Obsessive-Compulsive Disorder

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OVERVIEW OF DISORDER

Diagnostic Criteria

According to the text revision of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders DSM-IV-TR (American Psychiatric Association, 2000), obsessive-compulsive disorder (OCD) is characterized by recurrent obsessions and/or compulsions that interfere substantially with daily functioning. Obsessions are “persistent ideas, thoughts, impulses, or images that are experienced as intrusive and inappropriate and cause marked anxiety or distress” (p. 457). Obsessional content is sometimes categorized into six areas including: aggression (fears of harming others), contamination, sex, hoarding/saving, religion, and symmetry/exactness. For example, in one sample of OCD patients, 69% had aggressive obsessions, 57% had contamination obsessions, 53% symmetry/exactness obsessions, 34% somatic obsessions, 30% hoarding obsessions, and 24% religious obsessions (Antony, Downie, & Swinson, 1998). However, having obsessions with this content alone is not sufficient for a diagnosis of OCD. In fact, nearly 90% of the general population report thoughts with similar content (Ladouceur et al., 2000; Rachman & De Silva, 1978). What distinguishes OCD obsessions from nonclinical obsessions are the greater frequency, intensity, and discomfort.

People with OCD attach much greater meaning and threat to these thoughts than the general population. Individuals with OCD vary widely in how strongly they believe that their obsession concerns are realistic; only 4% believe with absolute certainty that their feared consequences will actually occur (E. B. Foa et al., 1995), while most acknowledge to varied degrees that their reactions to the thoughts are excessive or unreasonable. The OCD thoughts, impulses, or images are not simply excessive worries about real-life problems as in generalized anxiety disorder (GAD) and are not consistent with the individual’s self-perception (ego-dystonic or inappropriate).

In addition to frequent obsessions, most individuals with OCD (98%) engage in actions (compulsions) to reduce discomfort from obsessions (E. B. Foa et al., 1995). Compulsions are “repetitive behaviors or mental acts of which the goal is to prevent or reduce anxiety or distress” (p. 457). As in the case of obsessions, compulsions are also often grouped into categories including: cleaning, checking, repeating, counting, ordering/arranging, and hoarding/collating. The most common compulsion reported by patients with OCD is checking (Ruscio, Stein, Chiu, & Kessler, 2010). See Table 13.1 for other common obsessions/compulsions (Ruscio et al., 2010).
TABLE 13.1  Distribution of OCD Symptoms

<table>
<thead>
<tr>
<th>% of OCD Cases Reporting Each O/C</th>
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<tbody>
<tr>
<td>Checking</td>
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<tr>
<td>Hoarding</td>
</tr>
<tr>
<td>Ordering</td>
</tr>
<tr>
<td>Moral</td>
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<tr>
<td>Sexual/religious</td>
</tr>
<tr>
<td>Contamination</td>
</tr>
<tr>
<td>Hamming</td>
</tr>
<tr>
<td>Illness</td>
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<tr>
<td>Other</td>
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For most patients with OCD, compulsions are functionally linked to the obsession/s. For example, a person with a fear of contamination may resort to washing their hands to prevent harm or to reduce discomfort. As noted earlier, many patients report excessive checking. Interestingly, these patients often report memory impairment driving them to recheck tasks. However, studies suggest that this low confidence in memory is not associated with general memory impairment (MacDonald, Antony, Macleod, & Richter, 1997; McNally & Kohlbeck, 1993). The DSM-IV-TR criteria for OCD include obsessions or compulsions that are recognized as unreasonable or excessive; cause significant interference or distress; and are not better accounted for by another Axis I, substance, or general medical condition.

Demographic Variables

It is estimated that between 2 and 3 million people are suffering from OCD in the United States. The National Comorbidity Survey Replication (NCS-R) showed that approximately 1.6% of the United States population reported OCD at some point in their lives (Kessler, Berglund, et al., 2005), with 1% of the sample experiencing obsessive-compulsive disorder within the last year (Kessler, Chiu, Demler, Merikangas, & Walters, 2005). Prevalence of OCD is similar across ethnic and national groups. For example, a recent sample of 3,417 African Americans showed an OCD lifetime prevalence of 1.6% (Himle et al., 2008). Interestingly, while prevalence rates of OCD among African Americans were identical to the overall prevalence in the NCS-R, age of onset was later (mean = 31.8 years old) and use of mental health services was much lower, resulting in greater disability. Studies using different diagnostic systems (e.g., ICD-10) in various countries find roughly similar rates (see Figure 13.1).

Unlike many other anxiety disorders, males and females are equally represented in OCD populations (Rasmussen & Tsuang, 1986). However, onset is often earlier in males (13–15) than females (20–24) (Rasmussen & Eisen, 1990). Age of onset can be as young as 2 years old but most often occurs in early adolescence to young adulthood (Rasmussen & Eisen, 1990). As in the case of several mental disorders, OCD often appears to coincide with major stressors. In approximately 60% of cases, OCD follows a stressful experience (Kolada, Bland, & Newman, 1994; Rachman, 1997), traumatic life experience (De Silva & Marks, 1999; Rheaume, Freeston, Léger, & Ladouceur, 1998), or pregnancy and childbirth (Wisner, Pinedi, Gigliotti, & Hanusa, 1999).

Unfortunately, research suggests that without treatment the natural course of OCD is chronic (Antony et al., 1998; Eisen & Steketee, 1998). Indeed, most patients continue to meet full criteria for OCD or still show residual symptoms over time (Steketee, Eisen, Dyck, Warshaw, & Rasmussen, 1999).

Impact of Disorder

Obsessive-compulsive disorder results in severe personal distress and interferes with employment, relationships, and the daily activities of living (Ruscio et al., 2010). Individuals with severe OCD report significant impairment in home (100%), work (80%)
relationships (87%), and social life (87%) (Ruscio et al., 2010). One study showed that 22% of treatment-seeking participants with OCD were unemployed compared to the 6% unemployment rate for the U.S. general population at the time (Koran, Thienemann, & Davenport, 1996). Another study showed an even higher unemployment rate (40%) among patients with OCD (Steketee, Grayson, & Foa, 1987). OCD patients are also overrepresented in health-care populations. One survey showed that OCD patients saw dermatologists and cardiologists more often than the general public and even more than individuals with panic disorder or GAD (Friedman, Hatch, Paradis, Popkin, & Shalita, 1993; Kennedy & Schweb, 1997). Such high medical utilization, unemployment, and lost productivity due to OCD cost the U.S. economy billions of dollars each year (Koran, 2000; Leon, Porter, & Weissman, 1995). It is estimated that in 1990 the direct and indirect cost of OCD to the U.S. economy was $8.4 billion (DuPont, Rice, Shiraki & Rowland, 1995). OCD is considered one of the top 10 causes of disability worldwide (Lopez & Murray, 1998).

Individuals with OCD may struggle with obsessions and compulsions for up to 17 hours a day or more (Gallup, 1990). Not surprisingly, this time commitment and distress often interferes with interpersonal relationships. Half of OCD sufferers report losing friends and a quarter say that OCD caused the end of an intimate relationship (Gallup, 1990). This is consistent with other findings that approximately 60% of OCD patients report difficulty maintaining relationships (Calvocoressi et al., 1995). Celibacy rates are also elevated in OCD populations even relative to other anxiety disorders (Steketee et al., 1987), and approximately half of married patients with OCD report significant marital distress (Emmelkamp, De Haan, & Hoogduin, 1990; Riggs, Hiss, & Foa, 1992).

