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Prevalence and Clinical Characteristics of Mental Rituals in a Longitudinal Clinical Sample of Obsessive Compulsive Disorder

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Abstract

Background—Obsessive-compulsive disorder (OCD) is a chronic and debilitating anxiety disorder associated with significant impairment in quality of life and functioning. Research examining the differences in clinical correlates and treatment response associated with different obsessions in OCD has yielded important findings underscoring the heterogeneous nature of this disorder. To date, most of this research has focused on differences associated with primary obsessions, and little attention has been paid to the clinical utility of studying how compulsive symptoms affect clinical course. Virtually no systematic research has explored the clinical characteristics of one understudied symptom presentation, mental rituals, and what impact this primary symptom has on severity and course of illness. Mental rituals, or compulsions without overt signs, represent unique clinical challenges but often go understudied for numerous methodological and clinical reasons.

Methods—In the present study, we explored the impact of primary mental rituals on clinical severity and chronicity in a large, longitudinal sample of OCD patients ($N = 225$) over 4 years.

Results—Mental rituals were a primary presenting symptom for a sizable percentage of the sample (12.9%). Primary mental rituals were associated with greater clinical severity and lower functioning at intake, as well as a more chronic course of illness, as participants with primary mental rituals spent nearly 1 year longer in full DSM-IV criteria episodes over the 4-year follow-up interval than OCD patients without mental rituals.

Conclusions—These results suggest that mental rituals are uniquely impairing and highlight the need for further empirical exploration and consideration in treatment.

Keywords

obsessive-compulsive disorder; mental rituals; longitudinal; chronicity; anxiety

Introduction

Obsessive-compulsive disorder (OCD) is a chronic, debilitating disorder characterized by distressing intrusive thoughts, images, and/or impulses and repetitive rituals aimed at reducing this distress [1,2]. While OCD is considered a unitary nosological entity in current diagnostic classification systems, a substantial and growing body of evidence is increasingly highlighting the heterogeneity of OCD with respect to symptom presentation [3,4]. Extant research suggests that classification of OCD based on symptom dimensions may have important utility in exploring differences in clinical course and treatment response, and may

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guide future investigations on the development, refinement, and personalization of both pharmacological and psychotherapeutic interventions [5–7]. However, most of this research to date has focused on the clinical correlates of primary obsessions [8], with less attention paid to understanding certain clinical characteristics associated with primary compulsions. The goals of the present study are to provide a brief review of literature and explore the clinical correlates of an understudied compulsive symptom, mental rituals, in a large, treatment-seeking longitudinal clinical sample of individuals with primary OCD.

Defined as compulsions with no overt behavioral or motoric signs, mental rituals include such acts as silently repeating words or phrases, praying, counting, mental checking, thinking of “good” or “safe” thoughts, and neutralizing distressing mental images. Beginning with the publication of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* in 1994 (*DSM-IV*)^[1], the definition and diagnostic criteria for OCD was updated to include mental rituals, reflecting the significance of this symptom presentation, as well as its long history in clinical descriptions of OCD [9,10]. Individuals presenting with this pattern of symptoms have been historically described under a number of terms, including ruminators, neutralizers, and perhaps misidentified as “pure obsessives” [11–15, 44].

Despite the heightened attention placed on mental rituals in *DSM-IV*, research on the nature and clinical consequences of this symptom presentation remains surprisingly sparse. The limited data available suggests that mental rituals are a prevalent concern for individuals with OCD, with 9.8 to 25% of clinical patients exhibiting these symptoms, and some studies reporting as many 60% of patients without overt compulsions [5,16,17]. There are also several reasons to suspect that the true prevalence of mental rituals is underestimated. For example, Abramowitz and colleagues^[5] cite measurement problems and incomplete analysis of symptoms in studies that use one of the most common tools for assessing OCD, the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) and Symptom Checklist^[18,19], which includes mental rituals along with several others in the “miscellaneous compulsions” category. In many cases, this category has been excluded from analyses entirely or treated as a unitary entity, impeding the identification of potentially important patterns associated with mental rituals. In addition to measurement issues, clinical factors may also influence reporting. Limited research has found that sexual, repugnant, violent, or blasphemous obsessions are common counterparts to mental rituals^[20,21], and researchers have suggested that the emotional and moral salience of this intrusive thought content may also lead to increased reluctance to report and confront them in treatment^[22]. For this reason, it is possible that the prevalence of mental rituals in clinical OCD populations may be underestimated as a function of patients’ reluctance to disclose the associated obsessions.

