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## The Nature and Treatment of Obsessions and Compulsions

Jonathan S. Abramowitz

Obsessions and compulsions, often referred to collectively as obsessive–compulsive disorder (OCD; American Psychiatric Association, 2013) are among the most devastating psychological and behavioral problems. These experiences can interfere with work or school, interpersonal relationships, and activities of daily living (e.g., watching television, childcare). Moreover, the psychopathology of obsessions and compulsions—and indeed OCD—is among the most complex within the scope of psychological disturbances. Sufferers appear to struggle against seemingly ubiquitous unwanted thoughts, doubts, and urges that, while senseless on the one hand, present themselves as signs of danger and threat on the other. Complicating the problem further are the wide array of themes and the intricate associations between behavioral and cognitive phenomena that can perplex even the most experienced clinicians. Thus, one can anticipate a highly variable presentation that includes both general distress and specific fear-based symptoms. This chapter describes the nature of obsessions and compulsions, the leading explanatory theories and empirically supported psychological interventions, as well as recent developments to address barriers to successful treatment.

There are currently a number of psychological interventions with empirical support for obsessions and compulsions, including exposure and response prevention (ERP), cognitive/

cognitive behavioral therapy (CBT), and acceptance and commitment therapy (ACT). While these approaches differ procedurally (more or less) from one another, they overlap to a large extent in terms of their treatment targets and mechanisms of action. Moreover, they all produce generally large, clinically meaningful effects that are maintained over time and are associated with related improvements in depression, anxiety, and general functioning.

### The Nature of the Problem

#### Obsessions

Obsessions are intrusive, persistent thoughts, images, doubts, and ideas that a person experiences as unwanted or senseless, and that are yet repugnant and anxiety- or guilt-provoking (American Psychiatric Association, 2013). Although they are highly person-specific, the general themes of obsessions can be organized into categories such as contamination; responsibility for causing or not preventing harm; taboo thoughts about sex, violence, and blasphemy; and the need for order and symmetry. Unlike other types of repetitive thoughts often called “obsessive” (e.g., attachment to one’s new love or hobby), clinical obsessions are experienced as *unwanted* or *uncontrollable* in that they “invade” one’s consciousness. They often seem to occur

spontaneously at the “worst possible time” (e.g., a blasphemous thought in a place of worship), or are triggered by something in the environment (e.g., the sight of a knife provokes violent thoughts). Moreover, the content of obsessions is *incongruent* with the person’s belief system; these are not the types of thought the person expects of himself or herself. Finally, obsessions are *resisted*; that is, they are accompanied by the sense that they must be “dealt with,” neutralized, or altogether avoided. The motivation to resist is activated by the fear that if action is not taken negative consequences will ensue.

### Compulsions

Compulsions are urges to engage in behaviors that serve to reduce or remove obsessional distress, such as overt or mental rituals and avoidance. Rituals typically belong to the following categories: decontamination (washing/cleaning), checking (including asking others for reassurance), repeating routine activities (e.g., going back and forth through a doorway), ordering and arranging, and mental rituals (e.g., repeating a “good” phrase to neutralize an obsessional thought). Rituals are senseless and excessive, and often need to be performed repetitively or according to self-prescribed rules. They are also deliberate, in contrast to mechanical or robotic repetitive behaviors such as tics. Finally, compulsive behaviors have a specific function: they are performed to reduce distress; and this is in contrast to many impulsive behaviors (e.g., hair pulling in trichotillomania), which are carried out because they produce pleasure, distraction, or gratification (American Psychiatric Association, 2013).

The functional link between compulsions and obsessions is critical to understanding and treating these phenomena: *compulsive behaviors are performed to reduce obsessional distress*. Examples include excessively checking appliances to reduce the fear of fires, excessive hand-washing to avoid a feared sickness, and asking excessive questions to get reassurance that one has not acted on a violent thought or verbalized

any insults. Compulsive behaviors are sometimes performed to reduce feelings of anxiety, uncertainty, or incompleteness or asymmetry (i.e., the “not-just-right” feeling; Coles, Frost, Heimberg, & Rhéaume, 2003). Some compulsive behaviors are less repetitive but still serve an anxiety-reduction function, such as purposeful distraction and thought suppression. While many compulsive behaviors are overt and observable (e.g., walking back and forth through a doorway 10 times, confessing one’s thoughts), others are covert (e.g., repeating a prayer to oneself 12 times to ensure God understands, mentally reviewing one’s sexual history to determine whether one is gay or straight).

