Published in final edited form as:
J Anxiety Disord. 2014 August ; 28(6): 553–558. doi:10.1016/j.janxdis.2014.06.001.

The Impact of Symptom Dimensions on Outcome for Exposure and Ritual Prevention Therapy in Obsessive-Compulsive Disorder

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Abstract

Objective—Obsessive-compulsive disorder (OCD) is a severe condition with varied symptom presentations. The behavioral treatment with the most empirical support is exposure and ritual prevention (EX/RP). This study examined the impact of symptom dimensions on EX/RP outcomes in OCD patients.

Method—The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) was used to determine primary symptoms for each participant. An exploratory factor analysis (EFA) of 238 patients identified five dimensions: contamination/cleaning, doubts about harm/checking, hoarding, symmetry/ordering, and unacceptable/taboo thoughts (including religious/moral and somatic obsessions among others). A linear regression was conducted on those who had received EX/RP (n = 87) to examine whether scores on the five symptom dimensions predicted post-treatment Y-BOCS scores, accounting for pre-treatment Y-BOCS scores.

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Results—The average reduction in Y-BOCS score was 43.0%, however the regression indicated that unacceptable/taboo thoughts ($\beta = .27$, $p = .02$) and hoarding dimensions ($\beta = .23$, $p = .04$) were associated with significantly poorer EX/RP treatment outcomes. Specifically, patients endorsing religious/moral obsessions, somatic concerns, and hoarding obsessions showed significantly smaller reductions in Y-BOCS severity scores.

Conclusions—EX/RP was effective for all symptom dimensions, however it was less effective for unacceptable/taboo thoughts and hoarding than for other dimensions. Clinical implications and directions for research are discussed.

Keywords

obsessive-compulsive disorder; factor analysis; symptom dimensions; exposure and response prevention; hoarding; treatment outcome

Introduction

Obsessive-compulsive disorder (OCD) is a severe disorder involving distressing, intrusive obsessions and repetitive compulsions. Lifetime prevalence rates are estimated at 1.6-2.3% with nearly two-thirds of those afflicted reporting severe role impairment (Kessler et al, 2005; Ruscio, Stein, Chiu & Kessler, 2010). Cognitive behavioral therapy (CBT) consisting of exposure and ritual prevention (EX/RP) is the psychotherapeutic treatment of choice because of its efficacy and high empirical support (Foa et al., 2005; Frances, Docherty, & Kahn, 1997; Greist et al., 2003; NICE, 2005; Koran et al., 2007; Simpson et al., 2008). However, due to the wide range of varied symptom profiles, it is not clear if EX/RP is equally effective for all types of OCD symptoms (i.e., different symptom dimensions or profiles; Williams, Mugno, Franklin, & Faber, 2013).

OCD symptom dimensions have often been identified based on factor analytic studies of the Yale-Brown Obsessive-Compulsive Scale checklist (Y-BOCS; Goodman et al., 1989), using either the symptom categories (e.g., Abramowitz, Franklin, Schwartz & Furr, 2003; Baer, 1994; Leckman et al., 1997; Williams et al., 2011) or individual items (e,g., Feinstein, Fallon, Petkova & Leibowitz, 2003; Pinto et al., 2008). Similar results have been found with both approaches, and recent studies have generally yielded five symptom dimensions: contamination/cleaning, symmetry/ordering, doubts about harm/checking, hoarding, and unacceptable/taboo thoughts, which has been linked to reassurance, mental rituals, and somatic concerns (Pinto et al., 2008; Williams et al., 2011), although some studies have found variations in this pattern (e.g., Katerberg et al., 2010; Whittal, McLean, Woody, Rachman, & Robichaud, 2010).

Data suggest these symptom dimensions are associated with differential response to EX/RP treatment (e.g., Leckman et al., 2010), but findings vary due to methodological differences and other factors. For example, although patients with contamination/cleaning or doubts about harm/checking symptoms appear to respond well to EX/RP (De Araujo, Ito, Marks, & Deale, 1995; Foa & Goldstein, 1978; Foa, Kozak, Steketee, & McCarthy, 1992), one study of group treatment for OCD found those high on the dimension of contamination/cleaning were more resistant to treatment (McLean et al., 2001), possibly due to disgust as a factor in

obsessional distress (Feinstein et al., 2003; McKay, 2006). In contrast, Abramowitz and colleagues (2003) found that the symmetry/ordering dimension predicted a poorer response to EX/RP than other dimensions. Other studies have found that unacceptable/taboo thoughts (i.e., sexual, aggressive, and religious concerns) take longer to treat, possibly due to more obsessions and fewer observable compulsions and more mental rituals (Alonso et al., 2001; Grant et al., 2006; Rufer, Fricke, Moritz, Kloss, & Hand, 2006; Williams et al., 2011). Finally, hoarding symptoms seem to be the most resistant to CBT treatment for OCD (Abramowitz et al., 2003; Mataix-Cols et al., 2002; Rufer et al., 2006; Saxena et al., 2002).

