An update on the efficacy of psychological treatments for obsessive–compulsive disorder in adults

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ABSTRACT

We conducted a review to provide an update on the efficacy of psychological treatments for OCD in general and with regard to specific symptom presentations. The PubMed and PsycINFO databases were searched for randomized controlled trials (RCTs) published up to mid February 2012. Forty-five such studies were identified. Exposure and response prevention (ERP) and cognitive-behavioral therapy (CBT) were found to be efficacious and specific for OCD. More purely cognitive interventions that did not include ERP or behavioral experiments were found to be possibly efficacious, as were Acceptance and Commitment Therapy, Motivational Interviewing as an adjunct to the established treatments, Eye Movement Desensitization and Reprocessing, and Satiation Therapy. There was little support for Stress Management or Psychodynamic Therapy. Although the majority of the studies recruited mixed or unspecified samples of patients and did not test for moderation, CBT was efficacious for obsessional patients who lacked overt rituals. One more purely cognitive intervention named Danger Ideation Reduction Therapy was found to be possibly efficacious for patients with contamination obsessions and washing compulsions. Although ERP and CBT are the best established psychological treatments for OCD, further research is needed to help elucidate which treatments are most effective for different OCD presentations.

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Obsessive–compulsive disorder (OCD) is a complex condition characterized by recurrent, intrusive, unwanted ideas, thoughts or impulses (obsessions) and attempts to reduce or neutralize the anxiety or prevent a dreaded outcome associated with the

obsessions through carrying out repetitive ritualistic behavioral or mental actions (compulsions) (American Psychiatric Association, 2000). It is associated with substantial impairment and is a major cause of disability in young to middle-aged adults (Markarian et al., 2010; World Health Organization, 2001). Comorbidity with other psychiatric disorders is high (Torres et al., 2006).

Given the wide variation in the presentation of OCD, there is increasing evidence that it may be best conceptualized as a dimensional disorder and the following symptom dimensions have been most consistently identified: (a) contamination obsessions with cleaning/washing rituals, (b) doubts about harm with checking/reassurance seeking rituals, (c) obsessions relating to a need for symmetry, exactness or completeness and associated ordering, repeating or arranging rituals; (d) unacceptable thoughts of a violent, sexual or religious content with covert mental rituals, and (e) hoarding (Abramowitz et al., 2010; Bloch, Landeros-Weisenberger, Rosario, Pittenger, & Leckman, 2008; Mataix-Cols, Rosario-Campos, & Leckman, 2005; McKay et al., 2004; Wheaton, Abramowitz, Berman, Riemann, & Hale, 2010). However, the specific underlying dimensional structure of OCD and whether hoarding is a type of OCD (Pertusa et al., 2008) continues to be debated. In fact, criteria for a new diagnostic category entitled hoarding disorder have been developed (Mataix-Cols, de la Cruz, Nakao, & Pertusa, 2011). Nonetheless, a dimensional understanding of the symptomatic heterogeneity in OCD clearly has important implications for treatment.

Behavioral and cognitive theories have been particularly influential in shaping our understanding of the development and maintenance of OCD. Historically from the perspective of learning theory it was postulated that obsessions are previously neutral stimuli that come to elicit distress via classical conditioning and that this association is maintained over time by the fact that compulsions (themselves negatively reinforced by their capacity to reduce anxiety) serve as escape/avoidance behaviors that remove the individual from the situation before habituation to the cues occurs (Eysenck & Rachman, 1965; Rachman, 1971). While some aspects of this model have received empirical support, others have not (for a review see Clark, 2004). For example, obsessions may develop in the absence of any link to a traumatic event and compulsions sometimes increase anxiety. Importantly, the model has been limited in adequately explaining the varied and complex content and form of obsessions and compulsions in many individuals with OCD.