The strongest evidence for a functional link between obsessions and compulsions comes from experimental studies (for a review of this literature see Rachman & Hodgson, 1980) and studies identifying reliable and valid OCD symptom dimensions that consist of both obsessions and compulsions (e.g., Abramowitz et al., 2010; McKay et al., 2004). These dimensions include: (a) contamination (contamination obsessions and decontamination rituals), (b) responsibility for harm and mistakes (aggressive obsessions and checking rituals), (c) incompleteness (obsessions about order or exactness and arranging rituals), and (d) unacceptable taboo violent, sexual, or blasphemous thoughts with mental rituals

### Avoidance

Avoidance behavior is another strategy commonly deployed in response to obsessions, usually to prevent unwanted thoughts, negative outcomes, uncertainty, and compulsive urges. For example, one woman avoided pencils because they evoked obsessional thoughts of stabbing others in the eye. A man with obsessions about contamination from semen avoided his family’s home computer because he had once seen his father using it to view pornography. Another avoided driving past cemeteries so that he would not have to engage in the extensive praying rituals that were triggered by thoughts and images of the dead.

## Theoretical Models

Various conceptual models provide a framework for understanding the development and maintenance of obsessions and compulsions, and as a basis for interventions aimed at reducing these phenomena. The theoretical models with direct relevance to empirically supported psychological interventions are briefly summarized here.

### Conditioning

The conditioning model of obsessions and compulsions was derived from Mowrer's (1960) two-factor theory which proposes that pathological fear is acquired by classical conditioning and maintained by operant conditioning. According to this formulation, for example, obsessional fears that the number 13 will cause bad luck are thought to arise from conditioning experiences during which anxiety becomes associated with this number. The fear is then maintained by anxiety-reduction behaviors that prevent its natural extinction, such as avoidance of the number 13 and compulsive praying rituals performed with the aim of preventing bad luck. Avoidance and compulsions are negatively reinforced by the immediate (albeit temporary) reduction in discomfort that they engender. Thus, such behaviors evolve into time-consuming responses to obsessions that impair functioning and quality of life, and contribute to a self-perpetuating vicious cycle of obsessions and compulsions.

Research supports some aspects of the conditioning model but not others. Specifically, obsessional stimuli indeed evoke anxiety, and compulsive rituals do bring about an immediate reduction in anxiety and distress (e.g., Rachman, de Silva, & Roper, 1976). Thus, this formulation provides an empirically sound explanation for the persistence of seemingly irrational avoidance patterns and compulsions as escape behaviors that are maintained by negative reinforcement. However, traumatic conditioning experiences do not appear to be necessary for the development

of obsessions (Mineka & Sutton, 2006). Cognitive theorists (e.g., Salkovskis, 1985), recognizing the limitations of conditioning models for explaining obsessions, subsequently developed cognitive behavioral models to explain these phenomena, as described next.

### Cognitive Behavioral Approaches

Cognitive behavioral approaches to obsessions and compulsions are derived from Beck's (1976) cognitive theory of emotion which emphasizes beliefs about situations and stimuli rather than such stimuli themselves, as promoting emotional and behavioral responses. As applied to obsessions, these approaches begin with the well-established finding that intrusive thoughts (i.e., thoughts, images, and impulses that intrude into consciousness) are normal experiences that most people have from time to time (e.g., Rachman & de Silva, 1978), but that develop into distressing and time-consuming obsessions when the person mistakenly appraises the intrusions as threatening, personally significant, or provoking uncertainty that the person perceives as unmanageable or intolerable (Rachman, 1997, 1998; Salkovskis, 1996). For example, consider the unwanted thought of attacking a beloved elderly family member. Most people would consider such an intrusion as meaningless or harmless (e.g., "mental noise"). However, according to the cognitive behavioral model, such an intrusion would develop into an obsession if the person attaches to it a high degree of importance and uncertainty, leading to an escalation in negative emotion; for example, "I'm a terrible person and should be careful to make sure I don't lose control and attack my grandfather." Such appraisals evoke distress and motivate the person to engage in compulsive behaviors to (a) control, suppress, or neutralize the unwanted thought (e.g., by praying or replacing it with a "safe" thought); (b) attempt to prevent harmful consequences associated with the intrusion (e.g., by avoiding elderly people); or (c) gain certainty regarding any possible negative outcomes (e.g., by seeking reassurance).