Comorbidity among patients with OCD is more the rule than the exception. The most recent finding is that a full 90% of respondents with OCD meet criteria for at least one additional DSM-IV disorder (Ruscio et al., 2010). See Table 13.2 for lifetime comorbidity of OCD with other DSM-IV disorders (data from Ruscio et al., 2010).

Anxiety disorders were the most common additional diagnosis, followed by mood disorders, impulse-control disorders, and substance use disorders. Previous studies show similarly high rates of comorbidity, with about half of all patients with OCD meeting criteria for at least one other Axis I disorder (Lucey, Bucher, Clare, & Dinan, 1994; Rasmussen & Eisen, 1990). For example, one study showed that 57% of patients with OCD had another
TABLE 13.2 Comorbidity of OCD

<table>
<thead>
<tr>
<th>Disorder</th>
<th>% OCD Cases With Comorbid Disorder</th>
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<tbody>
<tr>
<td>Any anxiety disorder</td>
<td>75.8</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>20.0</td>
</tr>
<tr>
<td>Specific phobia</td>
<td>42.7</td>
</tr>
<tr>
<td>Social phobia</td>
<td>43.5</td>
</tr>
<tr>
<td>Generalized anxiety disorder</td>
<td>8.3</td>
</tr>
<tr>
<td>Posttraumatic stress disorder</td>
<td>19.1</td>
</tr>
<tr>
<td>Any mood disorder</td>
<td>63.3</td>
</tr>
<tr>
<td>Major depressive disorder</td>
<td>40.7</td>
</tr>
<tr>
<td>Dysthymic disorder</td>
<td>13.1</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>23.4</td>
</tr>
<tr>
<td>Any substance use disorder</td>
<td>38.6</td>
</tr>
<tr>
<td>Alcohol abuse/dependence</td>
<td>38.6</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>23.7</td>
</tr>
<tr>
<td>Drug abuse/dependence</td>
<td>21.7</td>
</tr>
<tr>
<td>Drug dependence</td>
<td>13.9</td>
</tr>
<tr>
<td>Any disorder</td>
<td>90.0</td>
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</table>

current Axis I diagnosis (Brown, Campbell, Lehman, Grisham, & Mancill, 2001) and 86% had lifetime comorbidity. Weissman et al. (1994) found that half of individuals with OCD also meet criteria for another anxiety disorder and approximately 30% also meet criteria for major depression (Crino & Andrews, 1996; Weissman et al., 1994). Eating disorders are also common among women with OCD. Ten percent of women with OCD have a history of anorexia (Kasvikis, Tsakiris, & Marks, 1986) and a third had a history of bulimia (Hudson & Pope, 1987).

Although effective treatment significantly improves quality of life among individuals with OCD (Bystritsky et al., 1999), only a minority of patients (29%) receive treatment specifically for OCD (Ruscio et al., 2010), and many suffer for years with OCD before receiving adequate treatment. People with OCD may feel excessive shame and hide their symptoms from others, attributing their struggles to personal weakness or failure (Pallanti, 2008). On average, OCD patients suffer 8 to 10 years before seeking treatment for the disorder (Marques et al., 2010; Rasmussen & Tsuang, 1986).

Assessment

Assessment of OCD is usually accomplished through a series of clinical interviews and self-report measures. Here we only cover the most common assessment tools. For a comprehensive list of other measures, please see the Practitioner's Guide to Empirically Based Measures of Anxiety (Antony, Orsillo, & Roemer, 2001).

Yale-Brown Obsessive-Compulsive Scale

The most widely used OCD outcome measure is the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) (Goodman, Price, Rasmussen, Mazure, Delgado, et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann, et al., 1989). It is a semi-structured interview that takes approximately 30 minutes to complete. The Y-BOCS consists of a checklist of obsessions and compulsions and a 10-item severity scale. The checklist is most often administered pretreatment and helps in treatment planning. The obsessions are listed in the categories mentioned previously, including: aggressive (fear of harming others), contamination, sexual, hoarding/saving, religious, symmetry or exactness, somatic, and miscellaneous. The compulsion list is organized into categories including: cleaning/washing, checking, repeating, counting, ordering/arranging, hoarding/collecting, and miscellaneous. The severity scale rates the time occupied by obsessions and compulsions; how much they interfere with functioning, how much distress they cause, attempts to resist, and level of control. Items are rated on a 5-point scale ranging from 0 (no symptoms) to 4 (severe symptoms). The severity scale is usually administered pretreatment and often periodically throughout treatment. The total score is calculated by adding items 1 through 10, yielding scores between 0 and 40.
The Y-BOCS shows good reliability ($\alpha = 0.88$ to 0.91) and validity (Goodman, Price, Rasmussen, Mazure, Delgado, et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann, et al., 1989; McKay, Danyko, Neziroglu, & Yaryura-Tobias, 1995), including across multiracial/ethnic groups in the United States (Washington, Norton, & Temple, 2008). Scores above 16 may be considered in the clinical range and the mean for OCD patients is 21.9 ($SD = 8$). Scores for healthy people without OCD are quite low (Mean = 0.31, $SD = 1.21$) (Simpson et al., 2006). Alternative forms of the Y-BOCS include a self-report version (Baer, 2000), a computerized version (Rosenfeld, Dar, Anderson, Kobak, & Greist, 1992), a child version (Schall et al., 1997), a body dysmorphic disorder version (Phillips et al., 1997), a version for heavy drinkers (Modell, Glaser, Cyr, & Mounzi, 1992), a version for individuals who shop compulsively (Monahan, Black, & Gabel, 1996), and a version for individuals with trichotillomania (Stanley, Prather, Wagner, & Swann, 1993). In addition, the Y-BOCS has been translated into approximately 25 languages (R. W. Lam, Michalak, & Swinson, 2005). A new version of the Y-BOCS (Y-BOCS-II; Storch et al., 2010) is under development.

**Obsessive-Compulsive Inventory-Revised (OCI-R)**

The Obsessive-Compulsive Inventory-Revised (OCI-R) is an 18-item self-report measure of distress from obsessions and compulsions (E. B. Foa et al., 2002). The total score ranges between 0 and 72. The questionnaire also includes six subscales, including: washing, checking, ordering, obsessing, hoarding, and neutralizing. Subscale scores range between 0 and 12. The OCI-R has shown good internal consistency ($\alpha = 0.81$ to 0.93), test-retest reliability ($r = 0.82$ to 0.84), and discriminant validity (E. B. Foa et al., 2002). A clinical cutoff score of 21 differentiates OCD patients from nonpatients (E. B. Foa et al., 2002). The OCI-R has been translated into Spanish (Fullana et al., 2005), Italian (Sca et al., 2009), Korean (Lim et al., 2008), German (Güner, Leonhart, & Ecker, 2007, 2008), Icelandic (Smár, Ólason, Eypórsdóttir, & Frölund, 2007), and French (Zermatten, Van der Linden, Jermann, & Ceschi, 2006).

