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# Thought control strategies in patients with severe obsessive–compulsive disorder: Treatment effects and suicide risk

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ABSTRACT

Individuals with obsessive–compulsive disorder (OCD) often use maladaptive strategies to control intrusive thoughts (e.g., thought suppression) that may paradoxically increase their frequency. Exposure and response prevention (ERP) treatment has been associated with decreased use of these disadvantageous strategies and increased use of advantageous ones. This study examines changes in thought control strategies among patients with severe OCD receiving ERP in an intensive residential setting. Thought suppression has also been associated with suicidality; thus, we tested whether suicide risk moderated changes in thought control from admission to discharge. Consistent with prior research, patients reported decreased use of worry and punishment, and increased use of distraction and social control. Suicide risk moderated changes in the use of distraction, such that high risk patients employed this strategy less frequently at admission, but no group differences remained at discharge. Additionally, only high risk patients increased their use of distraction over treatment. Furthermore, increased use of distraction and decreased use of self-punishment predicted reduced symptoms at discharge. These findings suggest that OCD patients at high risk for suicide may particularly benefit from interventions that facilitate focused distraction from intrusive thoughts. Further, dispositional use of distraction and self-punishment strategies may be worthwhile targets in the treatment of OCD.



## 1. Introduction

### 1.1. Thought control and OCD

Distressing, intrusive thoughts are a core symptom of obsessive–compulsive disorder (OCD). To a lesser degree, these types of thoughts are also commonly experienced in non-clinical populations. What makes such thoughts so intolerable, distressing, and recurrent for a subset of the populace?

Rachman's (1998) cognitive theory of obsessions posits that catastrophic misinterpretations of intrusive thoughts' importance promote efforts to exert control over them. However, attempts to inhibit or suppress unwanted thoughts often lead to a paradoxical increase in their occurrence (Abramowitz, Tolin, & Street, 2001). Thus, people with OCD may attribute undue significance to passing unwelcome thoughts, which likely enhances accompanying negative emotions. As a result, OCD patients will actively try (and fail) to inhibit these thoughts, creating a positive feedback loop that intensifies them. In other words, intrusive thought suppression may cause these thoughts to escalate, leading to increased negative affect, which in turn promotes further attempts at suppression. This idea is consistent with evidence that dispositional thought suppression mediates the relationship between negative emotionality and intrusive thought frequency (Lynch, Schneider, Rosenthal, & Cheavens, 2007).

Wells and Davies (1994) proposed five strategies that individuals use when attempting to control their thoughts: (a) distraction, (b) social control, (c) worry, (d) punishment, and (e) reappraisal. Although unfocused distraction may be a form of experiential avoidance in OCD, *focused* distraction (e.g., re-directing attention to pleasant activities or thoughts) is considered an adaptive strategy to manage anxiety arising from intrusive

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thoughts. Worry (e.g., focusing on other negative thoughts) and self-punishment (e.g., berating oneself) are considered maladaptive strategies: they maintain distress associated with intrusive thoughts, thereby increasing the motivation for further attempts at thought suppression. Patients with OCD employ both of these strategies more than both anxious and non-anxious controls (i.e., healthy individuals; Abramowitz, Whiteside, Kalsy, and Tolin (2003) and Amir, Cashman, and Foa (1997)). Additionally, individuals with OCD are less likely to use the adaptive strategy of distraction (e.g., engaging in an enjoyable activity) than anxious and non-anxious controls (Abramowitz et al. (2003) and Amir et al. (1997)).

Exposure and response prevention (ERP) is a type of cognitive-behavioral therapy (CBT) that involves repeatedly confronting stimuli that provoke intrusive thoughts while refraining from compulsions. Although ERP does not necessarily involve an explicit cognitive component, information about the significance of intrusive thoughts is derived implicitly from the absence of the expected catastrophic consequences when allowing these thoughts to occur without attendant rituals (cf. Craske, Treanor, Conway, Zbozinek, and Vervliet (2014)). This realization that distressing thoughts can be endured without disastrous results might decrease OCD patients' motivation to use disadvantageous thought control strategies, and even facilitate the use of more adaptive techniques. That is, experiencing intrusive thoughts without the expected consequences may reduce the fear and self-loathing associated with them, and thus the desire to suppress them. Repeatedly confronting these thoughts also likely causes habituation, as patients may come to realize that intrusive thoughts are common and not inherently dangerous (e.g., distress might be managed by focusing on other thoughts). Indeed, reduced OCD symptoms after ERP treatment are associated with decreased use of punishment and increased use of distraction (Abramowitz et al., 2003).

