. Only the predominant obsessions and compulsions of each patient are described above for heuristic purposes.*

### Neurological/Neuropsychological Findings

OCD is associated with abnormal neurological findings. First, as noted above, some patients with OCD have comorbid tic disorders. Second, some patients have neurological "soft signs" (e.g., deviant performance on a motor or sensory test when no other signs of a focal neurological disorder are present), especially those related to fine motor coordination and visuospatial functioning.<sup>28</sup> Third, OCD patients as a group perform poorly on certain neuropsychological tasks, despite intact verbal and intellectual abilities.<sup>29-40</sup> While the OCD neuropsychological literature is replete with conflicting studies—in part due to inattention to comorbid conditions, small samples, and lack of replication (and possibly due to the underlying heterogeneity of OCD)—there is mounting evidence that some OCD patients have specific deficits in executive functioning (e.g., planning, deciding, and abstract reasoning), visuospatial functioning, and nonverbal memory. Impairments on tasks that test these neuropsychological functions can discriminate patients with OCD from those with panic disorder or MDD,<sup>40</sup> and differentiate patients with schizophrenia who have OC symptoms from those without them.<sup>41</sup>

### WHAT CAUSES OCD?

#### Etiology

OCD is likely to have multiple causes. Possible biological causes for OCD include abnormal genetics and/or development (as suggested by family and genetic studies demonstrating that there is a higher prevalence of OCD and related disorders in the relatives of some patients with OCD<sup>27</sup>); hormonal precipitants (as suggested by reports of premenstrual and postpartum exacerbation of OCD<sup>42</sup> and of elevated CSF levels of oxytocin in some OCD patients<sup>43</sup>); infectious and autoimmune mechanisms (as suggested by the association between OCD and streptococcal infections<sup>44</sup>); metabolic causes (e.g., manganese poisoning<sup>45</sup>); and acquired neurological lesions (e.g., stroke, head trauma, tumors<sup>46</sup>).

Psychological causes for OCD have also been posited.<sup>47</sup> For example, a behavioral theory of OCD maintains that normal intrusive thoughts, images, and impulses can become associated, through classical conditioning processes, with anxiety. If a person engages in some kind of escape behavior (e.g., avoidance or ritual), this association will not diminish. Moreover, if the escape behavior results in anxiety relief, it will be reinforced, become more stereotyped, and can develop into a compulsive ritual. Continued performance of the ritual will prevent extinction of the conditioned anxiety associated with the obsession (e.g., the person will never learn that terrible things won't happen if he doesn't perform his rituals). Cognitive theories of OCD have also been proposed, including those that attribute OCD to dysfunctional

beliefs about danger or threat,<sup>47</sup> and those that postulate impairments in emotional memory structures that lead to problems processing fear.<sup>48</sup>

Regardless of the other factors contributing to the development of OCD, OCD appears to have a strong genetic predisposition, at least in a subset of patients.<sup>27</sup> Depending on the study, the concordance rate of OCD for monozygotic twins has ranged from 53%–86%, and the concordance rate for dizygotic twins has ranged from 22%–47%.<sup>49</sup>

#### Neuroanatomy

Different neuroanatomical theories have been proposed to explain the pathophysiology of OCD. The theories are based on reports of patients who developed OCD following specific neurological lesions,<sup>50</sup> on data from animal models of OCD,<sup>51,52</sup> and on data from structural (e.g., x-ray computed tomography [CT] or magnetic resonance imaging [MRI]) and functional (e.g., single photon emission computed tomography [SPECT], positron emission tomography [PET], and functional MRI) brain imaging studies of patients with OCD.<sup>53,54</sup> Most of these theories propose that obsessions and compulsions result from a malfunctioning neural circuit, which includes the orbitofrontal (and sometimes the cingulate) cortex, caudate nucleus, and thalamus.<sup>53-61</sup> The theories differ in the specifics of how this circuit is thought to malfunction.<sup>62</sup> Some have proposed specific variants of their theory to account for different clinical manifestations of OCD. For example, Baxter proposed that patients with OCD have pathology of the caudate nucleus while patients with OCD and comorbid tic disorders have pathology of both the caudate and putamen.<sup>63</sup>

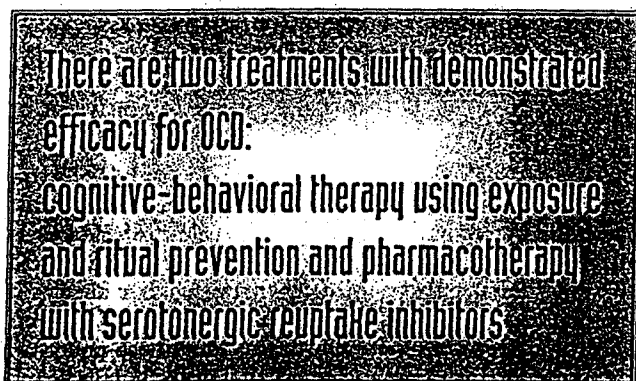
#### Neurochemistry

It has repeatedly been hypothesized that serotonergic (5-HT) dysfunction in the brain plays a critical role in the pathophysiology of OCD.<sup>61,64,65</sup> Dopaminergic dysfunction has also been implicated, at least in some patients.<sup>66</sup> The 5-HT hypothesis of OCD was initially based on the fact that the serotonin reuptake inhibitors (SRIs) are the most efficacious medications for OCD (see below). However, SRIs could be ameliorating OCD symptoms through a compensatory mechanism, rather than correcting a primary (5-HT) problem.