As with conditioning models, avoidance and compulsive behavior are conceptualized as strategies to control or reduce obsessions and to alleviate the associated distress and uncertainty over feared negative consequences. From a cognitive behavioral perspective, however, these strategies are viewed as counterproductive for a number of reasons. First, because they provide an immediate (albeit fleeting) escape from anxiety and doubt, rituals and avoidance prevent the person from learning that upsetting thoughts, anxiety, and uncertainty are manageable. Second, rituals and avoidance prevent the person from learning that obsessional distress eventually abates naturally when feared situations are confronted for extended periods of time. Third, avoidance and compulsions lead to an increase in the frequency of obsessions by serving as reminders of obsessional intrusions, thereby triggering their recurrence. For example, repeatedly checking the oven can trigger intrusions about fires. Trying to distract oneself from unwanted thoughts, paradoxically, increases the frequency of such thoughts because the distractors become reminders (retrieval cues) of the unwanted thoughts. Finally, avoidance and compulsive behavior preserve dysfunctional beliefs and misinterpretations of obsessional thoughts. That is, when feared consequences do not occur after the performance of a compulsive ritual, the person (erroneously) attributes this to the ritual rather than to the innocuousness of the intrusion.

Misinterpretations of one's thoughts lie at the heart of cognitive behavioral models and may include any (mis)appraisal of an intrusive thought as personally significant or threatening. An example is the belief that *thinking about doing something bad is the moral equivalent of acting badly* (e.g., "Thinking about stabbing a loved one is as bad as actually doing it"). Researchers (e.g., Frost & Steketee, 2002; Obsessive Compulsive Cognitions Working Group, 1997) have identified domains of "core beliefs" thought to underlie the development and persistence of obsessions, which are described in Table 6.1. This model appears to

explain the development, thematic content, and ubiquity of obsessions, and the persistence of time-consuming excessive compulsions. Yet, while the model is generally supported by empirical research (e.g., Abramowitz, Khandker, Nelson, Deacon, & Rygwall, 2006), cognitive and behavioral factors do not account completely for OCD symptoms in the available studies.

### Implications for Empirically Supported Treatment

The conceptual frameworks described here provide conceptually compelling and empirically consistent accounts of the processes involved in maintaining obsessions and compulsions. Moreover, they assume the presence of intact learning (conditioning) processes and normally functioning (albeit maladaptive) cognitive functioning. There are no appeals to chemical imbalances or defective brain parts; even the maladaptive beliefs and assumptions that give rise to obsessions are viewed as cognitive "errors" and "biases" rather than disease processes. Indeed, the precise distal causes of obsessions and compulsions remain elusive at present; although the problems' etiology most likely involves complex interactions among general biological and environmental/learning factors.

Accordingly, the frameworks described here implicate specific targets for reducing obsessive-compulsive symptoms. In particular, effective interventions must (a) correct maladaptive beliefs and appraisals that maintain obsessions, and (b) decrease avoidance and compulsive behaviors (e.g., rituals) that serve as barriers to the correction of such maladaptive beliefs. In short, the task of intervention is to foster an evaluation of obsessional stimuli (e.g., situations, stimuli, thoughts, doubts) as conferring acceptably low risk (without 100% guarantee of safety) and therefore not demanding of further action (including the need to reduce anxiety or gain certainty about feared consequences). The person must come to understand his or her problem not in terms of the risk of feared

**Table 6.1** Types of dysfunctional beliefs associated with obsessions.

Belief domain	Description
Inflated responsibility	Belief that one has the special power to cause, and/or the duty to prevent, negative outcomes
Overimportance of thoughts (thought–action fusion)	Belief that the mere presence of a thought indicates that the thought is significant, e.g., the belief that the thought has ethical or moral ramifications, or that thinking the thought increases the probability of the corresponding behavior or event
Need to control thoughts	Belief that complete control over one’s thoughts is both necessary and possible
Overestimation of threat	Belief that negative events are especially likely and would be especially awful
Perfectionism	Belief that mistakes and imperfection are intolerable
Intolerance for uncertainty	Belief that it is necessary and possible to be completely certain that negative outcomes will not occur

consequences, but in terms of how he or she is thinking and behaving in response to stimuli that objectively pose no more than everyday risk. Multicomponent treatment programs for obsessions and compulsions (i.e., OCD) have been developed that involve sets of core procedures derived from the conditioning and cognitive behavioral models outlined above. The next section describes the “active ingredients” of these programs, their theoretical rationale, and evidence for their efficacy. Because this chapter affords only a cursory description of each component, the reader is referred to Abramowitz and Jacoby (2014) for a more complete account of how these strategies can be implemented.