Perhaps more importantly, research suggests that individuals who present with mental rituals as their primary compulsion present unique challenges in treatment. Namely, mental rituals may serve as a form of cognitive avoidance during exposure-based treatment, thereby interfering with patients’ ability to habituate during exposures to anxiety-provoking stimuli both in therapy and in daily life^[23]. Moreover, mental rituals may serve as an ineffective attempt at thought suppression, risking the strengthening of anxious meanings and misinterpretation of the danger represented by the intrusive thought. Accordingly, OCD patients with mental rituals have been considered by some to be less treatable with empirically-supported interventions such as cognitive-behavioral therapy (CBT) and exposure and ritual prevention (ERP), given the lack of overt behaviors to target and prevent^[24–26], although more recent evidence for this claim is mixed. A number of studies have demonstrated that OCD patients with obsessions and no overt compulsions are refractory to treatment with both ERP and pharmacotherapy^[26–31]. A small number of studies and case reports have shown contrary results, demonstrating that OCD patients with

mental rituals fare no worse in treatment than most other subtypes^[5,8], while others have demonstrated preliminary efficacy in the treatment of mental rituals with interventions tailored for this clinical presentation^[32–34].

Given the relatively high prevalence of mental rituals, coupled with limited research on the nature and clinical correlates of them and the potentially important consequences for course and treatment, additional research is warranted. The purpose of this study was two fold. First, we intended to replicate previous findings regarding the prevalence of mental rituals in OCD populations a longitudinal sample of 225 adults with primary OCD. Second, we sought to explore the impact of mental rituals as a primary presenting compulsion on the clinical manifestation, severity, and course of OCD. On the basis of previous research, we predicted that mental rituals would be identified as a primary symptom for a percentage of the sample (i.e. 9 – 25%) consistent with previous studies examining prevalence. Second, we expected that the most common mental rituals would be praying, counting, and “un-doing” bad thoughts, and they would be most frequently associated with sexual, repugnant, violent, or blasphemous obsessions. Third, we hypothesized that patients presenting with primary mental rituals would be associated with greater clinical severity both at study intake and over 4 years of follow-up.

Method

Participants

Participants were 225 adults (age 19 and older) enrolled in the Brown Longitudinal Obsessive Compulsive Study (BLOCS), a large naturalistic prospective study of the course of OCD. A detailed description of sample characteristics, recruitment, and study procedures is reported elsewhere^[35]. Briefly, individuals were included in this study if they had a primary *DSM-IV* diagnosis of OCD and had sought treatment for OCD within the past 5 years. The only other inclusion criteria were willingness/ability to participate in annual interviews and no evidence of an organic mental disorder. Demographic and clinical characteristics of this sample are consistent with those of samples in previous studies of OCD phenomenology, including the *DSM-IV* field trial^[16,36,37].

Procedures

Participants were recruited from consecutive admissions to one of several psychiatric treatment settings in the Rhode Island/Southeastern Massachusetts area including a hospital-based outpatient OCD clinic, inpatient and partial hospitalization units of a private psychiatric hospital, two community mental health centers, a general outpatient psychiatric group practice, and three private practice psychotherapy sites known for their expertise in providing treatment for OCD. The Butler Hospital and Brown University Institutional Review Boards approved the study. After providing written informed consent to participate in annual interviews, participants were interviewed in person by trained clinical interviewers at study intake and were contacted annually for an in-person or telephone follow-up interview. Participants also completed a battery of self-report measures at the time of each annual follow-up, and were compensated for their participation.

Assessments

Intake diagnoses, demographic characteristics, clinical history, and psychosocial functioning were established at intake interviews using the Structured Clinical Interview for *DSM-IV* Axis I Disorders-Patient Edition^[38]. Current (past-week) OCD symptom presentation and severity was assessed at each annual interview using the Yale-Brown Obsessive Compulsive Scale (Y-BOCS), a reliable and valid 10-item rater-administered scale and the Y-BOCS Symptom Checklist^[18,19]. Primary obsessions and compulsions were determined by

participant report of the symptom which they would most like to get rid of, and by assessor judgment of the symptom causing the most distress and impairment. There was 100% concordance between participant report and assessor judgment with regard to the primacy of mental rituals in this sample. In addition, the Global Assessment of Functioning (GAF) was administered to assess overall severity of psychopathology and functional impairment in the worst week of the past month^[1]. Good to excellent interrater reliability has been established in this study for Axis I diagnoses, YBOCS total score, and GAF and are reported elsewhere^[2].