**Maudsley Obsessional Compulsive Inventory (MOC or MOCI)**

The Maudsley Obsessional Compulsive Inventory (MOC or MOCI) contains 30 dichotomously scored (true/false) items that assess obsessive-compulsive symptoms in the areas of contamination fears and washing behaviors, checking, and worries (Hodgson & Rachman, 1977). The MOCI takes 5 minutes to complete and scores can range from 0 to 30. The means for OCD patients (Richter, Cox, & Direnfeld, 1994) and student samples (Dent & Salkovskis, 1986) are 13.67 ($SD = 6.01$) and 6.32 ($SD = 3.92$), respectively. Reliability (Richter et al., 1994) and validity (Hodgson & Rachman, 1977) are acceptable, although this measure has been shown to have questionable validity when used with African Americans (Thomas, Turkheimer, & Oltmanns, 2000).

**Padua Inventory—Washington State University Revision (PI-WSUR)**

The original Padua Inventory contained 60 items about obsessions and compulsions on a 5-point rating scale in four main areas: contamination fears, checking, impaired control over mental activities, and worries about losing control over one's behaviors (Sanavio, 1988). Two revised versions of the scale have been published including the 41-item PI-R (Van Oppen, Hoekstra, & Emmelkamp, 1995) and the 39-item PI-WSUR (Burns, Keortge, Formea, & Sternberger, 1996). The mean total score for individuals with OCD is 54.93 ($SD = 16.72$). The scale takes approximately 10 minutes to complete. Reliability and validity for the scale are good to excellent (Burns et al., 1996). This measure has some problematic items and subscales when used with African Americans (M. T. Williams & Turkheimer, 2007; M. T. Williams, Turkheimer, Schmidt, & Oltmanns, 2005).
psychodynamic therapy and psychoanalysis, the most current expert guidelines note that "there is doubt as to whether it has a place in mental health services for OCD" at all (National Institute for Health and Clinical Excellence, 2006, p. 104). Therefore the remainder of this chapter will focus on cognitive behavioral approaches to treatment.

Cognitive Behavior Therapy (CBT)

Numerous behavioral approaches, based on learning theory, were developed to alleviate OCD-related distress, with varying degrees of success. The goal was to reduce fear by exposing the patient to the very thing that was feared or avoided until the patient adapted, or habituated, to the situation. Systematic desensitization, developed by Wolpe (1969), was useful for several types of phobias and was also applied in the treatment of OCD. This approach involved applied relaxation during gradual exposure (primarily imaginal exposure) to feared items and situations.

The goal of desensitization is to eliminate the patient's anxiety, which in turn eliminates the need for compulsions or rituals. The important components of treatment are to first create a hierarchy of anxiety-provoking stimuli; second, to train the patient in physical relaxation techniques; and third, to present items from the hierarchy to the patient while in the relaxed state. The theory is that anxiety and relaxation are incompatible, therefore in the face of the treatment the anxiety will dissipate. Compulsions are not addressed directly because in theory the rituals will no longer be necessary once the anxiety is gone (Wolpe, 1969). Systematic desensitization produced only limited success with OCD.

Aversive therapy consists of punishment for an undesirable response. The theory behind this therapy is that an activity that is repeatedly paired with an unpleasant experience will be extinguished. Aversive experiences that have been used to change behaviors include drugs that induce nausea (i.e., disulfiram for alcohol dependence, phobias, or aversive conditioning). The use of aversive conditioning has been termed "shock therapy" and "shock treatment," although neither term is generally used today, as this practice is condemned by the medical and psychological communities. (J. N. Black, 1997).

Perhaps the most famous aversion therapist is B. F. Skinner, who developed a treatment for alcoholics based on his aversion theory. Skinner was the first to systematically try to change the behavior of people who desire to change their behavior. The method of behavior change involves aversion therapy, which is designed to eliminate the aversive stimulus by pairing a previously neutral stimulus with the noxious one. The patient is taught to tolerate the noxious stimulus, which is usually, not simply the shock, nor the aversive experience itself, but the belief that it may be aversive. The method of behavior change is exactly the opposite of aversion therapy.

Viktor Frankl, the Austrian existential therapist, has argued that the treatment of OCD is primarily a cognitive process, involving the development of new cognitive methods to replace outdated thought patterns. The therapist and patient work together to create new thought patterns that are more realistic and less intrusive. The therapist uses a variety of techniques, such as cognitive restructuring and thought stopping, to help the patient develop new ways of thinking about their world. These new thought patterns are then used to guide the patient's behavior and help them live more fulfilling lives. 

In summary, the treatment of OCD is a complex and multifaceted process that involves a variety of techniques and approaches. The goal is to help the patient develop new thought patterns, tolerate anxiety, and change their behavior in a way that is consistent with their values and goals. The treatment of OCD is a dynamic process that involves the collaboration of the therapist and patient, working together to achieve a successful outcome.
dependence), electrical shocks (i.e., for paraphilias or addictions), or any other stimuli aversive to the patient. This technique has been used in treating a variety of disorders. The most common application in OCD has been the rubber band snapping technique, whereby the patient wears a rubber band on the wrist and is instructed to snap it every time he or she has an obsessive thought, resulting in a sharp pain; thus the pain and obsession become connected (Mastellone, 1974). This method was not shown to be very effective (J. N. Lam & Steketee, 2001), resulting in many discouraged OCD patients with inflamed wrists. Thought-stopping, by having the therapist or patient shout “stop” every time the there is an obsessional rumination has also not been shown to be effective (James & Blackburn, 1995; Stern, 1978).

Perhaps the reason for the limited utility of thought-stopping can be best explained by the theories of social psychologist Daniel Wegner, who demonstrated that thought suppression exerts a paradoxical effect, whereby the person attempting to suppress a thought actually becomes preoccupied with it (Wegner, Schneider, Carter, & White, 1987). Wegner determined that the very task of suppressing a thought is difficult, leading people to grasp the thought in consciousness even as they simultaneously try to release it. When a person is no longer required to suppress a thought, and is then asked to express that thought, they do so more vigorously, mentioning it more often than if they had simply been asked to express the thought from the beginning. Thus, there are both immediate and deferred urges to become preoccupied with the very thought that is being suppressed, which is exactly what occurs in OCD.

Viktor Frankl (1975) advanced a theory called paradoxical intention, which bypasses the tendency to become obsessed with an unwanted thought by deliberately bringing it to the forefront of consciousness. This theory is based on the idea that the important part is not the obsession per se, rather the patient’s attitude toward it. With paradoxical intention, the patient is encouraged to wish for the thing that is most feared, even to the point of exaggerating it until it seems humorous. The element of humor is a deliberate and key element of Frankl’s approach. He believed, rightly, that the tendency to fight against the obsession only made it stronger, so the trick to breaking the cycle is to pursue the obsession rather than resisting it. By exaggerating and confronting the obsession, the idea eventually becomes absurd to the patient. Frankl claimed a 46% recovery rate with this technique.

The first breakthrough occurred in the 1960s, when Meyer (1966) described two patients successfully treated with a behavioral therapy program that included prolonged exposure to distressing objects and situations, coupled with strict prevention of rituals. This account was followed by several reports of a series of patients that supported Meyer’s findings (e.g., E. B. Foa & Goldstein, 1978; Meyer, Levy, & Schnurier, 1974), and additional studies were then conducted to dismantle the effects of the treatment components.

