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## Authors
Samuels, Jack
Bienvenu, O Joseph
Krasnow, Janice
et al.

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# An Investigation of Doubt in Obsessive–Compulsive Disorder

**Jack Samuels**[a,*], **O. Joseph Bienvenu**[a], **Janice Krasnow**[a], **Ying Wang**[a], **Marco A. Grados**[a], **Bernadette Cullen**[a], **Fernando S. Goes**[a], **Brion Maher**[b], **Benjamin D. Greenberg**[c], **Nicole C. McLaughlin**[c], **Steven A. Rasmussen**[c], **Abby J. Fyer**[d], **James A. Knowles**[e], **Paul Nestadt**[a], **James T. McCracken**[f], **John Piacentini**[f], **Dan Geller**[g], **David L. Pauls**[h], **S. Evelyn Stewart**[i], **Dennis L. Murphy**[j], **Yin-Yao Shugart**[k], **Vidya Kamath**[a], **Arnold Bakker**[a], **Mark A. Riddle**[a], and **Gerald Nestadt**[a]

[a]Department of Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA

[b]Department of Mental Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland, USA

[c]Department of Psychiatry and Human Behavior, Brown Medical School, Butler Hospital, Providence, Rhode Island, USA

[d]Department of Psychiatry, College of Physicians and Surgeons at Columbia University and the New York State Psychiatric Institute, New York City, New York, USA

[e]Department of Psychiatry, University of Southern California School of Medicine, Los Angeles, California, USA

[f]Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles, School of Medicine, Los Angeles, California, USA

[g]Department of Psychiatry, Harvard Medical School, Boston, Massachusetts, USA

[h]Department of Psychiatry and Psychiatric and Neurodevelopmental Genetics Unit, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts, USA

[i]Department of Psychiatry, Faculty of Medicine, University of British Columbia, Vancouver

[*]Send correspondence to: Jack Samuels, PhD. Department of Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine, 550 N. Broadway #902, Baltimore, Maryland, USA 21205; Tel +1 410 614 4942; Fax: +1 401 614 8137; jacks@jhmi.edu.

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The authors of this manuscript do not have any actual or potential conflicts of interest to report or disclose.

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[j]Laboratory of Clinical Science, National Institute of Mental Health, National Institute of Health, Bethesda, Maryland, USA

[k]Unit of Statistical Genomics, Division of Intramural Research, National Institute of Mental Health, Bethesda, MD, USA

## Abstract

**Background—**Clinicians have long considered doubt to be a fundamental characteristic of obsessive-compulsive disorder (OCD). However, the clinical relevance of doubt in OCD have not been addressed.

**Methods—**Participants included 1,182 adults with OCD who had participated in family and genetic studies of OCD. We used a clinical measure of the severity of doubt, categorized as none, mild, moderate, severe, or extreme. We evaluated the relationship between doubt and OCD clinical features, Axis I disorders, personality and personality disorder dimensions, impairment, and treatment response.

**Results—**The severity of doubt was inversely related to the age at onset of OCD symptoms. Doubt was strongly related to the number of checking symptoms and, to a lesser extent, to the numbers of contamination/cleaning and hoarding symptoms. Doubt also was related to the lifetime prevalence of recurrent major depression and generalized anxiety disorder; to the numbers of avoidant, dependent, and obsessive-compulsive personality disorder traits; and to neuroticism and introversion. Moreover, doubt was strongly associated with global impairment and poor response to cognitive behavioral treatment (CBT), even adjusting for OCD severity and other correlates of doubt.

**Conclusions—**Doubt is associated with important clinical features of OCD, including impairment and cognitive-behavioral treatment response.

### Keywords

obsessive-compulsive disorder; doubt; uncertainty; impairment; treatment response

## 1. Introduction

Doubt has been described as a lack of subjective certainty about, and confidence in, one's perceptions and internal states [1]. Clinicians have long considered doubt to be an important characteristic of obsessive-compulsive disorder (OCD). For example, du Saulle described patients having "spontaneous and irresistible thoughts…with a "feeling of doubt" [2]. William James explained "the questioning mania" as a pathological excess of doubt [3]. Janet maintained that the symptoms in these patients are "designed to compensate for a lack of certainty" [4,5]. In the modern era, doubt continues to be considered an important feature of OCD [6] and has variously been explained as the inability to "experience a sense of conviction" [7], to put closure on experience [8], or to generate the normal "feeling of knowing" [9].