Follow-up interviews were conducted yearly with the Longitudinal Interval Follow-up Evaluation (LIFE), a semi-structured interview designed to assess the longitudinal course of Axis I disorders and psychosocial functioning^[39]. Using information obtained through the interview, weekly Psychiatric Status Ratings (PSRs) are made to determine whether participants meet *DSM-IV* criteria for specific Axis I disorders. The 6-point OCD PSR indicates whether subjects meet full criteria for OCD [at moderate (PSR4), severe (PSR5), or extreme (PSR6) levels of distress and impairment] or are in partial (PSR3) or full remission (PSR2, PSR1). Psychiatric Status Ratings have been used in numerous longitudinal studies and provide a reliable and valid global rating of ongoing disorder severity^[40]. Good to excellent interrater and test-retest reliabilities have been established for several Axis I disorders in this sample^[2] and in another longitudinal, naturalistic studies with similar assessment protocols^[40].

Treatment utilization was measured at intake and throughout the follow-up period with the Treatment Adherence Survey-Patient Version^[41], a rater-administered measure designed to assess the types of treatments recommended to participants (CBT and/or medications) and whether participants followed through with treatment recommendations. The TAS-PV has demonstrated excellent test-retest stability as well as concurrent validity^[41].

Statistical Analyses

All statistical analyses were performed with SPSS 16.0^[42] and SAS version 9.13^[43]. Descriptive analyses were conducted to describe the prevalence, content and nature of the mental rituals and the primary obsessions associated with them. Age of OCD onset was defined in two ways, with participants reporting the age at which they first began to experience the symptoms (minor onset), and the age at which their OCD symptoms first began to cause significant interference and distress (major onset).

Between-group differences in demographic, diagnostic and treatment variables were examined using Bonferroni-corrected chi-square tests for categorical variables and Bonferroni-corrected *t*-tests for continuous variables. Effect size estimates are reported as Cramer's *V* for chi-square analyses and *r* for *t*-tests (0.10 = small, 0.30 = medium, 0.50 = large for both measures of effect size). For treatment utilization and comorbidity variables, Bonferroni-Clinical correction resulted in an alpha threshold of .003 (.05/14 comparisons), and for clinical and functioning data Bonferroni-correction resulted in an alpha threshold of .006 (.05/8 comparisons) for significance. All subsequent results were identified as significant if they met the Bonferroni-corrected thresholds outlined above, and were identified as marginal if they result in a *p*-value less than .05. PSR Chronicity analyses were conducted by summing the total number of weeks each participant was at full criteria for OCD (LIFE PSR $\geq$ 4) during the 4-year follow-up, and then comparing mean number of weeks across the primary mental ritual and no mental ritual groups. Chronicity analyses were also conducted for monthly GAF scores by summing the total number of months each participant achieved a GAF rating of 60 or higher, then comparing mean number of months across groups. A GAF score of 60 was chosen as an *a-priori* cutoff based on study protocol,

whereby participants cannot be assigned a GAF score of higher than 60 if they meet full criteria for any Axis-I disorder. All statistical tests were two-tailed.

Results

Prevalence of Mental Rituals

Of 225 study participants, 29 (12.9%) reported mental rituals as their primary compulsion, 46 (20.4%) reported mental rituals as one of their current symptoms but not a primary concern, 36 (16.0%) reported mental rituals in the past but did not report them as a current symptom, and 114 (50.7%) reported no history of mental rituals. Of the 29 participants with primary mental rituals, only 1 (3.4%) endorsed mental rituals as their only compulsive symptom.

Mental Rituals as a Primary Compulsion

All subsequent analyses were conducted on the 143 participants who endorsed either primary mental rituals ($n = 29$) or no mental rituals ($n = 114$). The majority of the sample (97.9%) was Caucasian and 60.1% was female. Approximately half (49%) were married and the average age was 41.2 years ($SD = 12.70$, range = 19 – 75). Sixty-four percent of participants were employed at study intake and 53.8% had achieved a bachelor's degree or higher. There were no significant differences between the two groups on any demographic variables.