Rachman, Hodgson, and Marks (1971) reported positive results in a controlled study of 10 patients with chronic OCD that compared two types of exposure—modeling versus flooding. Participants were inpatients for 7 weeks, all of whom received relaxation as a control treatment prior to exposure. Flooding involved exposing the patient to the most feared item at the top of the hierarchy. Modeling, as described in this study, was closer to the technique used by Meyer (1966). It involved starting by confronting patients with situations that evoked relatively low levels of distress and moving gradually to situations that evoked increasingly higher distress. The patients engaged in exposure to each situation after observing the therapist doing the exposure first. Both flooding and modeling significantly reduced obsessions, but the modeling group reported less general anxiety after treatment.

I. Marks, Hodgson, and Rachman (1975) reported results of a series of studies in which
patients with OCD were treated with in vivo exposures in a partially controlled design. Treatment included 25 sessions administered over 4–12 weeks to a total of 20 inpatients. The OCD symptoms improved significantly after 3 weeks of treatment with in vivo exposure, and improvement was sustained through the follow-up period. After 2 years, three quarters of the patients were improved or much improved and five were unchanged. Relaxation exercises did not contribute to the success of the treatment, and in this study, modeling-based treatment was not better than exposure alone.

E. B. Foa and Goldstein (1978) reported successful results with a 2-week intensive outpatient treatment program for 21 OCD patients, using exposure and response prevention. Patients were treated by ongoing exposure to distressing stimuli and then prevented from engaging in rituals. In most instances, ritual prevention was monitored by relatives to ensure compliance with treatment protocols. Therapists conducted imaginal exposure of possible disasters that might result if rituals were not performed until patients reported a reduction in anxiety. Sixty-six percent of participants were symptom-free after treatment, and 20% improved partially. Only three did not benefit from the treatment program, which was attributed to overvalued ideation, or a strong belief that their fears were realistic.

The positive outcome of emerging OCD treatments was an early milestone for the promotion of CBT. The CBT researchers experimented with a number of techniques that have been refined into what is now called exposure and ritual prevention (EX/RP)—an effective psychological strategy for the treatment of OCD. The word response in EX/RP is often replaced by ritual as the word response is too broad—not all responses are compulsions. Though behaviorally based, EX/RP includes both behavioral and cognitive techniques. A more cognitive approach, that is cognitive therapy (CT), is advocated by some and may be appropriate for patients who are not responsive to behavioral strategies. However, EX/RP and CT both typically include behavioral and cognitive elements. EX/RP has been used in a variety of formats, including individual and group treatment, family-based treatment, computer-based treatment, self-help techniques, and intensive programs (NICE, 2006). The remainder of this section will describe the important components of EX/RP and CT for OCD.

In vivo exposure. Exposure is the cornerstone of EX/RP treatment. In vivo exposure has been shown to reduce obsessions and related distress (Kozak & Foa, 1996). This technique involves repeated and prolonged confrontation with situations that cause anxiety. Exposure sessions may last anywhere from 45 minutes to 2 hours. The immediate goal is for the patient to remain in the situation long enough to experience some reduction in anxiety and to realize that the feared disastrous consequences do not occur. With repeated exposures, the peak of the distress, as well as the overall distress, decreases over sessions (Kozak & Foa, 1996, p. 72–73). Thus, the patient habituates to the stimuli in two ways, within the session and between sessions.

Typically, exposure is gradual and the patient begins by facing objects and situations that result in only moderate levels of anxiety. Constructed in collaboration with the patient, the list of distress-evoking stimuli are placed in a hierarchical manner, beginning with the least distressing stimuli and gradually proceeding to more distressing ones. A rating scale of 0–100 (often called a SUDS scale for Subjective Units of Distress/Discomfort Scale) is used to rate the expected amount of distress associated with each item. After an item from the hierarchy is confronted in session with a therapist, the patient then practices self-exposure to the same item as daily homework. Once mastered, the patient faces the next progressively more distressing object or situation. The patient learns (a) that the feared consequence will not occur, (b) to better tolerate anxiety, and (c) that anxiety diminishes over time even without performing the rituals.
Imaginal exposure. In some cases it is not possible to construct an in vivo exposure to a patient's fear, and in these instances an exposure can be done in the imagination. Situations especially appropriate for an imaginal exposure are those in which the patient fears he may change in a fundamental way (i.e., shifting in sexual orientation or becoming a serial killer), cause a distal catastrophe (i.e., starting a chain of events that results in harm coming to unknown people), or that the outcome of failing to do a ritual is far in the future (i.e., going to hell or dying from cancer).

Imaginal exposure was used by E. B. Foa and Goldstein (1978) for the treatment of OCD. To conduct an imaginal exposure, the therapist and patient develop a detailed scene together based on the patient's worst fear. The story will describe a catastrophe befalling the patient and/or loved ones as a direct result of the patient's failure to perform rituals. The therapist might first recount the story aloud and then have the patient do the same, ideally in the present tense to make the events seem more real. The SUDS levels are taken at various points throughout the narrative to assure that the story is evoking enough anxiety to be productive. The exposure is typically recorded to facilitate repeated listening as homework.

Imaginal exposure is effective when it evokes the same distress in a person as the actual obsession. A person with OCD typically fights the obsession because they believe that if they entertain the ideas, the feared outcome will be more likely to occur. However, fighting the obsession only strengthens it. By repeating the distressing ideas in the form of a narrative, the person with OCD habituates to the fears and also learns that dwelling on the thoughts does not make them occur. The person gains a new perspective on the fear and is able to attend to it more objectively (E. Foa & Wilson, 2001).

Response/ritual prevention. The ritual or response prevention component involves instructions for the patient not to engage in compulsions or rituals of any sort. This is important because patients perceive that the rituals prevent the occurrence of a feared outcome. Only by stopping the rituals do patients learn that rituals do not protect them from their obsessional concerns. E. B. Foa et al. (1995) found that in the vast majority of cases rituals have a functional relationship with the obsessional thought (i.e., "washing will prevent me from becoming ill," or "if I don't wash I will be distressed forever and will fall apart"); many times this functional relationship is logical (e.g., "checking will prevent me from making mistakes") but sometimes it has a magical flavor (i.e., "If I tie my shoes four times the right way, my children will not be killed in a traffic accident"). Sometimes patients cannot articulate any negative outcome that is prevented by performing the rituals. Rather, the performance of the ritual "just feels right"; in this case the function of the ritual is to reduce anxiety or discomfort, and the disastrous consequence is psychological, such as falling apart.

Implementation of ritual prevention involves a detailed analysis of all compulsions or rituals performed by the patient. Typically patients are asked to keep daily logs of all rituals performed. The therapist uses these logs initially to identify the rituals that need to be stopped, and, as treatment progresses, it is used to identify areas of difficulty that need more therapeutic attention.

Cognitive therapy. The OCD patients feel anxious or distress when engaging with their obsessional thoughts or images, because they interpret them as warnings of events that are dangerous and likely to occur. Cognitive therapy is designed to help patients identify these automatic unrealistic thoughts and change their interpretations of the thoughts, resulting in decreased obsessions and distracting compulsions.