Several studies have found that OCD is associated with lack of confidence in one's own memory, attention, and perception [10,11,12]. More recently, empirical studies have utilized

cognitive paradigms to investigate doubt and indecision, under different levels of uncertainty, in individuals with and without OCD. For example, Sarig and colleagues [13] found positive correlations between obsessive-compulsive symptoms and performance on a color discrimination task, including amount of time required to complete the task, extent of search through the color continuum, and request for feedback. Stern and colleagues [14] found that OCD patients rated themselves as more uncertain than did controls, while accumulating evidence during a decision-making task, under conditions without objective uncertainty. Banca et al. [15] found that, compared to controls, OCD patients required more evidence to reach a decision on a random dot motion task, with longer response times and higher decision boundaries.

Although doubt was considered a potentially relevant domain in the early development of instruments to measure obsessive-compulsive beliefs [16,17], more research attention has been devoted to other constructs in OCD. Indecision, i.e., difficulty in choosing a course of action given more than one option, occurs in many individuals with OCD and is especially prominent in compulsive hoarding [18,19]. Perfectionism, a trait characterized by striving for flawlessness and having excessively high standards, is a frequent characteristic of OCD and obsessive-compulsive personality disorder [20]. Intolerance of uncertainty, which has been defined as the “belief that uncertainty, newness, and change are intolerable because they are potentially dangerous” [21], has been found to occur in OCD, several anxiety disorders, and major depression [22,23]. Intolerance of uncertainty involves unwillingness to tolerate the possibility that negative events may occur in the future, no matter how low the probability [24]; in contrast, doubt involves lack of confidence or certainty in the information available to make a decision [1, 10, 11, 12, 25].

Important questions about the significance of doubt in OCD have not been previously addressed. The current study addresses several of these questions: First, is the severity of doubt related to OCD features, including age at onset, severity, and specific symptom dimensions? Second, is doubt associated with Axis I disorders (major depression and generalized anxiety disorder), personality disorder dimensions (avoidant, dependent, and obsessive-compulsive), or general personality dimensions in individuals with OCD? Third, is doubt related to global impairment and treatment response in OCD?

## 2. Material and methods

### 2.1. Participants

The 1,182 individuals included in the current analyses were adults, age 18 years and above, were probands (index cases) who participated in one of three family/genetic studies of OCD. As described previously, the Johns Hopkins OCD Family Study selected OCD probands from specialty OCD treatment centers in the Baltimore/Washington area and evaluated them and available first-degree relatives [26]. The OCD Collaborative Genetics Study targeted families with OCD-affected sibling pairs, extending these when possible through affected first- and second-degree relatives, and also collected other pedigrees with multiple-affected relatives when these were available [27]. The OCD Collaborative Genetic Association Study targeted recruitment on trios (i.e., an OCD-affected individuals and both parents), but also included pedigrees with a proband and affected sibling, as well as families with multiple-

affected members [28]. The latter two studies were conducted as a collaboration among seven academic sites (Brown University, Columbia University, Johns Hopkins University, Massachusetts General Hospital, University of California at Los Angeles, University of Southern California, and the National Institute of Mental Health) and recruited participants from outpatient and inpatient clinics, referrals from clinicians in the community, web sites, media advertisements, self-help groups, and annual conventions of the International Obsessive Compulsive Foundation.

To be considered affected, a participant had to meet DSM-IV OCD diagnostic criteria at any time in his/her life [29]. Probands were included if, in addition to meeting DSM-IV criteria, their first onset of obsessions and/or compulsions occurred before 18 years of age. Probands with schizophrenia, severe mental retardation, Tourette disorder, or OCD occurring exclusively in the context of depression were excluded.

Written, informed consent was obtained prior to the clinical interview, after the nature of the procedures had been fully explained. The protocol was approved by the institutional review board at each study site.

### 2.2. Measures and Procedures

As described previously [27], diagnostic assessments were conducted by psychiatrists or PhD-level psychologists, who interviewed participants directly using a semi-structured format for the evaluation of psychopathology. Final diagnoses were assigned by clinicians at each site and reviewed by a diagnostic committee at the Johns Hopkins University coordinating site.