OCD symptoms associated with primary mental rituals—Among the 29 individuals endorsing mental rituals as their primary compulsion, over-responsibility for harm (e.g., fear of harming self/other, being responsible for something bad happening) was the most frequently endorsed obsession (41.4%) followed by fears of offending God and sacrilegious thoughts (20.7%). With regard to compulsive symptoms, praying was the most frequently endorsed type of mental ritual (48.3%) in this group, followed by undoing bad thoughts with good thoughts (31.0%; see Table 1).

Severity, onset and chronicity of OCD—Table 2 compares clinical characteristics between primary mental rituals and no mental rituals groups. Significant differences were found between the two groups on Y-BOCS severity at intake, with the primary mental rituals group exhibiting greater severity than the no mental rituals group, $t(57.07) = 4.10$, $p < .001$, $r = .48$. Similarly, tests for differences in OCD PSRs at intake revealed greater OCD severity in individuals with primary mental rituals compared to those without mental rituals, $t(141) = 2.96$, $p < .004$, $r = .24$. A significant difference also emerged with regard to age of major onset of OCD symptoms. The primary mental rituals group experienced interference from their symptoms 8.12 years earlier than the no mental rituals group, $t(66.11) = -4.56$, $p < .001$, $r = .49$. Marginal differences were also found for minor age of onset, with the primary mental ritual group experiencing minor onset 3.54 years earlier than the no mental rituals group, $t(125) = -2.22$, $p < .03$, $r = .19$. Chronicity analysis revealed that participants with primary mental rituals spent significantly more weeks at full criteria than those without mental rituals by the end of the 4-year period, $t(51.47) = 3.08$, $p < .003$, $r = .39$, with a mean difference of 48.26 weeks (see Figure 1).

Axis I comorbidity and global functioning—Participants with primary mental rituals did not differ from participants with no mental rituals in the likelihood of experiencing any lifetime anxiety disorder, mood disorder, psychotic disorder, substance use disorder, eating disorder, somatoform disorder, or impulse control disorder (all $ps > .05$). Additionally, no significant differences in mean number of lifetime Axis I disorders were found between the primary mental rituals and no mental rituals groups, $t(141) = 0.78$, $p = .44$. Although there

were no significant differences in disorder comorbidity, marginal differences were noted in global functioning. The primary mental rituals group reporting lower mean GAF scores than the no mental rituals group, $t(140) = -2.42, p < .02, r = .20$, indicating a trend that the primary mental rituals group was functioning more poorly at intake. GAF chronicity analyses also revealed a significant group difference, with the primary mental rituals group reporting fewer months with GAF scores above 60 compared to the no mental rituals group, $t(54.05) = -3.20, p < .002, r = .40$.

Treatment utilization—There were no differences between the groups on treatment utilization. With regard to psychotherapy utilization overall, there were no differences found between the groups on having seen a mental health professional for OCD therapy prior to intake or at any point over the 4 year follow-up interval, $\chi^2(1) = 0.89, p = .345$. Similarly, there were no differences in the likelihood of having specifically received CBT prior to intake ($\chi^2(1) = 0.26, p = .612$) or at any time during the follow-up period ($\chi^2(1) = 1.46, p = .227$). Finally, there were no differences in rates of taking medication for OCD both prior to intake ($\chi^2(1) = 0.13, p = .723$) or at any point during follow-up ($\chi^2(1) = 0.36, p = .549$; see Table 2). With respect to amount of treatment received, no significant differences emerged for total number of CBT sessions received during the follow-up period between the primary mental rituals group ($M = 34.88, SD = 36.13$) and the no mental rituals group ($M = 31.90, SD = 28.71$), $t(27) = 0.23, p = .818$. Furthermore, no differences emerged with respect to number of weeks on medication during follow-up between the primary mental rituals group ($M = 176.64, SD = 56.69$) and the no mental rituals group ($M = 166.25, SD = 59.87$), $t(132) = 0.83, p = .411$.

Discussion

The current investigation sought to examine the prevalence of primary mental rituals and their associated clinical characteristics in a large longitudinal sample of adults with OCD. In line with our prediction, the prevalence of primary mental rituals in the sample was 12.9%, which is comparable to existing research reporting prevalence between 9 and 25%^[16]. Compulsive praying and the act of undoing bad thoughts with good thoughts were reported as the most frequent primary mental rituals, with the themes of over-responsibility and blasphemy emerging as the predominant obsessions. This finding suggests that a substantial number of OCD patients experience mental rituals as a main clinical concern, and that they occur across a range of obsessive symptom types.

