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Strategies for Improving Long-Term Outcomes in Cognitive Behavioral Therapy for Obsessive-Compulsive Disorder: Insights From Learning Theory

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Cognitive-behavioral therapy (CBT) for obsessive-compulsive disorder (OCD) is often highly effective, yet some patients experience relapses following a seemingly successful course of treatment. In this article we describe the components of CBT for OCD and then present a patient who relapses after making significant gains during a course of CBT. Likely explanations for the patient's relapse, and methods for optimizing long-term treatment outcomes, are explored from the standpoint of research on learning and memory. These strategies mainly apply to the implementation of situational (in vivo) and imaginal exposure therapy, but also include suggestions for optimizing the psychoeducational and cognitive therapy components.

The beneficial effects of exposure-based cognitive-behavioral therapy (CBT) for obsessive-compulsive disorder (OCD) are among the most consistent findings in research and clinical settings. Still, as anyone who has implemented this treatment knows, not all individuals respond equally well; and even those who show impressive short-term gains are at risk of setbacks as treatment progresses or at some point following a full course of CBT. This article addresses the well-known phenomenon of relapse in exposure-based CBT for OCD, with the aim of offering empirically derived suggestions for optimizing long-term outcomes.

CBT for OCD is based on a conceptualization of the problem that begins with the well-established finding that negative intrusive thoughts (i.e., distressing thoughts, images, impulses, and doubts that intrude into consciousness; e.g., unwanted horrific images) are normal occurrences that most people—with and without OCD—experience from time to time (e.g., Rachman & de Silva, 1978). Often triggered by external stimuli (e.g., the sight of a police officer's gun), such thoughts usually reflect the individual's personal concerns. Yet these normal and universal intrusions are thought to escalate into highly fear-provoking and time-consuming clinical obsessions when they are misappraised as personally significant (Rachman, 1997, 1998; e.g., "Thinking about something bad means I am a bad person"), needing to be controlled (e.g., Clark, 2004), or as posing a threat for which the individual is responsible (Salkovskis, 1985; "I can and must prevent this"). That is, the intrusive thoughts are not considered the problem; rather, it is how the person interprets, responds to, and tries to control the intrusions that is thought to lead to obsessional fear and distress. The tendency to respond to thoughts in this way might be acquired through learning, even if there is a predisposing biological or genetic vulnerability (Taylor & Jang, 2011; Taylor, Jang, & Asmundson, 2010).

Compulsive rituals (overt and mental), avoidance, and other safety-seeking or neutralizing behaviors (e.g., counting) present in OCD are conceptualized as efforts to control or remove intrusions and to prevent feared consequences. After performing rituals, individuals with OCD generally report a reduction (albeit temporary) in their obsessional distress (Rachman & Hodgson, 1980), which negatively reinforces these behaviors. Thus, they evolve into time-consuming patterns that can impair functioning. Rituals, avoidance, safety seeking, and neutralizing also prevent the natural abatement of obsessional fear that would eventually occur with time even without the anxiety-reducing behavior. Moreover, rituals and avoidance lead to an increase in the frequency of obsessions by serving as reminders of their occurrence. For example, compulsively checking the stove can trigger intrusions about house fires. Finally, avoidance and rituals preserve the dysfunctional interpretations of intrusive thoughts. Specifically, following performance of a ritual, when feared consequences do not occur, the person attributes this to the ritual rather than to the low probability of the feared consequence. Thus, while environmental and biological factors enhance the vulnerability to acquire obsessional fear, rituals and avoidance behavior, along with cognitive biases, maintain this fear (see Abramowitz, 2006).

Keywords: OCD; relapse; exposure; CBT; learning theory

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In CBT, it is these maintenance processes that are targeted. In the following section we provide a brief description of the components in CBT for OCD.

CBT for OCD

Derived from the conceptualization outlined above, exposure-based CBT for OCD focuses on reducing (a) pathological fear associated with obsessional intrusions and triggering stimuli, and (b) the reliance on avoidance and rituals for controlling the obsessional fear. This approach typically includes psychoeducation, self-monitoring, cognitive restructuring, in vivo and imaginal exposure, and response prevention (e.g., Abramowitz, 2006). Treatment begins with information-gathering and psychoeducation about the nature and symptoms of OCD. Using both didactic and Socratic methods, the therapist socializes the patient to the cognitive-behavioral framework and develops a working model of the patient's OCD symptoms. Self-monitoring of rituals is introduced as a way to enhance objective self-awareness. Patients are instructed to record their rituals as they occur, as well as the thought or activity that provoked the ritual and their level of distress before performing the ritual.