Other evidence for 5-HT dysfunction in OCD comes from platelet studies, some of which have demonstrated abnormalities of the 5-HT transporter in the platelets of patients with OCD.<sup>67-77</sup> However, it has not been shown that platelet findings reflect what is happening in the brain.<sup>78</sup> Pharmacological challenge studies have also indicated that there are 5-HT abnormalities in OCD. However, these studies have been unable to identify the precise nature of the problem, despite the range of challenge agents (e.g., tryptophan, fenfluramine, mCPP, MK-

212, buspirone, and ipsapirone) that have been used.<sup>65, 79</sup> Studies measuring serotonin metabolites in the spinal fluid of patients with OCD have been inconclusive.<sup>65, 79</sup> The problem with these data is that they are indirect, because, until recently, there was no way to visualize serotonin abnormalities in the brains of living patients with OCD.

Recent advances in functional brain imaging technology using radiolabeled ligands and PET and/or SPECT have now made it possible to study specific neurotransmitter systems in the living human brain.<sup>80</sup> Various ligands have been developed that make it possible to visualize different parts of the serotonergic and dopaminergic neurotransmitter systems (e.g., Szabo et al.<sup>81</sup>). Brain imaging studies employing these ligands are just beginning in patients with OCD. Hopefully, this new technology will finally enable us to determine whether there are specific serotonergic and/or dopaminergic abnormalities in defined brain regions in patients with OCD.



**TREATMENT FOR OCD**

There are two treatments with demonstrated efficacy for OCD: cognitive-behavioral therapy (CBT) using exposure and ritual prevention (EX/RP) and pharmacotherapy with serotonergic reuptake inhibitors (SRIs) (i.e., clomipramine and the selective serotonin reuptake inhibitors [SSRIs], such as fluoxetine, fluvoxamine, paroxetine, and sertraline). These treatments will be reviewed in detail in the next two articles in this series. Other modalities have also been tried, including biological (e.g., transcranial magnetic stimulation, neurosurgery) and psychosocial (e.g., family or group therapy, 12-step programs, or vocational rehabilitation) treatments. Evidence supporting the use of these other treatments for OCD is much more limited.

**HOW DO OUR TREATMENTS WORK?**

While both EX/RP and SRIs help reduce OCD symptoms, how they work at the level of the brain is not clear. Different psychological theories for how EX/RP reduces OCD symptoms have been proposed. For example, the

behavioral theory described above maintains that EX/RP is effective because systematic exposure to feared situations in the absence of escape behaviors (e.g., rituals) enables patients to break their associations between certain situations and anxiety. Foa and Kozak proposed that exposure enables patients to correct disordered fear memories.<sup>48</sup> How and where in the brain these psychological processes might occur remains obscure.

Neurochemical theories for how SRIs and EX/RP help reduce OCD symptoms have also been proposed. SRIs inhibit the serotonin (5-HT) transporter. Based on animal data, Blier and de Montigny hypothesized that this inhibition eventually leads to an enhancement of 5-HT neurotransmission, which is therapeutic.<sup>82</sup> The implication of this theory is that OCD is due to a deficit of 5-HT neurotransmission, at least in certain brain regions. Also assuming that brain serotonergic dysfunction underlies OCD, Baer hypothesized that EX/RP ultimately works by normalizing serotonergic functioning.<sup>83</sup> It has been difficult to test these hypotheses directly in humans.

Functional brain imaging studies have demonstrated abnormalities (typically increases) in blood flow (as measured by SPECT or [<sup>15</sup>O]PET) and glucose metabolism (as measured by fluorodeoxyglucose (FDG) PET) in untreated OCD patients.<sup>53, 54, 62, 84</sup> Abnormalities have been found repeatedly (but not exclusively) in three brain regions: the orbitofrontal cortex, caudate nucleus, and cingulate cortex. After treatment with SRIs or CBT, significant reductions of blood flow or metabolism have been found in these same brain regions (e.g. orbitofrontal cortex,<sup>85-87</sup> caudate nucleus,<sup>59, 85, 88</sup> cingulate cortex<sup>89</sup>). While exciting, these functional brain imaging studies do not explicate what specific cellular or neurochemical problems underlie the blood flow or metabolic abnormalities. Moreover, these studies do not demonstrate that OCD is caused by these blood flow or metabolic abnormalities (e.g., they could be compensatory) or that our treatments reduce OCD symptoms by correcting these blood flow or metabolic abnormalities.

Further research is needed to elucidate the brain basis of OCD so that we can improve our current treatments. Hopefully, we will one day be able to explain to our patients how their brains produce obsessions and compulsions and how our treatments alter the brain to reduce these symptoms.