In line with our predictions, the two groups were significantly different on measures of clinical and functional severity at study intake, including YBOCS severity, PSR severity, and marginally different with respect to GAF scores ($p < .02$), providing convergent data demonstrating that those individuals with primary mental rituals may indeed represent a more problematic presentation of OCD. Importantly, the lack of significant differences in measures of comorbidity between the groups rules out the possible interpretation that those with primary mental rituals simply experienced more psychopathology overall. These findings suggest that individuals with primary mental rituals as part of their OCD symptom constellation may have a more severe form of the disorder.

Not only did individuals with primary mental rituals exhibit greater overall severity at baseline, but also they reported greater symptom chronicity. Individuals with primary mental rituals spent nearly 1 year longer (48.26 weeks or 23.2% of the follow-up period) at full criteria for OCD over the follow-up period, as well 11.3 more months with poorer global functioning (23.5% of the follow-up period), painting a less optimistic picture for those experiencing mental rituals relative to their non-mental ritual OCD counterparts. Furthermore, no differences were found with regard to psychotherapy and pharmacotherapy

utilization, which indicates that receiving treatment for OCD does not explain these chronicity findings. These findings have several important implications for the prognosis of these individuals. It suggests that this symptom subtype may have a greater negative impact on their lives over time and there is something uniquely impairing about experiencing mental rituals that warrants further empirical exploration.

In addition to the chronicity findings, participants with primary mental rituals began to experience both minor and major OCD symptoms at a much earlier age than those OCD patients without primary mental rituals. Indeed, onset of initial OCD symptoms were reported over 3.5 years earlier for those experiencing mental rituals, with clinically impairing symptoms occurring over 8 years earlier than in patients without primary mental rituals. Taken together with the chronicity findings and results from prior investigations highlighting the difficulties in treating mental rituals, these age of onset results indicate that the presence of primary mental rituals may be associated with a more insidious course of OCD, as individuals who experience mental rituals become impaired earlier, and experience a more chronic course over time. These findings highlight the need for early detection and improved interventions for mental rituals in order to prevent potentially poorer outcomes and an overall lower quality of life.

This study has a number of important limitations. First, age of onset data were retrospective and therefore subject to memory bias, and future studies examining the presence of mental rituals in children and young adults are needed to strengthen our conclusions. Secondly, the participants were all treatment-seeking and predominantly Caucasian limiting the generalizability to broader, more diversity community samples. Additionally, although the overall sample size was quite large, the resulting subgroup of patients with primary mental rituals was relatively small. Furthermore, because this investigation is among the first to empirically address the phenomenon of mental rituals, we felt it was most illuminating to focus our comparisons on groups at either end of the overt (no mental rituals) versus covert (primary mental rituals) compulsions continuum. Future research examining the role of *any* mental rituals (current non-primary, as well as primary), as well as their influence on clinical course and severity relative to other OCD symptoms, may provide additional clinically useful insights. These results require replication with larger, more diverse samples. Despite these limitations, the current study represents one of the first and most comprehensive explorations of the role of mental rituals in the clinical course of OCD and the findings provide an important preliminary examination of their clinical consequences.

This study represents one of the first and only empirical investigations of the impact of a primary compulsion, mental rituals, on the course of OCD. Nearly all previous studies examining the differences among OCD symptom subtypes have focused on the role of primary obsessions, and the results of the present investigation suggest that an increased focus on primary compulsive symptoms may be very important to consider for both future research, as well as for clinicians seeking to understand how a patient's symptom presentation may affect the course of OCD. The current study provides preliminary evidence that primary mental rituals are associated with an earlier onset of OCD, and a more severe and chronic form of the disorder. Future research on primary mental rituals may help to uncover potentially important biological and developmental mechanisms that may be unique to this symptom subtype and help to explain the more insidious course and associated earlier age of onset. This study also highlights the need for clinicians and future researchers to include comprehensive assessment of these symptoms, and avoid losing potentially rich clinical information by excluding the "miscellaneous" compulsions, or treating them as a unitary entity. For example, as a routine component of clinical interviews with OCD patients, clinicians should ask focused questions assessing the presence of mental rituals, such as "In addition to the other compulsions we've discussed, are there any things you do