In the first stage of CT, patients are taught to identify their worries as obsessions and their rituals as compulsions. The patient keeps a daily diary of obsessions, called a thought record. In the thought record, patients write down their obsessions and the interpretations associated with the obsessions. Important details to record
may include what the patient was doing when the obsession began, the content of the obsession, the meaning attributed to the obsession, and what the patient did in response to the obsession (usually a compulsion).

The therapist reviews the thought records with the patient with an emphasis on how the obsession was interpreted. Using reasoning and Socratic questioning, the therapist helps the patient challenge their unrealistic beliefs. This helps the patient identify the cognitive distortion, typically a faulty assessment of danger, an exaggerated sense of responsibility, or fears that thinking something negative will make it come true (thought-action fusion).

Once patients are able to identify their obsessions and compulsions as symptoms of OCD, the therapist initiates a few behavioral experiments to disprove errors in thinking about cause and effect. For example, if a patient believes that smoking four cigarettes will prevent her family from being harmed in an auto accident, the therapist may instruct the patient to smoke only three cigarettes and then wait to see if family members are actually harmed that day in an auto accident. The therapist may then use the results of this experiment as material for discussion about other types of magical thinking. Over time, patients learn to identify and reevaluate beliefs about the potential consequences of engaging in or refraining from compulsive behaviors and subsequently begin to eliminate compulsions.

Treatment by symptom subtype. Although CBT treatments are highly effective, it is important to keep in mind that not all symptom presentations are well-represented in the treatment-outcome literature. OCD is a highly heterogeneous disorder, and there is ample evidence to suggest that some OCD subtypes respond better to contemporary CBT methods than others. For example, compulsive hoarding seems to be more resistant to treatment, and sexual obsessions may require a longer course of therapy (Abramowitz, Schwartz, Franklin, & Furr, 2003; Grant et al., 2006). Treatment of cleaning/washing and checking is best represented in the literature, whereas mental compulsions (sometimes called pure obsessional types) are underrepresented (NICE, 2006; M. T. Williams et al., 2011). It is difficult to know how well other less recognized forms of OCD respond to treatment, as people with these types of OCD are generally less likely to be identified by mental health professionals and are subsequently less likely to be included in treatment studies. There is an urgent need for more research into how to best tailor treatment to target specific OCD subtypes.

Cultural variations in treatment. Most randomized trials of OCD patients have been conducted in the United States and Europe (i.e., Cottraux et al., 2001; De Araujo, Lo, Marks, & Deale, 1995; Emmelkamp, Visscher, & Hoekstra, 1988; E. B. Foa et al., 2005), with scattered reports from a handful of other areas, most notably Japan (Nakatani et al., 2005), India (Mehta, 1990), and Brazil (Cordiol et al., 2003). When treatments are conducted with non-Western patients, cultural adaptations may be necessary. For example Mehta (1990) found that outcomes for Indian patients were improved when CBT was administered according to a family-based model, taking into consideration the centrality of the patient’s family in this particular cultural group.

In North America, the United States is 68% non-Hispanic European Americans, but all North American RCTs have consisted of predominantly European Americans. African Americans and Hispanic groups remain under-represented in treatment studies, and OCD in minority populations is not well understood (Nydéger & Paludi, 2006; M. Williams, Yan, Powers, & Foa, 2010). This fact compromises what we know about the generalizability of OCD treatments to other ethnic groups.

Consensus Panel Recommendations

A number of expert consensus guidelines were published over the past 30 years for the psychological treatment of OCD. These guidelines have evolved from the 1960s and 1970s to the 1980s and beyond, and the QoL improvements for this disorder have been substantial. At this meeting, we concluded that CBT is the strongest evidence-based therapy for OCD. When the CBT protocol is followed, the majority of patients do well. For those patients with severe OCD, other treatments are available, including pharmacological and other behavioral treatments. When the CBT protocol is followed, however, the majority of patients do well. For those patients with severe OCD, other treatments are available, including pharmacological and other behavioral treatments. When the CBT protocol is followed, however, the majority of patients do well.
have evolved over time with increasing evidence from emergent literature. The first guideline entered into widespread use was developed by the Quality Assurance Project (QAP) of Austria and was published in 1985 (QAP, 1985). At this time, the success of the drug clomipramine (Anafranil) had been established but there was still considerable uncertainty about the primary of CBT as a psychotherapeutic treatment for OCD. The guidelines state, “for those patients who have no significant personality disorder, either short-term dynamic psychotherapy or cognitive behaviour therapy is indicated if the illness has lasted less than a year or if obsessions are the predominant symptoms. When compulsions predominate, particularly when they have been present for more than a year, response prevention is the treatment of choice. Tricyclic antidepressants and cingulotomies are also worthy of consideration in patients with persistent symptoms” (QAP, 1985, p. 240). The recommendation for rhizotomy demonstrates the traditional perception among professionals that OCD is a treatment-resistant condition.

Over the next 10 years, the role of SSRIs and CBT had become well-established. In a 1996 treatment manual for OCD, Kozak and Foa wrote, “Neither psychodynamic psychotherapy nor a wide variety of pharmacotherapies has been successful with [OCD]. . . There are two treatments with established efficacy: behavior therapy by prolonged exposure and pharmacotherapy with SSRIs” (Kozak & Foa, 1996, p. 71).

In the year, the landmark expert consensus guidelines for OCD were published in the Journal of Clinical Psychiatry (Frances, Docherty, & Kahn, 1997). These guidelines were the product of survey feedback from 69 expert OCD clinicians who were sent a questionnaire about the best treatment for OCD. The survey enjoyed an exceptional response rate of 87%. Potential treatments presented to experts were rated as being “treatment of choice,” followed by first-line, second-line, and third-line approaches. The study found that the expert clinicians preferred to begin treating OCD patients with either CBT alone or a combination of CBT and SRI medication, where the inclusion of medication depended on the severity of symptoms and age of the patient. With milder OCD, experts preferred to use CBT alone, and as severity increased, the experts were more likely to recommend the addition of medication or medication alone. Combined treatment consisting of CBT and SRI medication was the favored approach for OCD. Cognitive therapy was recommended for targeting dysfunctional beliefs and improving compliance with behavioral assignments. Thirteen to 20 sessions of individual therapy with between session homework assignments was the most recommended format for CBT, but with severe OCD or when treatment must be done quickly, intensive CBT (daily CBT for 3 weeks) was recommended (Frances, Docherty, & Kahn, 1997).

In 2003, Greist et al. (2003) published expert guidelines for the long-term treatment of OCD in adults based on the proceeding from the World Council of Anxiety meeting held in 2000 and a review of the literature. Both psychotherapy and pharmacotherapy were recommended for OCD, either alone or in combination, with cognitive behavior therapy (exposure and response prevention) indicated as the psychotherapy of choice.
evidence base for cognitive and/or behavioural therapies, although there are important limitations to the latter. Based on current evidence, ensuring access to adequate cognitive and/or behavioural therapies would currently appear to provide people with OCD with the best chance of improvement through psychological therapies” (NICE, 2006, p. 108).

Randomized Controlled Trials of CBT for OCD

The earliest RCTs for OCD are described previously and include seminal studies by Rachman et al. (1971), I. Marks et al. (1975), and E. B. Foa and Goldstein (1978), which established exposure and ritual prevention as effective treatment for OCD. These studies are sometimes difficult to compare to more contemporary studies because DSM-IV criteria for OCD and well-known outcome measures, such as the Y-BOCS, were not yet available. Nonetheless, these studies formed the foundation of future work by establishing effective CBT treatment approaches.