### Empirically Supported Treatment Components

Common across the most effective techniques for addressing obsessions and compulsions is the focus on modifying dysfunctional beliefs (as described above) that are presumed to give rise to and to maintain obsessions and the urges to perform compulsions. There are different approaches to modifying such beliefs, including direct confrontation with feared stimuli to foster extinction learning (i.e., ERP) and verbal/

logical disputation of such beliefs (i.e., cognitive restructuring). So-called third wave acceptance-based interventions (i.e., ACT) have also been applied in the treatment of obsessions and compulsions. While ACT explicitly focuses on changing how the individual relates to his or her obsessions and acts in ways consistent with his or her values, this too implicitly involves belief change.

### Exposure Therapy

Exposure therapy involves intentionally confronting feared, but objectively safe, objects, situations, thoughts, and bodily sensations with the goal of reducing fear and other negative reactions (e.g., avoidance) to the same or similar stimuli in the future (Abramowitz, Deacon, & Whiteside, 2012). Two forms of exposure are most often applied in the treatment of obsessions and compulsions: *situational* (i.e., real-life or *in vivo*) exposure is used for confrontation with external stimuli that provoke obsessional fear (e.g., floors, toilets) and *imaginal* exposure is useful in confronting obsessional thoughts and doubts that are not easily accessible to real-life situations (e.g., violent images, doubts about responsibility for harm). Less commonly used with OCD, *interoceptive* exposure may be

employed to help patients confront feared (but objectively harmless) body sensations that sometimes accompany anxiety and fear (e.g., racing heart, breathlessness). The selection of the type of exposure is dictated by the characteristics of the individual's fears; and it is often the case that different types of exposure are used concurrently (Abramowitz et al., 2012).

As examples of exposure, someone with obsessional fears of the number 13 would practice confronting this number in any way possible, such as by writing it down on a piece of paper, carrying the paper in his or her pocket, doing things in sets of 13, and so on. If he or she was afraid that 13 would bring about bad luck to loved ones, therapy would involve trying to "bring on" such bad luck, and then the incorporation of imaginal exposure practice to thoughts of being responsible for causing bad luck as a result of confronting this number. Similarly, someone with contamination obsessions might touch objects that he or she considers unclean for exposure—a trash can, his or her genitals, a neighbor's pet—for situational exposure. He or she would then confront thoughts of coming down with a serious illness as a result of this "carelessness" with the perceived contaminants.

As described in greater detail later in this section, exposure is a highly effective intervention for obsessions and compulsions and two theoretical models have been articulated to explain these effects. The first, emotional processing theory (EPT), was initially described by Rachman (1980), elaborated by Foa and Kozak (1986), and further revised by Foa and McNally (1996). EPT asserts that confrontation with a feared stimulus during exposure activates a *fear structure*—a set of propositions about the feared stimulus, response, and their meaning that is stored in memory. Activation of the fear structure, along with integration of information that is incompatible with it, is thought to result in the development of a new *non-fear structure* that replaces (Foa & Kozak, 1986) or competes with (Foa & McNally, 1996) the original one. The basis for this corrective learning (i.e., incompatible information) is the habituation

(i.e., reduction) of fear during an exposure trial and between trials (Foa & Kozak, 1986) in the absence of any avoidance or safety behavior. Thus, according to EPT, initial fear activation, within-session habituation, and between-session habituation are all indicators of successful learning (and therefore successful exposure therapy).

Research, however, suggests that neither initial fear activation nor habituation (within or between exposure sessions) is a consistent predictor of outcome with exposure (for a review see Craske et al., 2008). Indeed, performance more generally is not a reliable indicator of learning (Bjork & Bjork, 2006). Accordingly, a more recent model to account for the effects of exposure focuses on inhibitory mechanisms, which accounts for discrepancies between performance during extinction training and post-extinction levels of fear. Within the context of exposure therapy, inhibitory learning refers to the notion that fear associations are not removed during extinction but, rather, remain intact as new learning about the feared stimulus occurs (Bouton & King, 1983; Craske et al., 2008). That is, following successful exposure, the feared stimulus is thought to possess two meanings: the original fear-based (i.e., excitatory) meaning, as well as a safety-based (i.e., inhibitory) meaning. Thus, even if fear subsides following successful exposure, the original excitatory meaning is retained and may be recovered under certain circumstances such as a change in context (i.e., renewal), the passage of time (i.e., spontaneous recovery), and reacquisition of the original fear-based association (Bouton, 2002). From this perspective, exposure therapy helps the person develop (a) new non-threat associations, and (b) ways of enhancing the accessibility of these new associations (relative to the older threat associations) in different contexts and over time.