Cognitive theories of OCD attempted to deal with these issues by proposing that obsessions develop when the person misinterprets otherwise typical intrusive images or thoughts as indicative of underlying character flaws or predictive of subsequent catastrophes and indicative of increased responsibility for bringing about or preventing harm (Rachman, 1997, 1998; Salkovskis, 1985, 1999). Anxiety and distress arise as a consequence of these misinterpretations, and the individual engages in behavioral responses (e.g., rituals) trying too hard to reduce anxiety, seek safety, neutralize, reduce harm or decrease responsibility (Salkovskis & McGuire, 2003). Several studies have shown associations between OCD and cognitive variables including inflated responsibility and threat perceptions, lowered confidence in memory, difficulty tolerating uncertainty, perfectionism, thought-action fusion, and the over-importance of and need to control thoughts (e.g., Abramowitz, Khandker, Nelson, Deacon, & Rygwall, 2006; Moore & Abramowitz, 2007; Rassin, Muris, Schmidt, & Merckelbach, 2000; Salkovskis et al., 2000; Shafran, Thordarson, & Rachman, 1996; Tolin et al., 2001; van den Hout & Kindt, 2003; Wheaton et al., 2010; Wilson & Chambless, 1999).

Based on behavioral principles, early interventions for OCD initially focused on largely behavioral procedures such as exposure and response prevention (ERP), with the theoretical rationale that if individuals were prevented from carrying out their rituals,

their anxiety would naturally abate through the mechanism of habituation, leading to a decrease in the association between intrusive thoughts and compulsions (Rachman, Hodgson, & Marks, 1971). In ERP, patients are exposed (in vivo or in imagination) to stimuli that evoke obsessive thoughts, and their consequent distress, and encouraged to refrain from engaging in compulsive behaviors (Fals-Stewart, Marks, & Schafer, 1993; Foa et al., 2005). Nevertheless, some theorists have suggested that the largely behavioral procedures used in ERP may work in part by mobilizing underlying cognitive mechanisms. For example, Meyer (1966) proposed that patients' expectations are altered in ERP, and Foa and Kozak (1986) argued that corrective information is incorporated into activated fear structures. Thus, it can be useful to distinguish between the *procedures* that are used in a therapy in an effort to bring about change and the underlying *mechanisms* that are mobilized in the client that actually bring that change about.

The evolution of cognitive theories of OCD has influenced the development of additional procedures that focus specifically on the cognitive aspects of OCD, such as the formation of alternative but less threatening explanations of OCD symptoms ("I am dangerous" becomes "I worry too much about being dangerous"). Explicitly cognitive techniques (i.e., guided discovery and cognitive reappraisal) are used to challenge inflated responsibility, overestimation of threat, thought-action fusion, perfectionism and other maladaptive appraisals thought to maintain OCD (e.g., "thinking something is as bad as doing it" and "I should be able to control my thoughts"), to strengthen the alternative perspective that OCD is merely a problem of worry and to reduce anxiety (Salkovskis, 1999; Wells, 1997).

Although originally derived from learning theory, ERP protocols often include cognitive procedures. For example, Foa et al. (2005) noted that therapists may discuss patients' OCD-related beliefs along with the evidential disconfirmation provided by exposure assignments. Similarly, behavioral experiments are an integral part of many cognitive therapy protocols (Bennett-Levy et al., 2004) and may involve exposure to feared stimuli, such as public toilets, to challenge maladaptive beliefs (concerning contracting an illness for example; Morrison & Westbrook, 2004). Abramowitz, Taylor, and McKay (2005) have argued that there is too much overlap among treatment elements to define ERP as "purely" behavioral and cognitive therapy as "purely" cognitive, and have suggested that it may be best to conceptualize their differences as a matter of emphasis and focus, with cognitive interventions focusing more on cognitive elements and behavioral (ERP) devoting more attention to behavioral elements.

We agree with this perspective, but note that it often translates into differences in the rationale provided and the amount of time devoted to the different procedures. For example, cognitively-oriented therapists make more extensive use of cognitive restructuring and tend to use behavioral experiments (including ERP techniques) for the purpose of testing beliefs. Behavior therapists spend less time attending to beliefs and may repeat exposure exercises multiple times in order to facilitate the process of habituation. For this reason, we have organized our review according to whether studies investigate (a) predominantly behavioral interventions, such as ERP; (b) cognitive-behavioral treatment (CBT) that uses both cognitive and behavioral strategies to change beliefs; or (c) purely cognitive interventions that eschew ERP and behavioral experiments altogether. This classification system reflects the relative balance struck among the various types of procedures used in the different approaches (which usually reflect the mechanisms specified by theory) and may or may not correspond to the actual mechanisms mobilized.

Chambless and Hollon (1998) developed criteria for determining if a treatment works and whether it works better than generic treatment, and DeRubeis and Crits-Christoph (1998) applied