By the 1980s, CBT gained wide acceptance as an effective treatment for OCD. However, it was not clear which components of CBT were the most effective. Research clinicians differed in how to best approach treatment, and so subsequent trials tended to compare one form of CBT with another. Here we describe some of the major RCTs that were conducted. This does not describe every study that has been published, and only randomized, controlled psychotherapy studies, with nine or more subjects per cell are included. Studies are reviewed by topical area.

Exposure Versus Ritual Prevention

Although EX/RP was shown to be an effective treatment for OCD, it was not clear if the exposures, ritual prevention, or both were the essential ingredients of the treatment. E. B. Foa, Steketee, and Grayson (1984) conducted a randomized trial with OCD patients (N = 32) who had contamination fears and cleaning rituals severe enough to interfere with daily functioning. Participants were assigned to one of three treatment groups, in vivo exposure only, ritual prevention only, or a combination of the two techniques. Each person received daily treatment for 2 hours per day, over 3 weeks, for a total of 15 sessions. Each patient also received two home visits by the therapist of 4 hours each. All groups experienced significant improvement posttreatment, with the combined EX/RP group showing the greatest improvement with the best maintenance of gains at follow-up. Thus it was concluded that both exposure and ritual prevention were important components of OCD treatment.

Cognitive Therapy Compared to In Vivo Exposure

The first randomized control study comparing cognitive therapy to in vivo exposure was conducted by Emmelkamp et al. (1988). The form of cognitive therapy used in his study was Rational Emotive Therapy (RET), which focused on helping patients analyze irrational thoughts, followed by work to confront and modify the thoughts to reduce distress. Patients were 20 OCD patients with no prior CBT. Both treatments consisted of 10 1-hour sessions of treatment over 8 weeks, followed by a posttest and a follow-up assessment one month later. Treatment resulted in moderate improvements in both groups that were maintained at 1-month follow-up. Improvement was measured by the MOCI and other scales of cognitions and anxiety. No significant differences were found between treatments. One notable weakness in the study is that treatment groups were not well matched on age (12-year group age difference), homework assigned was less than typical for CBT, and the small sample size (nine per cell). After the 1-month follow-up, two thirds of the patients received more sessions, according to their clinical need, so longer-term maintenance of gains could not be determined.

Emmelkamp and Beens (1991) conducted a second study of RET and in vivo exposure. Participants were randomized to either (a)
4 weeks of CT followed by 4 weeks of CT plus in vivo exposure or (b) 4 weeks of in vivo exposure followed by 4 more weeks of in vivo exposure. Patients were 21 OCD patients with no prior CBT. Six 1-hour sessions of treatment were given over 4 weeks, followed by a waiting period of 4 weeks before the crossover treatment was administered for an additional 4 weeks. Improvement was measured by the MOCI and other scales of cognitions and anxiety. Again, both treatments were equally effective with no significant differences at the midpoint or posttreatment. Although the treatment groups were better matched in this study, there were still some issues such as a high dropout rate, homework assigned was less than typical for CBT, and a small sample size (10–11 per cell). Moreover, the CT condition included some exposure (to test unrealistic fears), whereas the in vivo condition included neither CT nor imaginal exposure.

Yan Opper et al. (1995) conducted a treatment study comparing CT to EX/RP. Seventy-one OCD patients were randomly assigned to either CT or in vivo exposure. Sixteen 45-minute sessions were administered. In the CT condition, treatment focused on “overestimation of danger and inflated personal responsibility,” and after session 6, behavioral experiments were included to test the basis of unrealistic beliefs. The exposure condition consisted of EX/RP working up a hierarchy of feared and avoided situations, with no discussion of feared consequences until after session 6. Outcome measures included the Y-BOCS and Padua Inventory. Patients in both groups improved significantly, and CT patients did better on all measures of improvement with significant change on the Y-BOCS and Padua Inventory. Weaknesses of the study include lack of follow-up and the duration of the sessions was shorter than is typical for CBT.

Cottraux et al. (2001) conducted a study involving 62 OCD patients who received 20 sessions of CT or EX/RP for OCD. Treatment included 4 weeks of intensive treatment (16 hours) and 12 weeks of maintenance (4 hours). The EX/RP and CT produced equal improvements in OCD symptoms after 4 weeks, based on the Y-BOCS, although EX/RP patients showed greater improvement on a measure of intrusive thoughts and CT patients were more improved in anxiety and depression. By week 52, most of the differences had vanished, but the EX/RP group had lower Y-BOCS scores and the CT group had less depression as measured by the BDI. The cognitive treatment included some behavioral techniques, such as behavioral experiments to test unrealistic fears and cognitive schemas, but no cognitive techniques were described as part of the EX/RP treatment.

In another dismantling study of CT and exposure for OCD (Vogel, Stiles, & Gotestam, 2004), 35 outpatients with OCD were randomly assigned to receive exposure plus relaxation, exposure plus cognitive therapy, or wait-list. The CBT portion of the treatment consisted of 2-hour sessions held twice a week for 6 weeks using EX/RP alone with either CT or relaxation; this was followed by 10 more sessions of in vivo and/or imaginal exposure. Outcome measures included the Y-BOCS and BDI. The two CBT treatments were equally effective, and patients showed significant improvement posttreatment and through 12-month follow-up. It should be noted, however, that this study suffered from a high attrition rate among treated patients, particularly in the EX/RP plus relaxation group.

Imaginal Exposure Compared to In Vivo Exposure

E. B. Foa, Steketee, Turner, and Fischer (1980) examined the effects of imaginal exposure added to in vivo exposure. The study included 15 OCD patients with checking rituals. The first group received 90 minutes of uninterrupted imaginal exposure, which focused on disastrous consequences, followed by 30 minutes of exposure to in vivo situations that would normally result in compulsive rituals. The second group was given 2 hours of in vivo exposure only. Both groups were prohibited from performing rituals. At the end of treatment, both groups showed equal improvement,
but at follow-up, those who received only the in vivo exposure showed some deterioration. Thus, imaginal exposure seemed to contribute to the maintenance of treatment gains.

Subsequently, Fox, Steketee, and Grayson (1985) compared imaginal exposure versus in vivo exposure. Nineteen OCD patients were randomly assigned to one of two treatment conditions, imaginal or in vivo exposure. No response prevention was instituted. Participants received 15 2-hour sessions over a 3-week period, and in the fourth week received two home visits. Patients made moderate improvements and continued to improve at follow-up, an average of 10 months after treatment. Improvement was based on several assessor ratings and the MOCI, which indicated no significant differences between treatments at posttest or follow-up. It was concluded that both techniques offered important and lasting benefits to patients with OCD.

De Araujo et al. (1995) examined the use of imaginal exposure in 46 British patients with OCD. Participants were given 9 weekly sessions of EX/RP, each session lasting 1.5 hours. Half were given 1 hour of in vivo exposure and 30 minutes of imaginal, and half received 1.5 hours of strictly in vivo exposures. All participants were provided psychoeducation and assigned 90 minutes of homework daily, based on the exposure that was done in session. Outcome measures included the Y-BOCS. Follow-up was reported at 20 and 32 weeks. There were no significant group differences at any time-point, and no significant differences in relapse. For the most part, participants maintained their gains. There was no control group in this study.