It is difficult to arrive at clear conclusions regarding the effectiveness of EX/RP for different symptom dimensions because prior studies have each had limitations that may contribute to divergent findings. Such limitations include: small sample size (e.g., Alonzo et al., 2001), inclusion of only some symptom dimensions in the analyses (e.g., De Araujo et al.,1995; Grant et al., 2006; Saxena et al., 2002), data from open treatment outpatient records (e.g., Abramowitz et al., 2003), alternative format for EX/RP (e.g., Mclean et al., 2001; Mataix-Cols et al., 2002), and/or treatment included additional psychosocial interventions (e.g., Rufer et al., 2006; Saxena et al., 2002).

To address this gap in the literature, we combined samples from two previous randomized controlled trials of EX/RP to examine treatment outcomes by OCD symptom dimension in a well-characterized sample. In these studies, EX/RP treatment was conducted in a standardized manner across both samples, and the assessment of outcome was conducted by trained evaluators who were blind to whether or not the patient was receiving EX/RP. Findings related to the phenomenology of OCD symptom dimensions in this combined sample were reported previously (Williams et al., 2011), and we now aim to extend this project by examining a subset of those participants who received EX/RP (n = 87).

Given that patients with cleaning and checking compulsions have been consistently well-represented in research and clinical practice (Williams, Powers, & Foa, 2012; (Williams, Mugno, Franklin, & Faber, 2013), our hypothesis was that these two dimensions (i.e., contamination/cleaning and doubts about harm/checking) would predict the best response to EX/RP, whereas the hoarding dimension would predict the poorest EX/RP outcomes (e.g., Abramowitz et al., 2003; Rufer et al., 2006; Saxena et al., 2002).

Methods

Participants

Data from two OCD treatment outcomes studies were pooled (n = 238). Both studies recruited adults ages 18-65 with a primary diagnosis of OCD. Briefly, the first study investigated the efficacy of EX/RP, clomipramine (or placebo), and their combination; the second study compared the efficacy of adding CBT (EX/RP or Stress Management Training) to serotonin reuptake inhibitor (SRI) medication. All participants received informed consent, and both these studies were approved by their respective institutional review boards (IRBs). Full study descriptions are available elsewhere (Foa et al., 2005; Simpson et al., 2008). Participants of interest were those randomly assigned to receive EX/RP as a part of treatment (n = 117). From this sample, 30 participants were not included

in the treatment outcome analyses because of missing Y-BOCS pre- or post-treatment data, leaving a final sample of 87 adults (61.0% male; M_{age} = 36.4, *SD* = 12.3; 83.3% non-Hispanic White).

Measures

All participants were administered a battery of assessments before and after treatment by a trained independent evaluator who was blinded to treatment condition.

The Y-BOCS (Goodman et al., 1989) is considered a gold-standard, clinician-administered measure that consists of a symptom checklist and severity scale. The symptom checklist consists of more than 60 specific symptoms ("symptom items") that are grouped into discrete clusters of obsessions or compulsions ("symptom categories," *n* = 17). The version of the Y-BOCS checklist used in this study included 5 additional items that expanded upon the original item about mental compulsions (Foa et al., 1995); this expanded version has been widely used to ensure that mental compulsions are adequately captured (e.g., Foa et al., 2005; Simpson et al., 2008; Simpson et al., 2013; Williams et al., 2012). Each checklist item is rated as having never been a problem, occurring in the past, or currently presenting (past week). The three most interfering, or distressing obsessions and compulsions are then identified and ranked as "target symptoms."

The 10-item severity scale is divided into an obsessions subscale and a compulsions subscale (5 questions each). Each question is scored on a 0-4 scale, with total scores ranging from 0 (*non-clinical*) to 40 (*extreme*). Scores greater than or equal to 16 were required for study entry, which indicates clinically significant OCD symptoms. The Y-BOCS severity scale has excellent psychometric properties, including reliability and construct validity (Goodman & Price, 1992; Goodman et al., 1989; Williams, Wetterneck, Thibodeau, & Duque, 2013; Woody, Steketee & Chambless, 1995).