**ARE THERE CLINICAL SUBTYPES OF OCD?**

OCD is thought to be a heterogeneous disorder. Evidence for this heterogeneity includes the protean clinical manifestations of OCD, the fact that not all OCD patients respond to standard treatment (i.e., SRIs or EX/RP), and the difficulty replicating certain neuropsychological and biological findings in different samples of patients with OCD. Because of this heterogeneity, attempts have been made to divide OCD into more homogeneous subtypes

based on clinical features. The hope is that these different clinical subtypes might help predict who will respond to SRIs or EX/RP and/or might reflect different underlying neurobiology. Some of the proposed OCD subtypes are described below.

#### OCD with Comorbid Tic Disorder

The clinical feature with the strongest evidence for an association between clinical feature and treatment outcome and/or underlying biology is comorbid tic disorder. Tic-related OCD, compared to non-tic-related OCD, has an earlier age of onset, is more frequent in males, is associated with a family history of tic disorders,<sup>14, 27</sup> exhibits different neurochemical features,<sup>43</sup> and has a distinct pattern of treatment response: a poor response to monotherapy with SSRIs but a good response to SSRI augmentation with haloperidol.<sup>90</sup> Moreover, some have found that patients with OCD and comorbid tic disorders tend to have more aggressive, religious, sexual, or symmetry obsessions and ordering, counting, or touching compulsions than OCD patients without tics.<sup>14, 91-95</sup>

#### OCD Subtyped by Factor-Analytically Derived Symptom Clusters

Some have classified OCD based on symptom type. Using data from the Yale-Brown Obsessive Compulsive Symptom (Y-BOCS) Checklist<sup>12, 13</sup> and the statistical method of factor analysis, Baer found three major groups of symptoms in OCD:<sup>96</sup>

1. aggressive, sexual, and religious obsessions
2. symmetry or saving obsessions leading to repeating, ordering, or hoarding compulsions
3. contamination obsessions with either cleaning or checking compulsions.

In a subsequent study, Leckman et al.<sup>97</sup> replicated and extended these results. In two independent OCD samples ( $n = 208$ ,  $n = 98$ ), they found that the following four symptom factors accounted for more than 60% of the variance:

1. aggressive, sexual, religious, and somatic obsessions with checking compulsions
2. symmetry obsessions and ordering, repeating, counting compulsions
3. contamination obsessions and washing compulsions
4. hoarding obsessions and compulsions.

These different symptom factors may be related to treatment outcome. Black et al. found that hoarding obsessions and compulsions predicted a poorer response both to SRI pharmacotherapy with paroxetine and cognitive-behavioral therapy.<sup>98</sup> Mataix-Cols et al. found that hoarding obsessions and compulsions predicted a poor response to SRIs.<sup>95</sup> These symptom factors may also reflect different underlying neurobiology. Rauch et al. found that the different symptom factors were associated with blood

flow abnormalities in different regions of the brain,<sup>99</sup> supporting the hypothesis that the heterogeneous symptoms of OCD could be mediated by different brain areas.<sup>57</sup>

#### OCD Subtyped by Clinical Course

Others have suggested subtyping OCD based on the clinical course. For example, Ravizza et al. proposed that patients with OCD who have an episodic course have a distinct subtype of OCD because they differ from those with a chronic course on demographic and clinical features and have a better response to SRIs.<sup>100</sup> Swedo et al. found that children whose OCD appeared to have been triggered by a streptococcal infection also had a distinctive course: the onset of OCD was prepubertal and abrupt, and the subsequent course was episodic.<sup>101</sup> The dramatic rise and fall of symptoms are thought to be due to the immunologic response to preceding or interceding streptococcal infections. These children may benefit from immunomodulatory treatments.<sup>102</sup>

#### OCD Subtyped by Degree of Insight

While many patients with OCD have good insight into the unreasonableness of their obsessions, others consider their concern reasonable, particularly when anxious or in close proximity to a feared situation.<sup>24</sup> Thus, subtyping OCD based on the patients' degree of insight into the senselessness of their symptoms or the presence of frank psychotic symptoms has been proposed.<sup>103, 104</sup> However, although some clinicians and researchers found that OCD patients with poor insight, comorbid schizotypal personality disorder, or comorbid psychotic disorders tend to have a worse course and/or to respond more poorly to standard OCD treatments, not all agree.<sup>104</sup> Hindering this work has been the heterogeneity of the psychotic symptomatology found in OCD (ranging from patients with OCD who sometimes lose insight into the irrationality of their obsessions, to patients with delusional OCD beliefs, to patients with OCD and comorbid schizotypal personality disorder, to patients with OCD and comorbid psychotic disorders) and the difficulty of measuring insight. Using a new semi-structured rating scale developed to measure insight reliably, Eisen et al. reported that patients with OCD who had poor insight were just as likely to improve with SRI treatment as patients with good insight.<sup>24</sup> However, only one patient in their sample was frankly delusional. Further work is needed to clarify how insight, psychotic features, or comorbid psychotic disorders affect the treatment response and underlying neurobiology of OCD.