### Response Prevention

Response prevention, a necessary accessory to exposure therapy, involves resisting urges to perform compulsive behaviors—overt and

covert—that serve as an escape from obsessive fear (e.g., not checking the door locks after leaving the house). This allows for prolonged exposure and facilitates the extinction of obsessional anxiety. If the patient engages in compulsive behaviors in an effort to reduce anxiety during exposure, he or she cannot learn that obsessional fears are exaggerated because there will always be a “condition” under which the feared outcome did not materialize (e.g., “If I had not washed my hands, I would have become ill”; “If I had not repeated the prayer, father would have had an accident”). In practice, response prevention for the patient described previously with an obsessional fear of the number 13 may entail refraining from any strategies typically used to prevent bad luck (e.g., compulsive praying), as well as from ritualistic reassurance seeking (e.g., asking questions to others) that nothing bad will happen. The patient with contamination obsessions would be instructed to refrain from decontamination compulsions such as washing and cleaning.

Foa, Steketee, Grayson, Turner, and Latimer (1984) found that individuals with contamination obsessions and washing compulsions who received only exposure therapy evidenced greater reductions in contamination fears than those who received only response prevention. In contrast, response prevention was superior to exposure in reducing washing compulsions. These results suggest that the procedures of exposure and response prevention have differential effects on obsessions and compulsions: response prevention is superior to exposure in decreasing compulsive rituals and exposure is superior to response prevention for decreasing obsessional fear. This study also revealed an additive effect of combining exposure and response prevention: individuals who received these techniques together (i.e., ERP) evidenced more improvement than those who received either of the individual components. Foa et al. (1984) proposed that response prevention helps render information learned during exposure more incompatible with the patient's expectations.

Numerous studies consistently show that ERP-based treatment programs result in clinically significant and durable improvement, with rates of 50% to 70% symptom reduction on average (Olatunji, Davis, Powers, & Smits, 2013). A review of 16 trials (involving 756 patients) indicated that ERP was substantially more effective than comparison treatments (e.g., relaxation, anxiety management training, waiting list, medication) immediately following treatment (effect size = 1.39) and moderately more effective at long-term follow-up (effect size = 0.43; Olatunji et al., 2013). While ERP is highly effective, about 20% of individuals with OCD do not respond and about 25% to 30% drop out of therapy. Some factors associated with poor outcome are discussed later in this chapter; a longer list of such factors is also addressed in Abramowitz (2006).

### Cognitive Techniques

Cognitive restructuring involves rational and evidence-based challenging and correction of the sorts of dysfunctional thoughts and beliefs that promote the escalation of normal intrusive thoughts into obsessions, such as overestimates of the probability and severity of danger and misinterpretations of intrusive thoughts as having implications for responsibility for harm. A central aim of cognitive restructuring is therefore to reduce obsessional fear and the need for compulsive behavior by helping the patient correct dysfunctional thinking and modify behavioral responses to obsessional stimuli (situations, thoughts, images) so that such stimuli no longer provoke strong urges to avoid perform compulsive behavior.

Various techniques may be used to help patients identify and correct their erroneous appraisals, such as didactic presentation of educational material, Socratic dialogue, and cognitive restructuring strategies aimed at helping patients recognize and remedy dysfunctional thinking patterns. For example, a clinician might help a patient with obsessions concerning violence explore the objective evidence for and against his or her erroneous belief that thinking

about committing violence is the moral equivalent of actually acting violently. Someone with the belief that uncertainty is intolerable might be helped to explore the short- and long-term pros and cons of living with uncertainty versus always trying to obtain assurances. Behavioral experiments, in which patients enter situations that exemplify their fears (similar to exposure), are often used to facilitate the acquisition of corrective information about the realistic risks associated with obsessional fears. For example, a man with a fear of molesting his infant while changing her diaper might change a diaper to prove that he is not likely to commit any sexually inappropriate acts. For a detailed manual describing the use of cognitive techniques, see Wilhelm and Steketee (2006).