EX/RP Compared to Wait-List or Placebo

One small study of EX/RP for OCD study compared exposure and response prevention with a general anxiety management treatment program as a credible control condition for OCD among 18 outpatients (Lindsay, Crino, & Andrews, 1997). The anxiety management condition consisted of relaxation techniques, breathing exercises, and problem-solving about non-OCD life stressors. Participants were given 15 hours of treatment over a 3-week period, each with 1 hour per day of homework. The EX/RP group showed significant improvements based on the Y-BOCS, MOCI, and Padua Inventories. No long-term follow-up results were reported.

Freeston et al. (1997) conducted a study to test the effectiveness of EX/RP on mental rituals. Twenty-nine OCD patients with only mental rituals were randomly assigned to treatment or wait-list conditions. Patients in the treatment condition received cognitive behavior therapy consisting of psychoeducation about the occurrence and maintenance of obsessive thoughts, exposure (in vivo and imaginal), response prevention of all compulsions (including mental neutralizing strategies), cognitive restructuring, and relapse prevention. Based on Y-BOCS and Padua Inventory scores, treated patients improved significantly over pretest and wait-list, and treatment gains were maintained at 6-month follow-up. Thus EX/RP was shown to be effective with a group of patients that were often considered resistant to treatment.

Individual EX/RP Compared to Family EX/RP

Because the family can play such an important role in the functioning of an OCD patient, Mehta (1990) conducted a study to test whether training family members as co-therapists would be a helpful intervention. Thirty patients with a prior unsuccessful trial of medication for OCD were randomized to either individual or family-based treatment. Treatment consisted of 24 sessions of EX/RP, twice per week. In the family-based condition, family members were provided with psychoeducation, given specific instructions on how to best support the patient, instructed not to participate in rituals, and one family member was taught to be the co-therapist. Both the MOCI and the OCD-I treatment outcome measures showed that the family condition was more effective than the individual condition.

Self-Administered EX/RP

McLennan et al. (1997) compared groups of six to eight patients for 18 sessions of 2.5 hours each. Some sessions were group meetings and were not used as measures. Y-BOCS and OCD-I treatment outcomes showed that the group condition improved significantly over the wait-list and the individual treatment conditions. Patients in the group condition were more likely to achieve remission of OCD symptoms. Group treatment was more effective than the individual condition over the follow-up period.
Both groups improved significantly on the MOCI from baseline, but the family-based treatment resulted in a superior outcome with more durable gains.

**Group Treatments for OCD**

McLean et al. (2001) examined the effects of cognitive therapy compared with EX/RP in the group treatment of 76 patients and a wait-list control. Treatments were conducted in groups of six to eight participants with two therapists, for 12 consecutive weeks, and sessions were 2.5 hours each. The CT treatment included some behavioral experiments, but no mention was made as to whether cognitive elements were included in the EX/RP condition. Outcome measures included the clinician version of the Y-BOCS as well as a self-report version. Both treatments resulted in improvement over baseline, but EX/RP was found to be superior to CT, and this remained true at the 3-month follow-up.

Cordolii et al. (2003) conducted a study of group treatment for OCD with 47 patients who were randomly assigned to 12 weekly sessions of group EX/RP or wait-list. Group EX/RP involved eight people per group with two therapists. Improvement was assessed based on Y-BOCS scores and other measures. The group EX/RP condition outperformed the wait-list at posttreatment and at the 3-month follow-up period.

**Self-Administered CBT for OCD**

Greis et al. (2002) conducted a study comparing self-directed therapies, including one administered by a computerized voice-response system. One purpose of this investigation was to determine if the treatment of OCD could be done in a more cost-effective manner that would make it more accessible to patients. In this large study, 218 patients from eight different sites were randomly assigned to one of three conditions: clinician-guided treatment, computer-based treatment, or non-OCD related self-study relaxation exercises.

The clinician-guided treatment consisted of 11 1-hour weekly sessions to negotiate self-exposure homework to be performed for 1 hour each day and recorded in diaries. The self-paced computer-based treatment consisted of a workbook and interactive telephone system that guided patients in self-exposure homework and relapse prevention in nine steps. The relaxation condition involved a written manual and audiotapes, with homework to be practiced for 1 hour per day and recorded daily in a diary over 10 weeks; no exposure or ritual prevention instructions were included. According to the Y-BOCS and other measures, both the computer-based and clinician-guided treatment resulted in moderate improvements but the relaxation treatment was ineffective.

**EX/RP and Medication**

There have been a number of studies done comparing medication to CBT. For the purposes of this chapter, we are only discussing studies where the effects of CBT can also be clearly compared to a nonmedication condition.

The first such study was done by L.M. Marks, Stern, Mawson, Cobb, and McDonald (1980), examining clomipramine or pill placebo with EX/RP or relaxation for OCD. This was followed by another study by L.M. Marks et al. (1988), involving clomipramine, placebo, self-controlled exposure, and/or therapist-aided exposure. Results suggested that the addition of EX/RP had a positive effect.

As OCD tends to be highly comorbid with depression, depressed patients show fewer long-term benefits from OCD treatment. E.B. Foa, Kozak, Steketee, and McCarthy (1992) hypothesized that reducing depressive symptoms prior to therapy would enhance the effects of EX/RP. To test this, 39 patients were divided into highly and mildly depressed groups, then randomized to receive imipramine or placebo for 6 weeks. This was followed by 3 weeks of intensive daily EX/RP, then 12 weeks of weekly supportive psychotherapy. The EX/RP was successful in reducing OC symptoms, but
imipramine did not make the EX/RP more effective. Both depressed and nondepressed patients responded equally well to the EX/RP for OCD. Both imipramine and EX/RP decreased depressive symptoms in patients.

To separate the effects of CT from EX/RP and to evaluate the added effect of medication, van Balkom et al. (1998) designed a study in which 117 OCD patients were randomly assigned to CT, EX/RP, fluvoxamine plus CT, fluvoxamine plus EX/RP, or wait-list control. The CT and EX/RP were conducted in 16 45-minute sessions. In the medication conditions, CBT was not started until after stabilization on fluvoxamine for 8 weeks. Results indicated that patients made moderate improvements, and all four active treatments were superior to wait-list, with no significant differences between them. Notably, until halfway through treatment, the EX/RP condition did not address the participant’s faulty assessment of risk nor did the CT condition include behavioral experiments; thus both CBT treatments were somewhat weaker than typical, which may have weakened the results of the study.

Nakatani et al. (2005) conducted a randomized study of 28 patients with OCD. Subjects were randomly assigned to one of three treatment conditions: CT (EX/RP with pill placebo), fluvoxamine (with autogenic training, a placebo for CBT), or a control group (autogenic training + pill placebo). The CT treatment consisted of EX/RP delivered in 12 weekly 45-minute sessions by two psychiatrists. Outcome measures included the Y-BOCS. Patients in the EX/RP and fluvoxamine groups showed significantly more improvement than those in the control group in the total Y-BOCS. Moreover, the EX/RP group showed significantly more reduction in total Y-BOCS score at the end of treatment than the medication group.