The Structured Clinical Interview for DSM-IV (SCID-IV) [30] was used for assessing major Axis I diagnoses other than OCD.

The OCD section of the assessment package was adapted from the Schedule for Affective Disorders and Schizophrenia (SADS-LA-R) [31] and included detailed screening questions. The Yale Brown Obsessive Compulsive Scale (YBOCS) was used to assess the severity of OCD during the worst episode, based on time occupied, functional interference, distress, resistance, and control associated with obsessions and compulsions, and the Yale Brown Obsessive Compulsive Scale symptom checklist (YBOCS-CL) was used to evaluate the lifetime presence of specific OCD symptoms, as well as the age of onset, amount of time spent, and level of distress experienced during the worst period of each symptom [32]. Based on prior factor analyses, we derived five obsessive-compulsive symptom scales by counting the number of symptoms reported for each factor (symmetry/ordering; contamination/cleaning; checking; hoarding; and taboo thoughts [33]. Because the number of symptoms varied across scales, we also derived alternative scales by a) dividing each symptom scale by the number of items comprising the scale; and b) creating z-scores for each scale.

Relevant items from the Structured Instrument for the Diagnosis of DSM-IV Personality Disorders [34] were used for the assessment of criteria for avoidant, dependent, and obsessive-compulsive personality disorders; each trait was rated 0 (not present), 1 (sub

threshold), 2 (present), or 3 (strongly present). Personality disorder dimensions were derived by counting the number of traits rated “present” or “strongly present”.

A total of 679 (57%) of the probands self-completed the Revised NEO Personality Inventory (NEO PI-R) or NEO Five-Factor Inventory-3 (NEO-FFI-3), for assessment of the five domains of normal personality as construed by the Five-Factor Model: neuroticism, extraversion, openness, agreeableness, and conscientiousness [35, 36]. T-scores for the five domains and 30 facets were calculated according to the method of Costa and McCrae, which uses different reference means and standard deviations for men and women. These distributions have a mean of 50 and standard deviation of 10. T-scores ranging from 45–55 are considered “average”. Scores less than 45 are considered “low”; those ranging from 56–65 are considered “high”, and those greater than 65 are considered “very high”.

Doubt was assessed with the questions: “After you complete an activity, do you doubt whether you performed it correctly? Do you doubt whether you did it at all? When carrying out routine activities, did you feel you didn’t trust your senses (i.e., what you see, hear, or touch)?” Doubt was rated on a five-point categorical scale, with descriptions provided for the examiner: “none”; “mild” (mentioned only on questioning; slight pathological doubt; examples given may be within normal range); “moderate” (ideas are stated spontaneously; clearly present and apparent in some of the individual’s behaviors; individual is bothered by significant pathological doubt; some effect on performance, but still manageable); “severe” (uncertainty about perceptions or memory is prominent; pathological doubt frequently affects performance); and “extreme” (uncertainty about perceptions is constantly present; pathological doubt substantially affects almost all activities; incapacitating; e.g., individual states that “my mind doesn’t trust what my eyes see”).

The examiners evaluated impairment in several areas (social, occupational, home/marital, academic, and other) and rated global impairment on a five-point scale: “none”; “minimal” (impairment limited to a single area of functioning, with only mild impairment in that area); “moderate” (impairment limited to a single area of functioning at a moderate level, or two or more affected areas, the combined impact resulting in marked impairment); and “extreme” (functioning in two or more areas affected to a marked degree) [37]. For the current analyses, impairment was dichotomized into low (no, minimal, or moderate impairment) or high (marked or extreme impairment).

Treatment response was evaluated by asking the participant his/her subjective response to specific serotonin or selective serotonin reuptake inhibitor medications, and/or to cognitive behavioral therapy, if these treatments had been received. Response was rated on a five-point scale, including no response, couldn’t tolerate, mild improvement, moderate improvement, or total remission. For the current analyses, treatment response was dichotomized into poor (no response, couldn’t tolerate, or mild improvement) or good (moderate improvement or total remission).