#### OCD Subtyped by Neurological Abnormalities

Thienemann and Koran examined whether neurological abnormalities (e.g., soft signs and/or poor neuropsychological performance) predicted medication response and found they did not.<sup>105</sup> In contrast, Hollander et al. found

that the severity of right-sided soft signs was significantly negatively correlated with medication response.<sup>106</sup>

**Summary**

Despite efforts to divide OCD into more homogeneous groups, there is not yet a consensus on the best way to subtype OCD or whether the proposed subtypes reliably predict treatment outcome and/or reflect different underlying biology. DSM-IV has only one specifier for OCD—poor insight. This specifier was included to alert clinicians to the range of insight that characterizes those with OCD.<sup>107</sup>

**DIAGNOSING OCD**

Despite major advances in our understanding of the phenomenology and neurobiology of OCD (as reviewed above), there are not (yet) any pathognomonic neurological, neuropsychological, or laboratory findings associated with OCD. Thus, the diagnosis of OCD relies on eliciting and observing the symptoms of obsessions and compulsions; the key to a correct diagnosis is an astute psychiatric history and the correct application of DSM-IV criteria (Table 1). When taking such a history, there are several things to keep in mind.

**Patients May Not Spontaneously Reveal OCD Symptoms**

In a large sample of OCD patients, Hollander et al. found a 10-year lag between the onset of OCD symptoms and the seeking of professional help, an additional 6-year lag before the correct diagnosis of OCD was made, and another 1.5 years before patients finally received appropriate treatment.<sup>108</sup> One way to reduce the delay between the onset and treatment of OCD is for mental health professionals always to ask about symptoms of OCD. Useful screening questions for OCD are listed in Table 3.

When evaluating a patient for OCD, it is also important to remember the following:

*In clinical samples, it is rare for OCD patients to have obsessions or compulsions alone.* Reviewing the records of 431 OCD patients at seven hospital outpatient clinics, Foa et al. found that 96% of OCD patients had both obsessions and compulsions as measured by the Y-BOCS symptom checklist; only 2% of patients had predominantly obsessions and only 2% had predominantly compulsions.<sup>107</sup> Thus, special attention is required when evaluating a patient who reports only obsessions or only compulsions. Sometimes patients cannot easily identify their obsessions until they stop avoiding feared situations and stop ritualizing. In addition, mental compulsions can be mistaken for obsessions, especially if the content of the obsession and the mental compulsion is identical (e.g., when an intrusive thought [i.e., an obsession] must then be reviewed multiple times to reduce

**Table 3. Screening Questions for OCD**

1. Do you have any distressing thoughts, images, or impulses that keep recurring, such as fears about being dirty or contaminated, fears about harming others or being harmed, fears that you are going to make a mistake, or fears that you are going to act on an unwanted impulse?
2. Do you do anything over and over (such as washing, checking, or arranging things), or do you have ritualistic ways of doing things?
3. Are you plagued by doubt so that even simple decisions are hard to make?
4. Do you have concerns about order and symmetry that seem excessive to others?
5. Do you collect things excessively? Do others complain that you collect too much?

anxiety [i.e., a mental compulsion]). In such cases, it is useful to remember that obsessions generate anxiety or distress; mental compulsions are performed to try to reduce this anxiety or distress. Typical mental rituals include mentally reviewing conversations, thinking a thought a set number of times, or mentally checking or counting. Most OCD patients have both mental and behavioral compulsions.<sup>107</sup>

*Certain obsessions are often found with certain compulsions.* As we discussed earlier, certain OCD symptoms commonly co-occur with other OCD symptoms.<sup>96, 97</sup> Thus, if a patient reports contamination fears, one should ask carefully about washing and cleaning rituals. If a patient reports sexual, religious, or aggressive obsessions (e.g., fears of harm befalling him or herself or another), one should ask carefully about checking rituals (including mental checking, mental reviewing, and repetitive requests for reassurance). If a patient reports ordering rituals, one should ask about symmetry obsessions.

*Parallel history can be very valuable.* Parallel history from family members or significant others is often very useful (especially in a hoarder), because some patients with OCD minimize their symptoms when talking with a clinician. On the other hand, some patients with OCD hide their symptoms out of shame and/or compensate so well for their symptoms that people close to them may not appreciate the full extent of the problem.

*If a diagnosis of OCD is probable, it is worth doing the Y-BOCS.*<sup>12, 13</sup> The Y-BOCS is one of the most widely used standardized instruments for measuring OCD symptoms. It contains a symptom checklist and a rating

scale. The symptom checklist provides examples of more than 50 obsessions and compulsions (Appendix A). The checklist takes less than 5 minutes to do and is very useful because patients are often unaware of the full extent of their OCD. Ten questions from the Y-BOCS rating scale are used to determine severity (Appendix B). Scores on the scale range from 0 to 40. A score  $\geq 16$  is considered to indicate clinically significant OCD, a score between 20 and 30 moderate to marked OCD, and a score between 30 and 40 severe OCD.