Cognitive therapy techniques are used to target misappraisals of intrusive thoughts and distorted beliefs pertaining to inflated estimates of threat and responsibility, the need for certainty and perfection, and the importance of and need to control unwanted thoughts. Mistaken cognitions are identified and subjected to logical disputation through the evaluation of various sources of evidence. Therapists use Socratic dialogue and behavioral experiments to help clients make discoveries that support alternative beliefs and appraisals that are more evidence-based rather than fear-based (i.e., based on the client's own assumptions).

The exposure component of CBT promotes the cognitive goal of providing data to challenge mistaken beliefs and appraisals. It also promotes the behavioral goal of extinguishing conditioned fear responses to obsessional thoughts, doubts, and images (imaginal exposure) and to external situations and stimuli that trigger obsessions (in vivo exposure). Exposure therapy for anxiety has developed over time, originating with the pairing of imaginal exposure with relaxation (i.e., counterconditioning) as developed by Wolpe (1959). Later, emotional processing theory emphasized habituation of fear within and between exposure trials as indicators of corrective learning (Foa & Kozak, 1986). More recently, Craske et al. (2008) have emphasized optimizing inhibitory learning with an approach that is not necessarily dependent on fear reduction during or across exposure sessions; we discuss this approach in a later section.

Efficacy of CBT for OCD

Only half a century ago, OCD was considered unresponsive to psychological interventions, which at that time typically centered on psychoanalytic and supportive approaches. However, with the introduction of exposure and response prevention (ERP) in the 1960s (Meyer, 1966), the prognosis substantially improved. Numerous controlled and uncontrolled studies conducted in various centers around the world have established ERP (and CBT more broadly) as a highly effective short- and long-term treatment for OCD (e.g., Abramowitz, 1996; Foa et al., 2005). In a meta-analysis of the seven existing randomized controlled studies, Olatunji, Davis, Powers, and Smits (2013) found that ERP outperformed control conditions such as relaxation, anxiety management training, and pill placebo on measures of OCD, yielding a large mean effect size of 0.92. Despite these beneficial effects, not all patients undergo significant symptom reduction; and perhaps as many as 25% to 50% discontinue treatment prematurely or experience relapses in the longer term (e.g., Franklin & Foa, 1998).

To illustrate the application of CBT to OCD, we next present a case study ("Lisa") based on a patient treated by a supervisee of one of the authors. In subsequent sections, we examine what went wrong with Lisa's treatment. Based on lessons learned from Lisa's case and on relevant developments in basic learning and memory research, we present revised aims and methods of CBT for OCD.

Case Study: Lisa

Lisa, a 27-year-old Caucasian woman who was married with a 6-month old son, received a diagnosis of OCD in our anxiety clinic following administration of the Yale-Brown Obsessive Compulsive Symptom Checklist and Severity Scale (Goodman et al., 1989a, 1989b; Lisa's score of 26 fell in the moderate to severe range). She described obsessional thoughts about being possessed by the devil and compulsive reassurance-seeking and mental rituals in response to these obsessions. Lisa was extremely fearful of anything that reminded her of death, possession, hell, and the devil, including the names of famous serial killers and words such as "murder" and "possession." Although not particularly religious (she was raised as a Catholic), Lisa also engaged in compulsive praying in response to her obsessional thoughts. Her problems with OCD had begun several years earlier when she learned that someone in her high school graduating class had murdered his wife. At that point, Lisa began avoiding her former school and anyone associated with it. Following the recent birth of her son, Lisa's obsessions and rituals became much more frequent and caused greater distress, leading her to seek treatment at our training clinic. Lisa's Beck Depression Inventory (Beck, Ward, & Mendelson, 1961) score was 15, yet she did not meet criteria for any mood disorders (or any other comorbid conditions).

Lisa was primarily afraid that exposure to the fear-provoking stimuli described above—including simply