### 2.3 Statistical analysis

Clinical features were compared across doubt severity categories, using the chi-square test for categorical variables, or analysis of variance for continuous variables. All tests were two-

tailed, with p-values < 0.05 considered to be statistically significant. The magnitude of the relationships between doubt and Axis I disorders (generalized anxiety disorder, recurrent major depression), global impairment, and treatment response were estimated using logistic models.

## 3. Results

### 3.1. Characteristics of the study sample

The study sample included 1,182 adults, 18 years of age and older, with definite DSM-IV OCD. Their ages ranged from 18–89 years, with mean age of 36.1 years (SD=12.4). Women comprised 737 (62%), and men 445 (38%) of the sample. A total of 1101 (93%) of the participants were white; 29 (3%) were Latino; 21 (2%) were African-American; and 31 (3%) were other ethnicities. Most individuals were college graduates (53%), and another 30% had attended or were attending college.

Of the study participants, 339 (29%) were rated as having no activity-related doubt; 182 (15%), mild doubt; 316 (27%), moderate doubt; 229 (19%), severe doubt; and 116 (10%), extreme doubt (Table 1).

### 3.2. Doubt severity and OCD clinical features

The distribution of several OCD clinical features varied across doubt categories. The mean age at onset of obsessive-compulsive symptoms showed an overall inverse relationship with doubt severity, from 10.3 years in the no doubt group, to 8.8 years and 9.1 years in the severe and extreme doubt groups, respectively ($F_{4;1171} = 3.0$, p=0.02). The mean YBOCS severity score increased, from 26.4 in the no doubt group to 34.2 in the extreme doubt group ($F_{4;1158} = 3.0$, p<0.001). The mean number of obsessive-compulsive symptoms showed an overall increase from the no doubt to extreme doubt group, for each symptom dimension: checking ($F_{4;1177} = 37.3$), contamination/cleaning ($F_{4;1177} = 18.6$), hoarding ($F_{4;1177} = 6.5$), taboo thoughts ($F_{4;1177} = 6.3$), and symmetry/ordering ($F_{4;1177} = 4.5$), with all p-values ≤ 0.001. (Figure 1). The relationship with doubt remained significant for checking ($F_{4;1173} = 21.6$, p<0.001), contamination/cleaning ($F_{4;1173} = 7.8$, p<0.001), and hoarding ($F_{4;1173} = 3.2$, p<0.05), when each model was adjusted for the four other obsessive-compulsive symptom dimensions. In addition, the relationships between doubt and these obsessive-compulsive symptom dimensions remained strong and significant, when adjusting for age at onset or severity of obsessive-compulsive symptoms. The statistical results (F values and p-values) were the same using alternative obsessive-compulsive symptom scales, derived by dividing each of the original scales by the number of symptoms in each scale, or by transforming into z-scores (results not shown).

### 3.3 Doubt severity, Axis I disorders, and personality dimensions

The lifetime prevalence of recurrent major depression increased with doubt severity, from 49.0% in the no doubt group to 61.2% in the extreme doubt group ($\chi^2_1$ linear trend = 5.6, p<0.001). The lifetime prevalence of generalized anxiety disorder also showed an overall, although not monotonic increase with doubt severity, from 27.5% in the no doubt group to 38.8%, 38.1%, and 33.0% in the moderate, severe, and extreme doubt group, respectively

($\chi^2_1$ linear trend = 7.6, p<0.01). In logistic models, the odds of generalized anxiety disorder was significantly greater in those with moderate doubt (odds ratio, O.R.=1.69, 95% CI=1.20=2.37, p=0.003) or severe doubt (O.R.=1.60, 95% CI=1.09–2.33, p=0.02), adjusting for OCD severity. However, doubt severity was not associated with recurrent major depression, after adjustment for OCD severity (results not shown).

The mean numbers of personality disorder traits were positively related to doubt severity, for all personality disorder dimensions: dependent ($F_{4;1171}$ = 22.5); obsessive-compulsive ($F_{4;1131}$ = 17.2); and avoidant ($F_{4;1171}$ = 9.6), with all p-values <0.001) (Figure 2). These relationships remained strong and significant, when adjusting for age at onset or severity of obsessive-compulsive symptoms (results not shown).