Most OCD patients achieve modest long-term symptom reduction from ERP treatment (Foa & Kozak, 1996). However, a subset of severe cases does not benefit from ERP in an outpatient setting, but responds somewhat more favorably to intensive residential treatment (IRT; Brennan et al., 2014). IRT involves a combination of behavioral and cognitive interventions, medication management, and milieu treatment conducted in a residential setting. While ERP is at the core of IRT, therapists also incorporate strategies from several other empirically supported treatments for OCD, including acceptance and commitment therapy (ACT; Hayes, Strosahl, and Wilson (1999) and Twohig, Hayes, and Masuda (2006)), mindfulness training (Fairfax, 2008), and various aspects of cognitive therapy (Clark (2004) and van Oppen and Arntz (1994)) with individuals and groups.

Patients with the most severe symptoms represent the majority of OCD-related impairment and hospitalizations in the United States (Ruscio, Stein, Chiu, & Kessler, 2010). Despite the magnitude of their impact on public health, limited research has addressed whether patients in this population differ from those with less severe OCD in symptom presentation and treatment factors. Taking a dimensional approach to OCD severity, it is imperative to distinguish between non-clinical samples with OCD symptoms, outpatient samples, and the treatment-refractory inpatients that primarily comprise participants in this study. These groups are potentially heterogeneous, and conclusions drawn from work examining relatively mild OCD may not generalize to the entire spectrum of symptom severity. Inpatient samples perhaps present the most significant challenges to study empirically, yet research in this population is crucial to understanding the disorder.

### 1.2. The relevance of suicide to OCD and thought control

Individuals with OCD are at elevated risk for suicidal ideation and attempts (Angelakis, Gooding, Tarrier, & Panagioti, 2015; Balci & Sevincok, 2010; Kalmath, Reddy, & Kandavel, 2007; Torres et al., 2011). This is unsurprising given its chronic course, high levels of comorbidity, and significant impact on overall functioning (Karno, Golding, Sorenson, and Burnam (1988) and Veale and Roberts (2014)). Importantly, a recent meta-analytic review found a positive association between OCD symptom severity and suicidality (Angelakis et al., 2015), indicating that suicide vulnerability might be a key factor that distinguishes treatment-resistant patients from less refractory cases.

Suicidal ideation and attempts are also associated with the tendency to suppress unwanted thoughts in depressed patients (Cukrowicz, Ekblad, Cheavens, Rosenthal, and Lynch (2008) and Lynch, Cheavens, Morse, and Rosenthal (2004)) and in non-clinical samples (Najmi, Wegner, & Nock, 2007; Pettit et al., 2009). This suggests that the use of thought suppression to manage obsessions may promote suicidality in OCD patients. Specifically, reliance on thought control strategies employed in the service of thought suppression (e.g., worry) could play a fundamental role in the development and maintenance of suicidal ideation. The association between such strategies and suicidality may be related to the ironic rebound effect of thought suppression (Wegner, 1994; Wegner, Schneider, Carter, & White, 1987). That is, when people attempt to suppress or neutralize undesirable thoughts (particularly those that are highly aversive and arousing, such as suicide-related cognitions), they often paradoxically increase in frequency and intensity (Pettit et al., 2009).

### 1.3. How suicidality affects thought control in severe OCD treatment

Severe mental illness is a robust predictor of suicide, and OCD inpatients are at especially enhanced risk (Harris & Barraclough, 1997). In the context of other severe psychological disorders, suicide prevention is considered a prerequisite for recovery (Foster, 2013), but little attention has been devoted to this phenomenon in OCD. If suicide is related to OCD and the thought control strategies associated with the disorder, and symptom improvement involves changes in these strategies, might suicide risk moderate shifts in thought control during treatment?

In the present study, we sought to replicate and extend the work of Abramowitz et al. (2003) to patients with severe OCD receiving ERP in a naturalistic IRT setting. In previous research, Abramowitz and colleagues compared the use of thought control strategies in a small sample of adults with OCD to those with panic disorder and non-anxious control participants. Those investigators reported that OCD participants used distraction less frequently, and worry and punishment strategies more frequently than the other groups. In addition, participants with OCD used social control less frequently relative to healthy individuals. OCD patients in the Abramowitz et al. (2003) study also received ERP on an outpatient basis. Participants characterized as treatment "responders" (i.e., patients who achieved $>40\%$ reduction in OCD symptoms) reported increased use of distraction and decreased use of punishment from pre- to post-treatment. In sum, the results of past research suggest that OCD involves the underuse of focused distraction and over-reliance on self-punishment in managing intrusive thoughts, and that this pattern might be addressed implicitly through ERP.

Consistent with the above work, we hypothesized that patients would increase their use of distraction and decrease their use of punishment over the course of IRT, and that these thought control changes would relate to symptom improvement. Given the unique nature of the population and setting, we also assessed patients'