The small number of studies that tested the effectiveness of cognitive restructuring for OCD have found that this approach can be effective (J. Abramowitz, Franklin, & Foa, 2002). Several studies have addressed the relative efficacy of cognitive restructuring and exposure therapy, with most reporting that these approaches produce equivalent effects. However, the conceptual distinction between ERP and cognitive restructuring is quite blurry—these interventions overlap in many ways. Indeed, manuals describing the implementation of ERP make clear the importance of informal discussions of mistaken cognitions during exposure trials (Abramowitz, 2006); and those describing cognitive therapy routinely incorporate “behavioral experiments” in which the patient is helped to confront feared stimuli and refrain from compulsive behaviors (i.e., ERP; Wilhelm & Steketee, 2006). One study (Vogel, Stiles, & Götestam, 2004) found that the inclusion of cognitive techniques was useful in reducing dropout from ERP. Thus, perhaps cognitive restructuring techniques improve the acceptability of exposure-based treatment.

#### **Interventions Derived from Acceptance and Commitment Therapy**

Research indicates that psychological flexibility (i.e., acceptance of negative emotional states) is associated with reduction in long-term distress

(Eifert & Heffner, 2003), whereas experiential avoidance (i.e., attempts to control, suppress, avoid, or escape from negative emotions) is associated with more severe distress, including obsessional symptoms (e.g., Manos et al., 2010). The aim of fostering acceptance of anxiety and obsessions in treatment also complements the goal of enhancing inhibitory learning as described previously: to the degree that obsessional fear is tolerated, inhibitory associations (e.g., obsessions are not dangerous) can be maximally acquired (Abramowitz & Arch, 2014). Accordingly, demonstrating to patients that they can tolerate distress and “act with obsessions” during and after ERP may be more important in the long run than ensuring within- and between-session fear reduction (i.e., habituation).

ACT is a set of techniques that can be applied in the treatment of obsessions and compulsions to foster a willingness to experience obsessional thoughts, uncertainty, and anxiety (Twohig, Hayes, & Masuda, 2006). Used within the context of exposure therapy (e.g., Twohig et al., 2015), ACT strategies can help patients understand ERP as a means of learning to respond flexibly in the presence of obsessions, anxiety, and uncertainty. Specifically, ACT focuses on (a) fostering willingness to experience obsessional distress; (b) recognizing thoughts and feelings as neither right nor wrong (i.e., “cognitive defusion”); and (c) using treatment to move toward what one values in life. For more information about ACT, the reader is referred to Hayes, Strosahl, & Wilson (1999). Most ACT-based techniques take the form of metaphors that are discussed in the context of obsessions, compulsions, and their treatment. While some proponents of this approach argue that challenging and changing cognitions is not an explicit goal of ACT (e.g., Twohig et al., 2006), moving from the belief that obsessional thoughts are threatening to being able to willingly experience such thoughts seems to involve a mechanism of cognitive change at one level or another.

Abramowitz and Jacoby (2014) and Twohig and colleagues (2015) describe how ACT techniques can be implemented within the framework of

ERP. To date, however, only two studies have examined the effects of ACT on obsessions and compulsions. Both a small open trial pilot study (Twohig et al., 2006) and a randomized controlled study (Twohig et al., 2010) suggest that this approach holds promise. Accordingly, a collaborative randomized controlled study currently ongoing at the University of North Carolina and at Utah State University is examining more closely the effects of incorporating elements of ACT into exposure-based therapy for OCD.

## Appraisal and Applications

As discussed in the previous section, the available research suggests that techniques with the strongest empirical support for obsessions and compulsions are those which include exposure and response prevention, many of which also involve either overt or informal verbal cognitive restructuring procedures. The underlying mechanisms of these interventions appear to be the promotion of new inhibitory learning via shifts in interpretations of obsessional thoughts and related feelings of doubt and uncertainty. The large short- and long-term effects using these techniques suggest that individuals completing treatment packages such as ERP can expect good, durable outcomes, and various manuals have been written detailing the use of these techniques (e.g., Abramowitz & Jacoby, 2014; Foa, Yadin, & Lichner, 2012). ACT techniques appear promising, yet at present there are insufficient data to suggest that monotherapy using ACT is equivalent or superior to existing ERP programs. Perhaps ACT strategies can be woven into exposure-based treatment to enhance ERP; yet, given the wealth of evidence for ERP, ACT as a monotherapy should only be considered after the failure of techniques with stronger empirical support.