#### Some Psychiatric Illnesses Bear a Resemblance to OCD, But Are Not OCD

When evaluating a patient with OCD, other disorders that can be confused with OCD (e.g., generalized anxiety disorder, body dysmorphic disorder, trichotillomania, specific and social phobia, hypochondriasis, eating disorders, paraphilias, pathological gambling, and obsessive compulsive personality disorder) should be systematically excluded. The DSM-IV reviews the key features that differentiate OCD from these other disorders. Two points are worth emphasizing:

*Not all obsessions or compulsions are OCD.* If the obsessions or compulsions are pleasurable or gratifying, a person does not have OCD; in OCD, the content of the obsessions must be distressing, and the compulsions must be aimed at reducing distress or preventing some dreaded event or situation. For example, a patient with a paraphilia may have recurrent sexual thoughts, but these thoughts are typically enacted and associated with pleasure. In contrast, a patient with OCD can also have recurrent sexual thoughts, but these thoughts are unwanted and distressing and typically lead to repetitive behaviors (e.g., checking), which are aimed at *preventing* any enactment. In addition, for obsessions or compulsions to be OCD, they must be time consuming or interfere with a person's functioning. This requirement is included because most people experience intrusive thoughts or compulsive behavior at one time or another. While the content of such "normal" obsessions and compulsions can be the same as in OCD (e.g., fear of harm befalling a loved one, fear of contamination, checking rituals, or washing rituals), such "normal" obsessions and compulsions are infrequent, not time-consuming, and don't interfere with the person's functioning.<sup>2</sup> Finally, worries or ruminations about real life problems (as in generalized anxiety disorder) are different from the obsessions of OCD.<sup>104</sup>

*OCD patients vary in their degree of insight.* Some OCD patients have complete awareness that their obsessions and compulsions are senseless and irrational; others can be near delusional in the degree to which they believe in their obsessional fears. OCD patients can also vary in their degree of insight at different stages of their

illness and in different situations (e.g., displaying good insight when discussing their symptoms in the therapist's office and poor insight when confronted with a feared object). Because of this, it can at times be difficult to differentiate OCD with poor insight from psychotic disorders such as delusional disorder, schizophrenia, or schizoaffective disorder. The distinction is important because of the potential treatment implications; however, the boundary between delusional OCD and psychotic disorders is not always clear.<sup>24</sup>

Some OCD patients have complete awareness that their obsessions and compulsions are senseless and irrational; others can be near delusional in the degree to which they believe in their obsessional fears.

#### Certain Axis I Disorders Commonly Co-occur in Patients with OCD

Because of their prevalence in OCD, it is especially important to screen for major depressive disorder, dysthymia, other anxiety disorders (e.g., specific phobia, social phobia, panic disorder), tic disorders (including Tourette's disorder), and any of the proposed spectrum conditions (e.g., body dysmorphic disorder, trichotillomania). In children and adolescents (and in adults whose OCD started in childhood), it is also worth probing for a history or symptoms of attention deficit/hyperactivity disorder and/or learning disorders.

#### OCD Can Affect a Patient's Social and Occupational Functioning

As a group, people with OCD are impaired in their social and/or occupational functioning.<sup>5-7</sup> However, individual patients can vary greatly in their degree of impairment. Some patients with OCD are severely disabled—unable to work (e.g., out of fear of making a mistake or out of near constant obsessions and/or compulsions) and unable to maintain any social relations (e.g., out of severe contamination fears). Others work, marry, and have a satisfying interpersonal life, although even "higher functioning" patients typically function below their potential. Thus, the impact of OCD on the individual's social and work life should be assessed in all patients in order to devise an appropriate and comprehensive treatment plan.

Special Issues Arise in Evaluating a Child with OCD  
*Most children exhibit normal age-dependent obsessive-compulsive behaviors.* Normal age-dependent obsessive-compulsive behaviors can include liking things to be "just so," performing elaborate bedtime rituals, and having contamination fears. However, these "normal" behaviors typically occur in early childhood, are gone by adolescence, are common in their peer group, and are associated with mastery of developmental milestones. In contrast, behaviors indicative of OCD usually occur later, appear odd (to adults, other children, and often the child), and always lead to dysfunction.<sup>9</sup>

*A subgroup of children may have OCD that is caused or exacerbated by an autoimmune response to a Group A beta hemolytic streptococcal (GABHS) infection.*<sup>9,44</sup> Children who are hypothesized to have a pediatric autoimmune neuropsychiatric disorder associated with streptococcal infections (or PANDAS) are characterized by the following: a prepubertal and abrupt onset of OCD, an episodic course, abnormal neurological movements (e.g., tics and choreiform movements), and exacerbations of OCD symptoms that are temporally related to the GABHS infection.<sup>101</sup> Based on the pathophysiological model underlying other sequelae of GABHS infections (e.g., rheumatic carditis and Sydenham's chorea), it is hypothesized that children with PANDAS develop OCD (and abnormal neurological movements) when antibodies formed against GABHS antigens cross-react with antigens in the basal ganglia of genetically susceptible hosts. A recent controlled study demonstrated that plasma exchange and intravenous immunoglobulin therapy were both effective in reducing OCD symptom severity in children with PANDAS.<sup>102</sup> Whether the course of the OCD changes (e.g., becomes chronic) as these PANDAS children grow older or whether this same phenomenon can occur after puberty is not yet known.

## CONCLUSION

OCD is a prevalent, chronic, and disabling condition. The phenomenology of OCD is complex, in part because of the range of possible obsessions and compulsions, the high rate of comorbid conditions, and the lack of consensus on how to divide OCD into more homogeneous groups. What causes OCD remains unclear, although there is some evidence that OCD may be mediated by a malfunctioning neural circuit that includes the orbitofrontal cortex and caudate nucleus and that problems in serotonin and/or dopaminergic neurotransmission play some role. There are no pathognomonic neurological, neuropsychological, or laboratory findings associated with OCD. Thus, the key to its diagnosis is a careful psychiatric interview. This interview should include screening carefully for OCD, excluding other diagnoses that bear a resemblance to OCD, determining whether comorbid disorders that may

affect treatment are present, and assessing a patient's level of functioning. We will review the treatment of OCD in the next two articles in this series.