From no doubt to extreme doubt groups, mean neuroticism scores increased from 60.9 to 66.0 ($F_{4;674}$ = 7.0, p<0.001), while mean extraversion scores decreased from 46.0 to 42.3 ($F_{4;674}$ = 2.6, p=0.04). Doubt was not significantly related to openness ($F_{4;674}$ = 2.1, p=0.08), agreeableness ($F_{4;674}$ = 0.2, p=0.96), or conscientiousness ($F_{4;674}$ = 1.3, p=0.04, p=0.27) personality dimensions. The relationship between doubt and neuroticism remained significant, when adjusting for age at onset or severity of OCD; however, the relationship between doubt and extraversion was not significant after adjusting for OCD severity $F_{4;660}$ = 1.7, p=0.15.

### 3.4 Doubt severity, impairment, and treatment response

The proportion of participants with marked or extreme impairment from obsessive-compulsive symptoms showed an overall increase, from 44% in the no doubt group to 81% in the extreme doubt group (linear association, $\chi^2_1$ = 61.1, p<0.001). The proportion of participants reporting a good response to CBT declined with doubt severity, from 58% in those with no doubt, to 35% in those with extreme doubt (linear association, $\chi^2_1$ = 8.4, p<0.01). The proportion reporting a good response to SRIs showed a non-significant decline with doubt severity, from 51% in those with no doubt to 43% in those with extreme doubt (linear association, $\chi^2_1$ = 3.1, p=0.08 (Figure 3).

As shown in Table 2, the odds of impairment showed an overall increase with doubt severity; relative to the no doubt group, the odds of impairment were significantly higher in the severe doubt group (odds ratio, O.R.=2.63, 95% CI=1.84–3.78, p<0.001) and the extreme doubt group (O.R.=5.45, 95% CI=3.22–9.21, p<0.001). Adjusting for obsessive-compulsive symptom dimensions, personality disorder dimensions, generalized anxiety disorder, or recurrent major depression did not appreciably change the magnitude of these relationships. Adjusting for YBOCS severity reduced the magnitude of these relationships; nevertheless, the odds of impairment remained significantly greater in those with severe doubt (O.R.=1.68, 95% CI=1.14–2.49, p<0.01) or extreme doubt (O.R.=2.39, 95% CI=1.35–4.22, p<0.001) (Table 2).

The odds of a good response to CBT were only 0.40 (95% CI=0.22–0.72, p<0.01) for those with extreme doubt, relative to those with no doubt. Adjusting for obsessive-compulsive symptom dimensions, personality disorder dimensions, generalized anxiety disorder, or recurrent major depression did not appreciably change the magnitude of the relationship

between extreme doubt and CBT response (Table 3). Similarly, the magnitude of the relationship between extreme doubt and CBT response did not appreciably change after adjusting for impairment (O.R.=0.45, 95% CI=0.24–0.85, p<0.05) or OCD severity (O.R.=0.44, 95% CI=0.24–0.84, p=0.01).

## 4. Discussion

To our knowledge, this is the first investigation of the clinical significance of the doubt construct in OCD. The findings indicate that doubt has important implications for understanding the nature of OCD. First, we found that the severity of doubt, as measured in this study, was distributed in the sample such that many cases were rated as severely burdened with doubt, whereas a sizeable proportion were rated as having no, or little, doubt. This suggests that doubt may not be a core feature of all cases of OCD, but rather a frequently-occurring symptom of, or trait related to, the disorder. However, it should be noted that the measurement of doubt in this study was based on a single item that focused on performing an activity and trusting one's senses, and that different aspects of doubt may be involved in other cases.

Second, we found that the severity of activity-related doubt was strongly related to OCD severity, global impairment, and reported response to CBT, indicating that doubt contributes to prognosis in OCD. Although the magnitude of the relationship between doubt and impairment was attenuated after adjustment for OCD severity, the odds of impairment remained significantly greater in those with severe or extreme doubt. In addition, those with extreme doubt were much less likely to report a good response to CBT, even adjusting for other clinical correlates of doubt.

Third, although doubt was related to contamination/cleaning and hoarding OCD symptom dimensions, the relationship was strongest for checking symptoms, suggesting that doubt may play an especially prominent role in these symptoms. Fourth, we found that doubt severity was strongly related to the number of "anxious" personality disorder traits, neuroticism score, and prevalence of generalized anxiety disorder, suggesting that doubt may be a trait vulnerability related to anxious and neurotic personality characteristics.