There is currently no research addressing questions regarding the optimal way to sequence the individual treatment components described in the previous section. Thus, the recommendations

provided here are based on the sequences described in available treatment manuals and are subject to change on the basis of future research. The initial phase of treatment—information gathering—includes a thorough (functional) assessment of (a) external stimuli that cue obsessional thoughts; (b) the content of the thoughts themselves; and (c) the feared consequences of exposure to the external stimuli or obsessional thoughts (e.g., “if I touch the floor I will get sick”). The various types of compulsive behaviors and avoidance patterns are also assessed, along with the beliefs about how these behavioral patterns are thought to “work” (e.g., “washing my hands up to my elbow five times with extra strength soap ensures that there are no more germs”). Cognitive assessment includes the administration of psychometrically valid measures of OCD-related dysfunctional beliefs, such as the Obsessive Beliefs Questionnaire and Interpretation of Intrusions Inventory (Obsessive Compulsive Cognitions Working Group, 2005). The patient is also instructed to self-monitor compulsive behavior between sessions to collect additional data regarding the frequency of such behavior and its triggers.

Once assessment data are collected, treatment progresses to the planning and education stage in which the patient is socialized to the cognitive behavioral model of OCD and provided with an explanation and rationale for the various treatment techniques to be used. Data from the assessment are used to help the patient understand how the conceptual model can be applied to his or her own obsessional and compulsive symptoms. The treatment rationale is consistent with the conceptual model provided so that the patient understands the choice of potentially anxiety-provoking techniques such as ERP. Then, a list of exposure items (i.e., fear hierarchy) is generated, and a list of compulsive behaviors to be targeted in response prevention is made. Significant others may be included in treatment so that they understand the rationale for ERP. As appropriate, metaphors from ACT can be used to help illustrate the conceptual model of obsessions and the rationale for

performing exposure to learn to “lean in” to one’s fears rather than trying to avoid such experiences.

Once the therapist and patient agree to the treatment plan, exposure and response prevention begin. Exposures are conducted in the session under the therapist’s supervision, and then as homework practice in various settings between sessions. Usually, exposures progress from moderately distressing stimuli and thoughts to the most distressing stimuli, although research suggests that using a hierarchy is not essential for successful outcomes and may even hinder long-term maintenance of gains (Abramowitz & Arch, 2014). More importantly, exposure to the most feared situations and thoughts must be conducted and repeated in various contexts to ensure generalization of learning. ACT metaphors may be used throughout ERP to help patients understand the rationale for these techniques, and cognitive techniques may be used in instances where patients have difficulty engaging in exposures because of strongly held dysfunctional beliefs. Significant others may be brought into treatment to learn how to serve as coaches outside of the session. As the end of the exposure list nears, a relapse prevention plan is made for how the patient will continue to implement ERP in their daily life—perhaps aided by a loved one. The relapse prevention plan includes normalization of the high rates of return of fear, as well as a plan for which tools to implement when or if fear returns. Treatment may be tapered down as termination approaches, or the termination of in-person sessions may be followed by monthly check-in phone calls as appropriate. Some obstacles to successful treatment are discussed next, with suggested solutions based on the recent research.

#### **Fears of Long-Term or Unknowable Consequences**

Some obsessions which feature feared consequences that take place in the very long term (e.g., “I will get cancer in 40 years”) or are in fact *unknowable* (e.g., “I will go to hell”) can complicate

the implementation of ERP. Many therapists will try to use exposure or cognitive restructuring to “disprove” such fears (e.g., to provide evidence that one is not going to hell or won’t ever act on violent thoughts, or that cancer is unlikely in a given situation). Yet this is futile since it is not possible to prove or disprove such fears—indeed we must all live with everyday uncertainties around most things.

Instead of trying to use exposure or cognitive therapy to disprove long-term or unknowable feared outcomes, clinicians can reframe the problem as an intolerance of uncertainty and implement ERP to disprove more immediate beliefs about not being able to tolerate living with uncertainty. For example, rather than emphasizing habituation of anxiety during exposure, exposure could focus on helping the patient learn that he or she can provoke uncertainty and delay compulsive behavior such as seeking reassurance, and thereby live with uncertainty, for longer than they predicted they could manage the uncertainty. The patient would continue the exposure (or repeat it) until expectancies about the inability to tolerate uncertainty are violated (rather than until anxiety habituates); for example, “I thought I could only last for 30 minutes without checking the Bible to reassure myself, but it’s been 45 minutes and I’m doing OK.”

Following each exposure trial, the therapist can help the patient consolidate his or her learning by asking for summaries of what they have “discovered” and what “surprised” them, highlighting discrepancies between what they predicted and what actually occurred (Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014); for example, “I learned that I can be unsure about heaven or hell for longer than I’d thought I could.” This technique helps the patient learn (through exposure) that he or she can tolerate uncertainty at a higher intensity and for longer durations than expected.