Treatment

All participants in the current sample completed EX/RP as part of their treatment through the randomized trial. The majority (79.5%) were also receiving an SRI. Specifically, 19 of 36 participants from the first study were receiving clomipramine that was started at the same time as the EX/RP treatment; the remaining 17 received EX/RP alone. All 47 participants from the second study were taking an SRI (clomipramine, fluoxetine, paroxetine, sertraline, fluvoxamine, citalopram, or escitalopram) for at least 12 weeks at a stable dose prior to starting EX/RP treatment.

Outpatient EX/RP treatment was conducted each weekday over a 4-week period in the first study and twice-weekly over an 8-week period in the second study. Previous research has shown that these two scheduling strategies produce similar results (Abramowitz, Foa, & Franklin, 2003), and therefore the outcome data were collapsed across studies. Treatment consisted of two information-gathering sessions, followed by 15 ninety-minute exposure sessions, which includes imaginal and in vivo exercises. Details of the EX/RP treatment procedure are described elsewhere (Kozak & Foa, 1997; Foa, Yadin, & Lichner, 2012).

Data Analytic Plan

Following methodology described in previous studies (*e.g.*, Baer, 1994; Mataix-Cols, Rauch, Manzo, Jenike, & Baer, 1999; Pinto et al., 2007; Williams et al., 2011), each patient was assigned a score for each symptom category based on responses to the individual checklist items. Within each category, a score of one indicated that the participant endorsed one or more of the individual items in that category as being currently experienced. A score of two meant that at least one of the symptoms in that category was not only current but also considered a target symptom. Each participant could have up to three target obsessions and three target compulsions.

Descriptive statistics were conducted initially to evaluate treatment outcomes for the overall sample in response to EX/RP. Next, to evaluate the impact of symptom dimensions on treatment outcomes, a series of steps were completed. First, the responses for each subject on each of 16 symptom categories were entered into an exploratory factor analysis (EFA) with a geomin (orthogonal) rotation, conducted in *Mplus*, version 6 (Muthen & Muthen, 2010). Mplus uses a probit model to account for the categorical nature of the items, which can take values of 0, 1, or 2. Next, we conducted a stepwise regression, including only those who received EX/RP. In the first step, we predicted the post-treatment scores of the treatment group first from their pre-test scores. In the second step, we entered the orthogonal dimensions derived from the EFA. In Mplus, the EFA and the regression are conducted as part of single analysis, called exploratory structural equation modeling (ESEM). Lastly, additional tests (t-tests) were utilized using SPSS version 17, as needed, to ascertain the clinical significance of group differences in Y-BOCS change scores based on the results of the regression, where $p < .05$ was considered significant.

Results

Descriptive Results

Prior to treatment, patients on average had severe OCD ($M_{\text{Y-BOCS}} = 25.6$, $SD = 4.7$). Post-treatment, Y-BOCS scores averaged in the mild severity range ($M_{\text{Y-BOCS}} = 14.6$, $SD = 7.9$). Those receiving EX/RP experienced on average a 43.0% Y-BOCS reduction ($SD = 25.2$) or an 11-point Y-BOCS decrease (SD = 7.7). A dependent paired t-test revealed the change in Y-BOCS severity scores to be significantly different ($t[86] = 13.4$, $p < .0001$, $d = 1.531$; [$r = .35$, $p = .001$]).

Factor Analysis

The exploratory factor analysis was conducted on all participants with complete Y-BOCS symptom checklist data ($n = 238$). The first ten eigenvalues from the EFA were equal to, 4.21, 2.27, 1.87, 1.42, 1.17, 0.85, 0.87, 0.71, 0.64, 0.49. Based on examination of the scree plot, we selected five factors for rotation. Upon examination of the loadings, we labeled them as: 1) Doubts about Harm/Checking, 2) Unacceptable/Taboo Thoughts, which included mental compulsions, reassurance, and somatic concerns, 3) Contamination/ Cleaning, 4) Hoarding, and 5) Symmetry/Ordering. The five-factor solution fit the data well (RMSEA = 0.026; CFI = 0.998), and accounted for 68.5% of the variance. Factor loadings are shown in Table 1 (also see Williams et al., 2011).