E. B. Foa et al. (2005) compared EX/RP to clomipramine in a randomized, placebo-controlled trial of 122 participants with OCD. Patients were randomized to receive either EX/RP, clomipramine, pill placebo, or a combination of both EX/RP plus clomipramine. Treatment consisted of 15 2-hour sessions given over a 3-week period. Outcome measures included the Y-BOCS. At 12 weeks, both groups receiving EX/RP showed a good response to treatment, the clomipramine-alone condition resulted in moderate improvement, and the placebo group was unimproved. The effect of EX/RP did not significantly differ from that of EX/RP plus clomipramine.

Collectively, results of these studies suggest that medication does not add to the effectiveness of CBT for OCD, which is a change from earlier thought that the combination of medication and CBT was most effective.

**Augmentation of Medication Treatment**

Most OCD patients are already taking an SRI when they seek psychological intervention. Therefore, Simpson et al. (2008) conducted a study to determine if EX/RP could result in additional gains. The study compared stress management training (SMT) to EX/RP in 108 patients with OCD symptoms who were already taking a stable dose of an SRI. Treatment consisted of 17 sessions of CBT twice per week, where each session was 90–120 minutes in length. EX/RP included both in vivo and imaginal exposures. SMT included deep breathing, progressive muscle relaxation, positive imagery, assertiveness training, and problem-solving techniques. SMT was intended as a credible control condition to account for the effects of patient expectancy, the therapeutic relationship, and other non-specific factors. Patients in both groups were asked to monitor symptoms and complete 1 hour of homework daily. EX/RP was found to be significantly better than SMT at reducing OC symptoms. Based on the Y-BOCS, EX/RP patients showed good improvement at the end of treatment, whereas SMT patients had only improved slightly. No follow-up scores were reported.
Meta-Analyses of CBT for OCD

Given the many often conflicting research findings, variations in treatment procedures, and differing outcome measures, it can be difficult to identify a clear best choice for CBT treatment of OCD. In such cases, a meta-analysis of studies can be useful to distill the results of several studies into a clearer picture. Here we review meta-analyses of CBT for OCD in adults. Meta-analyses of child and adolescent studies are cited earlier in the chapter.

Abramowitz (1996) conducted a meta-analysis to determine the degree of symptom improvement associated with four different variations of EX/RP. The study examined a total of 38 trials from 24 controlled and uncontrolled studies. Results suggested that therapist-supervised exposure was more effective than self-exposure. Complete response prevention during exposure therapy was better than partial or no response prevention. The combination of in vivo and imaginal exposure was better than in vivo exposure alone in reducing anxiety. There was no significant difference between treatments that included gradual exposure and those that included flooding.

A meta-analysis by Eddy, Dutra, Bradley, and Wexen (2004) examined data from 15 different clinical trials. Treatments examined included EX/RP, CT, and active and inactive control conditions. Approximately two thirds of the patients who completed treatment improved, but only a third met recovery criteria. Among the intent-to-treat sample, which included dropouts, about one half of patients improved and only a quarter recovered. Findings were strongest for EX/RP over CT and individual over group therapy. The authors also commented that most studies excluded patients with several common conditions, including thought disorders, concurrent medications, and substance use disorders. A smaller number also excluded common conditions, such as comorbid depression. Given that comorbidity is quite high among OCD patients, it can be difficult to determine if some treatments are more effective with certain comorbidities versus others. As mentioned earlier in this chapter, up to 90% of OCD patients have a history of at least one additional disorder. Accordingly, the authors urge future studies to include more patients with comorbid conditions, and to examine its association with outcome within studies (Eddy et al., 2004).

Rosa-Alcázar, Sánchez-Meca, Gómez-Conesa, and Marín-Martínez (2008) conducted a meta-analysis examining data from 19 controlled psychotherapy treatment studies for OCD. Both EX/RP and CT were found to be highly effective, as well as their combination, with no significant differences between treatments. The authors found no differences between in vivo versus in vivo plus imaginal exposure in EX/RP for OCD; however interestingly, the combination of in vivo and imaginal exposure resulted in a greater reduction of depressive symptoms than in vivo exposure alone. There was evidence that therapist-supervised exposure was more effective than assisted self-exposure. The effect size of the improvement was greater for studies conducted by psychologists rather than psychiatrists, and more recent studies had larger effect sizes that older ones.

The authors note the similarity of the findings for EX/RP and CT, and point out that both techniques incorporate similar treatment strategies. For example, CT most often involves behavioral experiments that include exposure to anxiety-evoking situations to challenge irrational thoughts, thereby incorporating behavioral components. On the other hand, the application of EX/RP involves challenging the patient about unrealistic beliefs and irrational thoughts surrounding decision making under uncertainty, so the recommended application of EX/RP contains important elements of cognitive therapy. It could be that EX/RP is more effective than CT, but the studies that compare EX/RP with CT have taken special care to avoid the use of cognitive elements in EX/RP resulting in an incomplete application of the
technique, whereas the application of CT in research studies usually includes elements of exposure (Rosa-Alcázar et al., 2008).

Evidence-Based Practices

Over 40 years of published research has led to the wide consensus among researchers and clinicians that cognitive behavior therapy is an effective treatment for OCD (Frances et al. 1997; Greist et al., 2003; NICE, 2006). Exposure-based treatments have the largest evidence base to support their use for OCD. EX/RP, which includes elements of CT, appears to be most effective, whereas exposure without cognitive elements appears to be equally effective as CT. Based on the existing literature EX/RP is recommended as the first-line treatment for OCD, with CT as a second choice alternative.

EX/RP has the strongest support, but some patients drop out prematurely (25–30%), and although about 80% of treatment completers respond well, 20% do not; therefore, about 50% of patients with OCD who are referred for treatment are not helped (Abramowitz, 2006). It will be important for clinical researchers to continue to refine CBT techniques to maximize improvement and make treatment more palatable to those in need of help. Usefulness of other psychological interventions and alternative therapies is difficult to determine, as there is very little published literature. The lack of evidence to support the use of psychodynamic therapies was discussed previously in this chapter, but continues to be commonly administered. There has been one published RCT on an alternative therapy, yogic meditation (Shannahoff-Khalsa et al., 1999) in the treatment of OCD, but no RCTs have been published on any other psychological interventions, such as hypnosis, virtual reality therapy, homeopathy, or an integrated psychological approach. Furthermore, no well-designed single case studies have been published on either other psychological interventions or alternative/complementary therapies (NICE, 2006). Patients interested in alternative approaches should be informed that there is no evidence base to support these practices. Further work is needed to validate alternative treatments for OCD.

More work also needs to be done to determine how to best tailor treatment to individual needs. Most studies do not have sufficient power to break down treatment response by OCD subtype. Some subtypes have been studied more than others, and some subtypes are typically excluded from RCTs. Most people with OCD have comorbid disorders, but studies typically exclude participants with substance abuse, psychosis, or bipolar disorder, thus we do not know how effective treatments are for comorbid populations. In terms of ethnic and racial differences, North American RCTs have consisted of predominately European Americans, and OCD in minority populations is not well understood (M. T. Williams et al., 2011). There are also many cultures worldwide for which CBT treatment of OCD has not been tested. These remaining gaps in our knowledge represent an important challenge for future investigation.

REFERENCES


Specific Disorders