The current study had several strengths for investigating clinical correlates of doubt in OCD. Participants were recruited from a variety of clinical and non-clinical sources, and were not exclusively selected for treatment. Participants were thoroughly examined, evaluated for many clinical features, and rigorously diagnosed. Furthermore, multivariate methods were used to estimate the relationships between doubt and clinical correlates, adjusting for other potentially confounding features.

However, several potential limitations of the study should be considered. First, OCD cases were participants in family/genetic studies of OCD, which over-selected those with affected relatives. These cases, presumably with a more genetic etiology, may be different than other cases. Moreover, the relationship between doubt and a clinical feature (e.g., treatment responsiveness) might be due to shared genetic factors, rather than due to a direct causal relationship between them. Additional studies in cases selected from families without other

OCD-affected relatives would help determine if the relationships found in the current study are generalizable to other cases of OCD. Second, doubt was assessed with a single item which focused on performing an activity and trusting one's senses, and cases may have experienced other aspects of doubts that were not assessed in this study. We also did not evaluate the inter-rater reliability or temporal stability of the doubt rating. Third, we cannot exclude the possibility that self-reported treatment response was influenced by the tendency to doubt. Currently, we are developing and evaluating a multi-item instrument to assess doubt dimensionally in clinical and non-clinical samples. Fourth, given the retrospective nature of this study, it is not possible to determine the direction of the relationship between past clinical features and doubt, and prospective studies are needed to rigorously evaluate the longitudinal relationships between doubt and its clinical correlates in OCD.

Despite these limitations, the findings of this study suggest that doubt is an important feature to consider in the evaluation and treatment of patients with OCD. Several clinical features were associated with doubt, although they do not appear to comprise a distinct syndrome, and the design of the study could not distinguish between doubt as a symptom of, or vulnerability trait for, OCD. Nevertheless, the presence of substantial doubt appears to have important prognostic implications in OCD, being strongly associated with functional impairment and poor response to cognitive-behavioral treatment.

Moreover, doubt should be considered as a potential cognitive endophenotype, intermediate in the causal pathways between genes and symptoms, in genetic studies of OCD [38]. Results from several experimental suggest that individuals with OCD gather more evidence, and take more time, in reaching a decision than do comparison groups [13, 14, 15, 39, 40, 41, 42]. This encourages further investigation of the correlations between doubt, on the phenomenological level, and underlying brain structure and function, on the other.

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**Figure 1.**

Numbers of obsessive-compulsive symptoms, by doubt severity. Contamination/cleaning ($F_{4;1177}$ = 18.6, p<0.001); Taboo thoughts ($F_{4;1177}$ = 6.3, p<0.001); Checking ($F_{4;1177}$ = 37.3, p<0.001); Symmetry/ordering ($F_{4;1177}$ = 4.5, p=0.001); Hording ($F_{4;1177}$ = 6.5, p<0.001).


**Figure 2.**

Number of DSM-IV personality disorder traits, by doubt severity. Obsessive-compulsive ($F_{4;1177}$ = 17.2, p<0.001); Dependent ($F_{4;1177}$ = 22.5, p<0.001); Avoidant ($F_{4;1177}$ = 9.6, p<0.001).

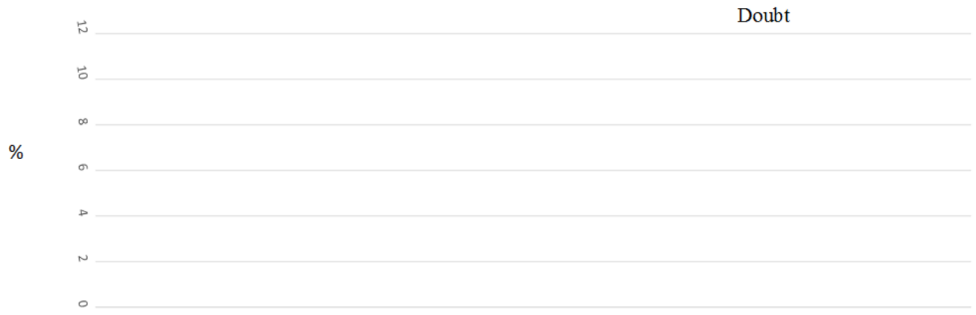


**Figure 3.**

Proportion with impairment (marked or extreme) and proportion responding to treatment (moderate improvement or total remission), by doubt severity. Impairment ($\chi^2_1$ trend = 60.1, p<0.001); CBT, Cognitive behavioral therapy ($\chi^2_1$ trend = 8.4, p<0.001); SRI, Serotonin reuptake inhibitors ($\chi^2_1$ trend = 3.1, p=0.08).