Regression Model

The full regression model, shown in Table 2, accounted for 27.1% of the variance in post-treatment Y-BOCS score. In the first step of the regression, post-test score was predicted from pre-test score only, which explained 21.1% of the variation in post-test score. We then entered simultaneously the five orthogonal dimensions derived from the EFA, using the Mplus ESEM procedure. The five symptom dimensions uniquely accounted for an additional 6.0% of the variance in outcomes. Two of the individual symptom dimensions had a significant effect on treatment outcome, over and above variance explained by step 1. Specifically, the Unacceptable/Taboo thoughts dimension ($\beta = .27$, $p = .02$), and the Hoarding dimension ($\beta = .23$, $p = .04$) each had significant negative effects on treatment outcome.

Treatment Outcomes Comparisons

Additional analyses were conducted to understand the clinical significance of the regression results associated with poorer outcomes. First, we identified the Y-BOCS checklist symptom categories associated with the two significantly different dimensions mentioned above: Unacceptable/Taboo Thoughts and Hoarding. This yielded a total of 8 symptom categories, which included: impulsive aggressive obsessions, sexual obsessions, religious/moral obsessions, somatic obsessions, mental compulsions, and reassurance seeking (Unacceptable/Taboo Thoughts dimension), and hoarding obsessions and hoarding compulsions (Hoarding dimension). Next, a series of independent sample t-tests were conducted to examine if there were significant differences in Y-BOCS severity reduction between patients who endorsed and did not endorse any symptoms within each of the 8 categories. These results, shown in Table 3, revealed that patients endorsing religious/moral (scrupulous), somatic, and hoarding obsessions showed significantly poorer response to EX/RP treatment, as evidenced by smaller percent reductions in Y-BOCS severity scores, in comparison to those not endorsing these symptoms.

Discussion

Outcomes by Symptom Dimension

The current study aimed to evaluate EX/RP treatment outcomes by OCD symptom dimension. We found that individuals with unacceptable/taboo thoughts had poorer EX/RP outcome than those with contamination/cleaning, doubts about harm/checking, and symmetry/ordering. This is consistent with the three prior studies that also found these individuals are more difficult to treat with EXRP (Rufer, Fricke, Moritz, Kloss, & Hand, 2006; Mataix-Cols, Marks, Greist, Kobak, & Baer, 2002). Our study confirms these results in a sample that received standardized EX/RP, lending further support to previous findings. The reason for this poorer outcome could be that EX/RP treatment for this group may be more challenging to implement given that compulsions tend to be primarily mental and reassurance-seeking behaviors may be easily overlooked as rituals (Williams et al., 2011). Treatment of those with Unacceptable/Taboo obsessions will likely require more imaginal exposures, and ritual prevention will need to include the suppression of mental compulsions, which is more difficult to obtain (Williams et al., 2013). However, very few treatment studies have focused exclusively on this group of patients, and such studies have suffered

from small sample sizes (Abramowitz & Zoellner, 2002; Freeston, Léger, & Ladouceur, 2001) or the treatment was cognitive therapy (CT) rather than EX/RP (i.e., Whittal et al., 2011).

In looking more closely at the individual symptoms within the Unacceptable/Taboo thoughts dimension, patients with religious/moral and somatic concerns fared significantly worse than others in our sample. With regard to religious concerns, these results are consistent with previous findings that have documented poorer EX/RP treatment response among patients with scrupulosity (Mataix-Cols, Marks, Greist, Kobak, & Baer, 2002; Nelson, Abramowitz, Whiteside, & Deacon, 2006). A growing number of empirical investigations have specifically examined this patient population and barriers to successful treatment (e.g., Abramowitz, 2001; Himle, Chatters, Taylor, & Nguyen, 2011; Huppert, Seiv, & Kushner, 2007; Rosmarin, Piruitnsky, & Siev, 2010; Siev, Baer, & Minichiello, 2011). One possible reason for the inferior outcome is that therapists may incorrectly identify scrupulous symptoms as religious behavior instead of psychiatric in nature, thus overlooking it in treatment. Another possible reasons is that patients may be less trusting of exposure-based treatment for fear of disrespecting their faith, potentially influencing treatment adherence. Indeed, it may be difficult for a patient and/or therapist to distinguish between what is acceptable religious/moral thoughts or behavior versus excessive, posing difficultly with developing and implementing the exposure hierarchy. Moreover, it is unlikely that religious- or moral-based behavior will be completely extinguished (per ritual prevention) if a patient has strong religious values, which in turn would potentially facilitate the continued maintenance of OCD symptomology.