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**Appendix A: Yale-Brown Obsessive Compulsive Scale Symptom Checklist†**

Check all that apply, but clearly mark the principal symptoms with a "P". (Rater must ascertain whether reported behaviors are bona fide symptoms of OCD, and not symptoms of another disorder such as Simple Phobia or Hypochondriasis. Items marked "\*" may or may not be OCD phenomena.)

Current	Past	
—	—	<b>AGGRESSIVE OBSESSIONS</b>
—	—	Fear might harm self
—	—	Fear might harm others
—	—	Violent or horrific images
—	—	Fear of blurting out obscenities or insults
—	—	Fear of doing something else embarrassing*
—	—	Fear will act on unwanted impulses (e.g., stab a friend)
—	—	Fear will steal things
—	—	Fear will harm others because not careful enough (e.g., hit and run MVA)
—	—	Fear will be responsible for something else terrible happening (e.g., fire, burglary)
—	—	Other _____
—	—	<b>CONTAMINATION OBSESSIONS</b>
—	—	Concerns or disgust with bodily waste or secretions (e.g., urine, feces, saliva)
—	—	Concern with dirt or germs
—	—	Excessive concern with environmental contaminants (e.g., asbestos, radiation, toxic waste)
—	—	Excessive concern with household items (e.g., cleansers, solvents)
—	—	Excessive concern with animals (e.g., insects)
—	—	Bothered by sticky substances or residues
—	—	Concerned will get ill because of contaminant
—	—	Concerned will get others ill by spreading contaminant (Aggressive)
—	—	No concern with consequences of contamination other than how it might feel
—	—	Other _____

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Current	Past	
—	—	<b>SEXUAL OBSESSIONS</b>
—	—	Forbidden or perverse thought, images, or impulses
—	—	Content involves children or incest
—	—	Content involves homosexuality*
—	—	Sexual behavior toward others (Aggressive)*
—	—	Other _____
—	—	<b>HOARDING/SAVING OBSESSIONS</b>
—	—	[distinguish from hobbies and concern with objects of monetary or sentimental value]
—	—	Other _____
—	—	<b>RELIGIOUS OBSESSIONS (SCRUPULOSITY)</b>
—	—	Concerned with sacrilege and blasphemy
—	—	Excess concern with right/wrong, morality
—	—	Other _____
—	—	<b>OBSESSION WITH NEED FOR SYMMETRY OR EXACTNESS</b>
—	—	Accompanied by magical thinking (e.g., concerned that mother will have accident unless things are in the right place)
—	—	Not accompanied by magical thinking
—	—	<b>MISCELLANEOUS OBSESSIONS</b>
—	—	Need to know or remember
—	—	Fear of saying certain things
—	—	Fear of not saying just the right thing
—	—	Fear of losing things
—	—	Intrusive (nonviolent) images
—	—	Intrusive nonsense sounds, words, or music
—	—	Bothered by certain sounds/noises*
—	—	Lucky/unlucky numbers
—	—	Colors with special significance
—	—	Superstitious fears
—	—	Other _____
—	—	<b>SOMATIC OBSESSIONS</b>
—	—	Concern with illness or disease*
—	—	Excessive concern with body part or aspect of appearance (e.g., dysmorphophobia)*
—	—	Other _____
—	—	<b>CLEANING/WASHING COMPULSIONS</b>
—	—	Excessive or ritualized handwashing
—	—	Excessive or ritualized showering, bathing, tooth-brushing, grooming
—	—	Involves cleaning of household items or other inanimate objects
—	—	Other measures to prevent or remove contact with contaminants
—	—	Other _____

**Appendix B: Yale-Brown Obsessive Compulsive Scale†**

	Current	Past	
Impulses	___	___	<b>CHECKING COMPULSIONS</b>
	___	___	Checking locks, stove, appliances, etc.
	___	___	Checking that did not/will not harm others
	___	___	Checking that did not/will not harm self
	___	___	Checking that nothing terrible did/will happen
	___	___	Checking that did not make mistake
Objects of	___	___	Checking tied to somatic obsessions
	___	___	Other _____
	___	___	<b>REPEATING RITUALS</b>
Concerned	___	___	Re-reading or re-writing
	___	___	Need to repeat routine activities (e.g., in/out door, up/down from chair)
	___	___	Other _____
in	___	___	<b>COUNTING COMPULSIONS</b>
	___	___	Other _____
if	___	___	<b>ORDERING/ARRANGING COMPULSIONS</b>
	___	___	Other _____
	___	___	<b>HOARDING/COLLECTING COMPULSIONS</b> [distinguish from hobbies and concern with objects of monetary or sentimental value (e.g., carefully reads junk mail, piles up old newspapers, sorts through garbage, collects useless objects)]
	___	___	<b>MISCELLANEOUS COMPULSIONS</b>
	___	___	Mental rituals (other than checking/counting)
	___	___	Excessive list making
	___	___	Need to tell, ask, confess
	___	___	Need to touch, tap, or rub*
	___	___	Rituals involving blinking or staring*
	___	___	Measures (not checking) to prevent: harm to self ___; harm to others ___; terrible consequences ___
	___	___	Ritualized eating behaviors*
	___	___	Superstitious behaviors
	___	___	Trichotillomania*
	___	___	Other self-damaging or self-mutilating behaviors*
	___	___	Other _____

This rating scale is intended for use as a semistructured interview. The interviewer should assess the items in the listed order and use the questions provided. However, the interviewer is free to ask additional questions for purposes of clarification.