**Table 1**

Characteristics of the study sample

| | Number (%) |
|---|---|
| Sex | |
| Women | 737 (62.4) |
| Men | 445 (37.6) |
| Age, years | |
| 18–29 | 441 (37.3) |
| 30–39 | 291 (24.6) |
| 40–49 | 262 (22.2) |
| 50–82 | 188 (15.9) |
| Age, mean (SD), years | 36.1 (12.4) |
| Ethnicity | |
| White | 1101 (93.1) |
| Latino | 29 (2.5) |
| African-American | 21 (1.8) |
| Other or not specified | 31 (2.6) |
| Education | |
| Less than college | 194 (16.5) |
| Some college | 352 (30.0) |
| College graduate | 331 (28.2) |
| Post-college | 297 (25.3) |
| Doubt | |
| None | 339 (28.7) |
| Mild | 182 (15.4) |
| Moderate | 316 (26.7) |
| Severe | 229 (19.4) |
| Extreme | 116 ( 9.8) |

**Table 2**

Relationship between doubt and marked or extreme impairment Odds ratio (95% CI)

| Doubt | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| None | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Mild Moderate | 0.81 (0.56– 1.19) | 0.71 (0.48– 1.05) | 0.74 (0.50– 1.10) | 0.77 (0.52– 1.14) | 0.71 (0.47– 1.07)) |
| Severe Extreme | 1.15 (0.84–1.58) | 1.03 (0.74– 1.44) | 1.07 (0.77– 1.50) | 1.10 (0.79– 1.52) | 0.88 (0.62– 1.24) |
| | 2.63 (1.84– 3.78) *** | 2.31 (1.58– 3.38) *** | 2.39 (1.64– 3.48) *** | 2.56 (1.77– 3.70) *** | 1.68 (1.14– 2.49) ** |
| | 5.45 (3.22– 9.21) *** | 4.38 (2.53– 7.59) *** | 4.62 (2.69– 7.96) *** | 5.23 (3.08– 8.89) *** | 2.39 (1.35– 4.22) ** |

Model 1: Unadjusted.

Model 2: Adjusting for OCD symptom dimensions.

Model 3: Adjusting for personality disorder dimensions.

Model 4: Adjusting for generalized anxiety disorder and recurrent major depression.

Model 5: Adjusting for OCD severity (YBOCS score).

* p<0.05;

** p<0.01;

*** p<0.001.

**Table 3**

Relationship between doubt and moderate response or remission after cognitive-behavioral therapy Odds ratio (95% CI)

| Doubt | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| None | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Mild Moderate | 1.05(0.62– 1.78) | 1.05 (0.61– 1.80) | 1.17 (0.68– 2.02) | 0.97 (0.57– 1.66) | 1.08 (0.63– 1.84) |
| Severe Extreme | 0.67 (0.43– 1.03) | 0.65 (0.41– 1.01) | 0.76 (0.48– 1.19) | 0.60 (0.39– 0.94) | 0.69 (0.45– 1.08) |
| | 0.79 (0.49– 1.25) | 0.67 (0.41– 1.11) | 1.00 (0.61– 1.63) | 0.74 (0.46– 1.19) | 0.83 (0.51– 1.35) |
| | 0.40 (0.22– 0.72) ** | 0.37 (0.19– 0.69) ** | 0.49 (0.26– 0.92) * | 0.39 (0.21– 0.71) ** | 0.44 (0.24– 0.84) * |

Model 1: Unadjusted.

Model 2: Adjusting for OCD symptom dimensions.

Model 3: Adjusting for personality disorder dimensions.

Model 4: Adjusting for generalized anxiety disorder and recurrent major depression. Model 5: Adjusting for OCD severity (YBOCS score).

* p<0.05;

** p<0.01;

*** p<0.001