With regard to somatic obsessions, these symptoms include two items on the Y-BOCS, including concern with illness or disease (e.g., having a disease that has not yet been diagnosed) and excessive concern with body part or aspect of appearance (e.g., nose, eyes, mouth, etc. are not right). These symptoms may be more closely related to other psychiatric disorders (hypochondriasis and body dysmorphic disorder), which may be maintained by alternative cognitive mechanisms, including anxiety sensitivity and bodily vigilance (in hypochondriasis; Deacon & Abramowitz, 2008) and differ on important clinical variables (e.g., level of insight, functional impairment; Frare, Perugi, Rufflol & Toni, 2004; Phillips et al., 2007). Together, this may complicate treatment delivery or adherence.

As predicted, patients with hoarding symptoms were less responsive to treatment than those without these symptoms. Of note, no patients in our sample *exclusively* endorsed hoarding obsessions and/or compulsions. So, it is possible that these individuals (with a combination of hoarding and other content-area OCD symptoms) are in some way different from persons with purely hoarding symptoms. Since this data was collected, hoarding has been classified as a separate disorder (Hoarding Disorder; DSM-5, 2013) *when symptoms are not clearly related to obsessive-compulsive concerns*. This is based on clinical differences between hoarding and other types of OCD. For example, unlike individuals with other OCD presentations, hoarding symptoms tend to involve fewer intrusive thoughts (obsessions) about possessions and fewer urges to perform rituals; instead, accumulating and saving behaviors are typically ego-syntonic, whereas OCD symptoms are by definition ego-

dystonic and rituals are performed in response to anxiety and distress (DSM-5 Task Force and Work Group, 2011; Pertusa et al., 2010).

EX/RP Effective for All Symptom Dimensions

Despite significant differences in treatment outcome, overall patients evidenced clinically significant symptom reduction, and those with unacceptable/taboo thoughts and hoarding had a decrease in Y-BOCS scores by at least a third. These results are consistent with the growing empirical evidence on the efficacy of EX/RP for OCD. Although these two dimensions were significantly less responsive to EX/RP, these patients *did* respond to treatment and demonstrated clinically significant gains, just to a lesser degree. It is important to note that overall these data suggest that standard EX/RP is an effective treatment for OCD patients who have hoarding symptoms in the context of their OCD, and therefore consistent with NICE guidelines (2005) and World Council of Anxiety (Greist et al., 2003), a reasonable first-line treatment option.

Strengths and Limitations

The strengths of this study include the large sample, use of a standardized EX/RP protocol, and independent, blinded evaluation of symptom severity pre- and post-treatment. Limitations include the fact that individuals in the current sample were taking an SRI for their OCD symptoms, however prior analyses of the first study demonstrated that outcome with EX/RP was not improved by the addition of an SRI medication (Foa et al., 2005). Additionally, the study sample was primarily non-Hispanic White, so it is unclear how results may generalize to more diverse populations (Williams, Powers, Yun, & Foa, 2010).

The current study did not assess improvement on each symptom dimension individually. For example, in the hoarding group, since all had OC symptoms in addition to hoarding, it is possible that the treatment response we observed is largely accounted by the reduction in non-hoarding OCD symptoms. It is also possible that individuals with hoarding symptoms in conjunction with other obsessive-compulsive symptoms may respond more favorably to traditional EX/RP than individuals with “pure” hoarding symptoms, i.e., Hoarding Disorder. This is an empirical question that remains to be answered. Future studies might utilize additional measures of OCD that quantify severity based on symptom dimension, such as the Dimensional Y-BOCS (DY-BOCS; Rosario-Campos et al., 2006) or the Dimensional Obsessive-Compulsive Scale (DOCS; Abramowitz et al., 2010).

Conclusions

Given the findings of the current study, EX/RP continues to be a recommended treatment for people with all OCD symptom dimensions, including those with unacceptable/taboo thoughts and hoarding symptoms that occur with other OCD symptoms. However, clinicians should pay special attention to these two constellations of symptoms to maximize EX/RP outcome. Future research should aim to better understand differences by focusing on outcomes for these more treatment-resistant dimensions and ongoing development of interventions tailored to specific symptom profiles (Williams, Mugno, Franklin, & Faber, 2013).