silently or ‘in your head’ that no-one else can see (mental praying, checking, counting) to reduce distress or anxiety?” Suggestions for tailoring CBT for individuals with primary mental rituals should include creating an atmosphere in therapy that will encourage patients to disclose these symptoms, especially since they are often accompanied by blasphemous, sexual, or violent intrusions that patients may find uncomfortable to disclose. Also, collaboratively discussing the goals of exposure therapy with patients should include instructions about the counter-therapeutic effects of engaging in mental rituals as a potential form of cognitive avoidance during ERP^[23], and patients could be instructed to “Note that it is especially important to try to resist using mental compulsions as a substitute for behavioral compulsions during exposures, as this may make the treatment less effective”. Finally, a number of important suggestions for adapting cognitive treatment for OCD patients without behavioral rituals are outlined by Wilhelm^[34], including a focus on addressing the interpretations these individuals make regarding the meaning and implications of their symptoms for how they view themselves, the world, and the future. Also, carefully developing behavioral experiments to test the patient’s beliefs about what would happen if they did not complete their mental ritual can serve as a form of response prevention. Significant questions still remain with regard to the effectiveness of treatment for OCD with mental rituals, and future research addressing the question of treatment resistance, and the development of additional tailored interventions for these individuals will be critically important.

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Figure 1.
Group difference in number of cumulative weeks at full-criteria DSM-IV OCD over our years of follow-up.

Table 1

Frequency of Mental Rituals and Obsessions for Participants Who Endorse Mental Rituals as a Primary Symptom (N = 29)

	N	%
Mental Ritual		
Praying	14	48.3
Undoing Bad Thought with Good Thought	9	31.0
Repeating Phrases/Mantras	4	13.8
Mental Checking	4	13.8
Counting/Numbers	1	3.4
Mental 'Word Games'	1	3.4
Obsession		
Fear of Harming Self/Other, Responsible for Something Bad Happening	12	41.4
Sacrilege/Blasphemy/Offending God	6	20.7
Unwanted Sexual Thoughts	3	10.3
Violent Thoughts/Mental Imagery	2	6.9
Concern with Illness and Disease	2	6.9
Lucky and Unlucky Numbers	1	3.4

Note: Numbers sum to >29 due to some participants endorsing >1

Table 2

Clinical Characteristics of Participants With Primary Mental Rituals and No Mental Rituals

Measure (Range)	Primary Mental Rituals (N = 29)	No Mental Rituals (N = 114)	<i>t</i>	<i>r</i>
	Mean (SD)	Mean (SD)		
YBOCS Score (0 – 40)	24.69 (6.42)	18.77 (8.69)	4.10***	.48
Intake PSR (1 – 6)	4.62 (0.82)	4.00 (1.01)	2.96**	.24
PSR Chronicity (0 – 208)	166.69 (71.88)	118.43 (87.83)	3.08**	.39
Intake GAF (0–100)	48.79 (9.78)	55.06 (12.85)	–2.42 ^a	.20
GAF Chronicity (0 – 48)	9.07 (16.02)	20.41 (20.57)	–3.20**	.40
Lifetime Comorbid Diagnoses (0 – 42)	2.55 (2.13)	2.25 (1.75)	0.78	n.s.
Age of Minor Symptom Onset	9.19 (6.25)	12.73 (7.62)	–2.22 ^a	.19
Age of Major Symptom Onset	13.86 (6.22)	20.53 (9.55)	3.57***	.49
CBT Sessions During Follow-up	34.88 (36.13)	31.90 (28.71)	0.23	n.s.
Weeks on Medication During Follow-up	176.64 (56.69)	166.25 (59.87)	0.83	n.s.
	N (%)	N (%)	χ^2	V
Any OCD Therapy Lifetime	27 (93.1)	98 (86.0)	0.89	.08
CBT During Follow-Up	18 (62.1)	51 (44.7)	1.46	.13
Medications During Follow-Up	27 (93.1)	101 (88.6)	0.36	.05

Notes:

^a
p < .05,**
p < .005,***
p < .001;

PSR Chronicity = Number of Weeks at Full Criteria (PSR>=4); GAF Chronicity = Number of Months with GAF at 60 or Above