Before proceeding with the questions, define "obsessions" and "compulsions" for the patient as follows:

*"OBSESSIONS are unwelcome and distressing ideas, thoughts, images, or impulses that repeatedly enter your mind. They may seem to occur against your will. They may be repugnant to you, you may recognize them as senseless, and they may not fit your personality."*

*"COMPULSIONS, on the other hand, are behaviors or acts that you feel driven to perform although you may recognize them as senseless or excessive. At times, you may try to resist doing them but this may prove difficult. You may experience anxiety that does not diminish until the behavior is completed."*

The final score for each item should reflect a composite rating of all of the patient's obsessions or compulsions.

Rate the characteristics of each item during the prior week up until and including the time of the interview. Scores should reflect the average (mean) occurrence of each item for the entire week.

*(Adapted from General Instructions. Users will receive a full copy of instructions when they order the scale.)*

*"I am now going to ask several questions about your obsessive thoughts."*

**1. TIME OCCUPIED BY OBSESSIVE THOUGHTS**

Q: "How much of your time is occupied by obsessive thoughts?" When obsessions occur as brief, intermittent intrusions, it may be difficult to assess time occupied by them in terms of total hours. In such cases, estimate time by determining how frequently they occur. Consider both the number of times the intrusions occur and how many hours of the day are affected. Ask: "How frequently do the obsessive thoughts occur?" Be sure to exclude ruminations and preoccupations which, unlike obsessions, are ego-syntonic and rational but exaggerated.

0 = None.

1 = Mild, less than 1 hour/day or occasional intrusion.

2 = Moderate, 1 to 3 hours/day or frequent intrusion.

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- 3 = Severe, greater than 3 and up to 8 hours/day or very frequent intrusion.
- 4 = Extreme, greater than 8 hours/day or near constant intrusion.

**2. INTERFERENCE DUE TO OBSESSIVE THOUGHTS**

Q: "How much do your obsessive thoughts interfere with your social or work (or role) functioning? Is there anything that you don't do because of them?" If currently not working, determine how much performance would be affected if patient were employed.

- 0 = None.
- 1 = Mild, slight interference with social or occupational activities, but overall performance not impaired.
- 2 = Moderate, definite interference with social or occupational performance, but still manageable.
- 3 = Severe, causes substantial impairment in social or occupational performance.
- 4 = Extreme, incapacitating.

**3. DISTRESS ASSOCIATED WITH OBSESSIVE THOUGHTS**

Q: "How much distress do your obsessive thoughts cause you?" In most cases, distress is equated with anxiety; however, patients may report that their obsessions are "disturbing" but deny "anxiety." Only rate anxiety that seems triggered by obsessions, not generalized anxiety or anxiety associated with other conditions.

- 0 = None.
- 1 = Mild or not too disturbing.
- 2 = Moderate, disturbing, but still manageable.
- 3 = Severe, very disturbing.
- 4 = Extreme, near constant and disabling distress.

**4. RESISTANCE AGAINST OBSESSIONS**

Q: "How much of an effort do you make to resist the obsessive thoughts? How often do you try to disregard or turn your attention away from these thoughts as they enter your mind?" Only rate effort made to resist, not success or failure in actually controlling the obsessions. How much the patient resists the obsessions may or may not correlate with his/her ability to control them. Note that this item does not directly measure the severity of the intrusive thoughts; rather it rates a manifestation of health, i.e., the effort the patient makes to counteract the obsessions by means other than avoidance or the performance of compulsions. Thus, the more the patient tries to resist, the less impaired is this aspect of his/her functioning. There are "active" and "passive" forms of resistance. Patients in behavioral therapy may be encouraged to counteract their obsessive symptoms by not struggling against them (e.g., "just let the thoughts come"; passive opposition) or by intentionally bringing on the disturbing thoughts. For the purposes of this item, consider use of these behavioral techniques as forms of resistance. If the obsessions are

minimal, the patient may not feel the need to resist them. In such cases, a rating of "0" should be given.

- 0 = Makes an effort to always resist, or symptoms are minimal doesn't need to actively resist.
- 1 = Tries to resist most of the time.
- 2 = Makes some effort to resist.
- 3 = Yields to all obsessions without attempting to control them, but does so with some reluctance.
- 4 = Completely and willingly yields to all obsessions.

**5. DEGREE OF CONTROL OVER OBSESSIVE THOUGHTS**

Q: "How much control do you have over your obsessive thoughts? How successful are you in stopping or diverting your obsessive thinking? Can you dismiss them?" In contrast to the preceding item on resistance, the ability of the patient to control his obsessions is more closely related to the severity of the intrusive thoughts.