Acknowledgments

This study was supported by NIMH grants R01 MH-045404-17S1 (Dr. Foa for Dr. Williams), R01 MH-45436 (Drs. Liebowitz and Simpson), R01 MH-45404 (Dr. Foa), and K24 MH- MH091555 (Dr. Simpson).

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Highlights

- We examine the impact of symptom dimensions on treatment outcomes in OCD
- An exploratory factor analysis of 238 patients identified 5 symptom dimensions
- Linear regression was conducted on those receiving exposure and ritual prevention
- Unacceptable/taboo thoughts and hoarding exhibited poorer treatment outcomes
- Nonetheless, EX/RP was an effective treatment for all symptom dimensions

J Anxiety Disord. Author manuscript; available in PMC 2015 August 01.

Table 1

Factor loadings of YBOCS-SC categories or items

YBOCS-SC category/item	Doubt-checking	Contamination-cleaning	Symmetry-ordering	Unacceptable/taboo thoughts	Hoarding
Unintentional harm obsessions	**0.795**	-0.003	0.034	0.055	0.095
Impulsive aggression obsessions	**0.479**	0.002	-0.092	**0.467**	0.012
Contamination obsessions	0.231	**1.124**	0.053	0.043	0.014
Sexual obsessions	0.012	-0.012	-0.293	**0.706**	0.043
Hoarding obsessions	0.087	0.008	0.095	0.087	**0.840**
Religious obsessions	0.112	0.003	0.094	**0.580**	0.007
Symmetry obsessions	0.098	0.134	**0.786**	0.018	0.033
Somatic obsessions	0.279	0.128	0.075	**0.395**	0.222
Cleaning compulsions	0.247	**0.718**	0.156	0.023	0.052
Checking compulsions	**0.629**	0.110	0.147	0.106	0.164
Repeating compulsions	0.274	0.021	**0.466**	**0.448**	0.073
Counting compulsions	0.174	0.044	**0.422**	0.094	0.160
Ordering compulsions	0.041	0.057	**0.571**	0.014	**0.423**
Hoarding compulsions	0.073	0.012	0.015	0.039	**1.101**
Mental compulsions	0.386	0.004	0.160	**0.584**	-0.042
Reassurance seeking	0.208	0.089	0.019	**0.621**	0.129

Table 2

Regression predicting post-treatment Y-BOCS scores by symptom dimension

Model	B	Std Err	beta	t	p
1 (Constant)	4.94	4.65	0.63	1.06	0.30
Pre Treatment Y-BOCS	0.38	0.18	0.23	2.10	0.04
Factor 1: Doubt Harm/Checking	-1.23	1.40	-0.16	-0.88	0.38
Factor 2: Unacceptable/Taboo	2.09	0.98	0.27	2.14	0.02
Factor 3: Contamination	-1.22	0.90	-0.16	-1.36	0.17
Factor 4: Hoarding	1.75	0.90	0.23	1.95	0.04
Factor 5: Symmetry/Ordering	1.12	1.11	0.14	1.01	0.31

Y-BOCS = Yale-Brown Obsessive-Compulsive Severity Scale score

Table 3

Independent-Sample T-test of Y-BOCS Change Scores between those with and without various OCD symptom categories by dimension.

	% Y-BOCS Severity Scale Reduction				
Symptom Dimension	**Symptom Present Mean (SD); n**	**Symptom Not Present Mean (SD); n**	***t***	***p***	***d***
Unacceptable/Taboo Thoughts					
Impulsive Aggressive Obs.	39.54 (29.23); n = 42	46.15 (29.19); n = 45	1.06	.294	0.23
Sexual Obsessions	36.94 (31.01); n = 27	45.66 (28.23); n = 60	1.29	.199	0.30
Religious/Moral Obsessions*	34.28 (30.97); n = 35	48.43 (26.93); n = 52	2.18	.032	0.48
Somatic Obsessions*	32.94 (28.01); n = 41	51.89 (27.60); n = 46	3.17	.002	0.69
Mental Compulsions	40.00 (29.76); n = 70	55.14 (23.97); n = 17	1.95	.055	0.53
Reassurance Seeking	38.84 (26.42); n = 44	47.17 (31.60); n = 43	1.33	.186	0.29
Hoarding					
Hoarding Obsessions*	33.84 (28.78); n = 36	49.49 (28.06); n = 51	2.52	.014	0.55
Hoarding Compulsions	35.83 (24.80); n = 33	47.31 (31.05); n = 54	1.80	.075	0.40

Y-BOCS = Yale-Brown Obsessive-Compulsive Severity Scale score