Although no studies have tested the effects of continuing exposures past the point at which patients’ obsessional fears have been violated examined, Deacon et al. (2013) found

that conducting interoceptive exposure beyond the point at which patients believed they would experience catastrophic consequences of physiological arousal produced significantly greater reductions in the fear of anxious arousal relative to less intensive “doses” of interoceptive exposure.

### **Disgust and “Not-Just-Right” Experiences**

The expectancy tracking method described in the previous section can also be used to help individuals with OCD learn that they can tolerate emotions other than fear and uncertainty that are sometimes associated with obsessions and compulsions. For example, those who present with contamination obsessions that involve disgust rather than a focus on harm-related outcomes often hold beliefs that disgust will persist indefinitely and become intolerable (e.g., “I can’t stand the feeling”). Here, therapists can use expectancy tracking to help such patients discover that they can endure and manage such feelings—despite their unpleasantness—even if they persist longer and at higher intensities than desired. Indeed, attempts to implement exposure to bring about the habituation of disgust are unlikely to be successful as research indicates that, unlike anxiety and fear, disgust responses do not easily (if at all) habituate (e.g., Olatunji, 2009).

An analogous situation arises with ordering and arranging obsessions and compulsions characterized by “not-just-right” experiences (NJREs), which are often similarly appraised as unmanageable (Coles et al., 2003; Coles, Heimberg, Frost, & Steketee, 2005). Here, the expectancy violation method can be used to help patients provoke NJREs and resist ritualizing to discover that these uncomfortable experiences are more manageable than expected.

### **Family Accommodation**

While this chapter focuses on obsessions and compulsions from the perspective of the individual sufferer, there is often an interpersonal component that develops within the context of

the sufferer’s relationships with close relatives, intimate partners, or friends. Accommodation occurs when such a loved one (a) participates in the patient’s compulsive behaviors (e.g., answers reassurance-seeking questions, helps with cleaning rituals); (b) helps with avoidance strategies (e.g., avoids places deemed “contaminated” by the patient); or (c) helps to resolve or minimize problems resulting from obsessions and compulsions (e.g., supplying money for extra-strength soap). Accommodation may occur at the request (or *demand*) of the individual, or it may be voluntary and based on the desire to show care and concern by reducing the sufferer’s distress.

Whether subtle or overt, accommodation is related to more severe obsessions and compulsions and poorer treatment outcome (Boeding et al., 2013). It not only contributes to the maintenance of obsessional fear but also decreases the sufferer’s motivation to engage in treatment that would change the status quo (Abramowitz, Baucom, Wheaton, et al., 2013). Our treatment program for couples in which one partner has OCD includes a focus on reducing accommodation (Abramowitz, Baucom, Boeding, et al., 2013). Specifically, the patient and his or her partner are taught to identify and understand the role of accommodation, and activities that have become hampered by obsessions and compulsions are identified. The couple is taught effective communication and problem-solving skills, and trained in how to apply these to various situations by promoting the idea of exposure and fear tolerance rather than avoidance and compulsive behaviors. For example, a wife may resume using previously “off-limits” rooms in the house. A husband may stop checking electrical appliances for his wife prior to coming to bed. The goal of these interventions is to work toward a life in which the individuals confront the situations and stimuli that the person with obsessions and compulsions has been avoiding to practice experiencing the anxiety.

When encouraging a loved one not to accommodate compulsive urges, it is important to understand the function accommodation plays

in the relationship. For example, accommodation might have become a primary way in which a wife shows care, concern, and love for her husband with obsessions and compulsions. Clinicians can keep an eye out for situations in which removing accommodation changes the relationship dynamics such that the parties feel less close to each other. Treatment can involve discussions of new ways in which the couple show their love, care, and concern for each other instead of through accommodation of compulsions.

## Conclusions

This chapter has explored the nature and conceptual models that best explain obsessions, compulsions, and their interaction. The most empirically supported components of available treatment programs, and recommendations for optimizing these techniques are also presented. Research on how to optimize techniques such as ERP, and how to best incorporate cognitive techniques and ACT strategies continues at a rapid pace as the field strives to improve on existing methods. Presently we do not have an infallible method for managing obsessions and compulsions, yet this is no time to abandon the conceptual models and interventions that have brought us so far in the last half-century. Prior to the 1960s, obsessions and compulsions were poorly understood and considered treatment refractory. Techniques such as ERP, which are based on empirically supported conceptual foundations, have demonstrated great success at reducing symptom levels for these disorders, making OCD one of the psychological syndromes most responsive to treatment. Additional research is needed to build on present methods and to enhance the generally effective interventions we currently have.

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