- 0 = Complete control.
- 1 = Much control, usually able to stop or divert obsessions with some effort and concentration.
- 2 = Moderate control, sometimes able to stop or divert obsessions.
- 3 = Little control, rarely successful in stopping or dismissing obsessions, can only divert attention with difficulty.
- 4 = No control, experienced as completely involuntary, rarely able to even momentarily alter obsessive thinking.

*"The next several questions are about your compulsive behaviors."*

**6. TIME SPENT PERFORMING COMPULSIVE BEHAVIORS**

Q: "How much time do you spend performing compulsive behaviors?" When rituals involving activities of daily living are chiefly present, ask: "How much longer than most people does it take to complete routine activities because of your rituals?" When compulsions occur as brief, intermittent behaviors, it may be difficult to assess time spent performing them in terms of total hours. In such cases, estimate time by determining how frequently they are performed. Consider both the number of times compulsions are performed and how many hours of the day are affected. Count separate occurrences of compulsive behaviors, not number of repetitions; e.g., a patient who goes into the bathroom 20 different times a day to wash his hands 5 times very quickly, performs compulsions 20 times a day, not 5 or  $5 \times 20 = 100$ . Ask: "How frequently do you perform compulsions?" In most cases compulsions are observable behaviors (e.g., hand washing), but some compulsions are covert (e.g., silent checking).

- 0 = None.
- 1 = Mild (spends less than 1 hour/day performing compulsions), or occasional performance of compulsive behaviors.

- 2 = Moderate (spends 1 to 3 hours/day performing compulsions), or frequent performance of compulsive behaviors.
- 3 = Severe (spends more than 3 and up to 8 hours/day performing compulsions), or very frequent performance of compulsive behaviors.
- 4 = Extreme (spends more than 8 hours/day performing compulsions), or near constant performance of compulsive behaviors (too numerous to count).

**7. INTERFERENCE DUE TO COMPULSIVE BEHAVIORS**

Q: "How much do your compulsive behaviors interfere with your social or work (or role) functioning? Is there anything that you don't do because of the compulsions?" If currently not working, determine how much performance would be affected if patient were employed.

- 0 = None.
- 1 = Mild, slight interference with social or occupational activities, but overall performance not impaired.
- 2 = Moderate, definite interference with social or occupational performance, but still manageable.
- 3 = Severe, causes substantial impairment in social or occupational performance.
- 4 = Extreme, incapacitating.

**8. DISTRESS ASSOCIATED WITH COMPULSIVE BEHAVIOR**

Q: "How would you feel if prevented from performing your compulsion(s)?" Pause. "How anxious would you become?" Rate degree of distress patient would experience if performance of the compulsion were suddenly interrupted without reassurance offered. In most, but not all, cases, performing compulsions reduces anxiety. If, in the judgment of the interviewer, anxiety is actually reduced by preventing compulsions in the manner described above, then ask: "How anxious do you get while performing compulsions until you are satisfied they are completed?"

- 0 = None.
- 1 = Mild, only slightly anxious if compulsions prevented, or only slight anxiety during performance of compulsions.
- 2 = Moderate, reports that anxiety would mount but remain manageable if compulsions prevented, or that anxiety increases but remains manageable during performance of compulsions.
- 3 = Severe, prominent and very disturbing increase in anxiety if compulsions interrupted, or prominent and very

disturbing increase in anxiety during performance of compulsions.

- 4 = Extreme, incapacitating anxiety from any intervention aimed at modifying activity, or incapacitating anxiety develops during performance of compulsions.

**9. RESISTANCE AGAINST COMPULSIONS**

Q: "How much of an effort do you make to resist the compulsions?" Only rate effort made to resist, not success or failure in actually controlling the compulsions. How much the patient resists the compulsions may or may not correlate with his/her ability to control them. Note that this item does not directly measure the severity of the compulsions; rather it rates a manifestation of health, i.e., the effort the patient makes to counteract the compulsions. Thus, the more the patient tries to resist, the less impaired is this aspect of his/her functioning. If the compulsions are minimal, the patient may not feel the need to resist them. In such cases, a rating of "0" should be given.

- 0 = Makes an effort to always resist, or symptoms so minimal doesn't need to actively resist.
- 1 = Tries to resist most of the time.
- 2 = Makes some effort to resist.
- 3 = Yields to almost all compulsions without attempting to control them, but does so with some reluctance.
- 4 = Completely and willingly yields to all compulsions.

**10. DEGREE OF CONTROL OVER COMPULSIVE BEHAVIOR**

Q: "How strong is the drive to perform the compulsive behavior?" Pause. "How much control do you have over the compulsions?" In contrast to the preceding item on resistance, the ability of the patient to control his/her compulsions is more closely related to the severity of the compulsions.

- 0 = Complete control.
- 1 = Much control, experiences pressure to perform the behavior but usually able to exercise voluntary control over it.
- 2 = Moderate control, strong pressure to perform behavior, can control it only with difficulty.
- 3 = Little control, with strong drive to perform behavior, must be carried to completion, can only delay with difficulty.
- 4 = No control, drive to perform behavior experienced as completely involuntary and overpowering, rarely able to even momentarily delay activity.