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Long-term Course of Pediatric Obsessive-Compulsive Disorder: Three Years of Prospective Follow-up

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Abstract

Objective—This study assesses the long-term course of treatment-seeking youth with a primary diagnosis of DSM-IV OCD.

Method—Sixty youth and their parents completed intake interviews and annual follow-up interviews for three years using the youth version of the Longitudinal Interval Follow-up Evaluation (Y-LIFE) and Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS). Remission was defined as no longer meeting DSM-IV criteria for OCD for 8 weeks or more, and recurrence was defined as meeting full criteria for OCD for 4 consecutive weeks after having achieved symptom remission. Remission rates for youth were compared to rates of adults participating in the same study.

Results—The probability of achieving partial remission of OCD was 0.53 and the probability of achieving full remission was 0.27. Among the 24 youth participants who achieved remission: 79% stayed in remission throughout the study (mean of 88 weeks of follow-up) and 21% experienced a recurrence of symptoms. Better functioning at intake and a shorter latency to initial OCD treatment were associated with faster onset of remission ($P < .001$).

Conclusions—Remission is more likely among youth versus adults with OCD. Treatment early in the course of illness and before substantial impact on functioning predicted a better course.

Keywords

obsessive; compulsive; pediatric; long-term; course

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Introduction

There is little known about the long-term patterns of course and outcome of pediatric obsessive-compulsive disorder (OCD). While studies of adults support the notion that OCD is a chronic lifelong disorder, studies of youth, in contrast, suggest a high percentage of patients have an episodic course. Across studies of pediatric OCD, remission rates range from 32–79% depending on methodology and type of sample (epidemiologic, clinical) studied. Stewart and colleagues [1] reviewed follow-up studies of pediatric OCD published over a 50 year period and found that only 6 of the 16 studies used a prospective design [2–7]. These prospective studies were limited by small OCD sample sizes of 10–25 [2, 3, 5, 6], lack of repeated observation [2–5], and/or short follow-up duration [2, 5, 7].

Two recent studies of children with OCD treated in the United States [8] and Great Britain [9] support high rates of full remission for pediatric OCD. Bloch and colleagues [8] contacted 45 children who had been treated with serotonin reuptake inhibitors (SRIs) and cognitive behavioral therapy (CBT) in childhood (mean age 12.1±2 years). They found 44% were in full remission (CYBOCS <8) when reinterviewed in late adolescence or young adulthood (mean length of follow-up= 9.0±2.9 years). Micali and colleagues [9] used computerized diagnostic assessments and questionnaires to reassess 126 youth who had been treated at an OCD specialty clinic in London. They found 55% had no OCD symptoms at follow-up (mean = 5.1±2.7 years, range 1–11). In the current study, we expand on the literature by using a prospective longitudinal design with multiple yearly assessments. This design minimizes recall bias in reported symptom course and time of remission. Moreover, this pediatric sample is part of a large prospective study of OCD, the first study to compare course in youth and adults using the *same longitudinal methodology*, thus maximizing comparability of data across the samples.

Few studies to date have examined predictors of long-term course in pediatric OCD. These have focused largely on disorder onset, severity, and duration. Younger age of OCD onset was associated with a more chronic course in some studies [1]. In contrast, studies using longer follow-up periods found a *later* age of onset to be associated with OCD persistence [8]. Moreover, later OCD onset was related to a longer lag between onset and initial assessment [1, 9]. Characteristics associated with an episodic course include less severe OCD, a comorbid tic disorder, and absence of hoarding symptoms [8]. Those data, however, contrast with studies finding OCD to be more persistent in children with comorbid tics [4, 10]. Finally, the presence of a mood or externalizing disorder as well as a greater burden of comorbidity illnesses more generally were associated with protracted course [4, 8, 10].

The current study is an ongoing prospective study of the course of OCD in a large, clinically representative sample of children, adolescents and adults with primary DSM-IV OCD [11, 12]. In a previous report, we reported results of a cross-sectional comparison of intake characteristics of youth and adults with pediatric-onset OCD [11]. Compared to their adult counterparts, youth were more likely to be male, have an earlier onset of OCD symptoms and have a very substantially shorter average latency to treatment (1.5 years for youth versus 27 years for adults). Results from our adult sample suggest that the probability of achieving

at least partial remission of symptoms ranges from .24 to .40 and complete remission is rare [13, 14].

Aims of the study

The current study describes the course of OCD in the pediatric sample and compares the rate of remission of youth versus adults over the first three years of observation. Based on the literature described above, we hypothesized that a later age of onset (age 10 or older), shorter latency to initial treatment, better psychosocial functioning, and decreased severity at initial assessment would be associated with a greater likelihood of remission. In post-hoc analyses, we explored presence of specific OCD symptoms (i.e. hoarding) and comorbid disorders (tics, internalizing, externalizing) in participants who achieved and sustained remission versus those with an unremitting course.

Method

Participants

Participants were treatment-seeking individuals who enrolled in the Brown Longitudinal OCD Study (BLOCS), a prospective, observational study of the course of OCD. Recruitment occurred between June 2001 and December 2005. Participants were recruited from clinical settings in Rhode Island and Massachusetts, including an outpatient OCD clinic, a private psychiatric hospital, and several large outpatient primary treatment sites for anxiety disorders. A detailed description of full sample characteristics and methods can be found elsewhere [11]. Inclusion criteria were: 1) a primary DSM-IV diagnosis of OCD defined as the psychiatric disorder that participants (and parents of child participants) considered to be the biggest problem overall; 2) at least 6 years of age at intake; 3) treatment-seeking within the past five years; and 4) participant and parents were willing and able to sign written assent and consent. The only exclusion criterion was the presence of organic mental disorders and mental retardation at intake. [11]

This report is based on the prospective data collected on 60 youth participants (86% of the intake sample) who completed at least two years of follow-up assessments (60 completed two years and 56 completed the full three years). The remaining 14% (n=10) of participants: were lost to follow-up (n=6), did not respond to repeated attempts to schedule or repeatedly missed scheduled follow-up appointments (n=1), were too ill to participate (n=1) or refused/ withdrew from the study (n=2). There were no significant differences in demographic or clinical characteristics between participants who completed or did not complete follow-up assessments.

Course data are compared to 221 adult participants who also completed at least two years of follow-up assessments. Previous reports have described the intake characteristics of adult participants in detail (ref Pinto 2006) and the prospective course of adults at two (ref Eisen) and five year follow-up assessments (ref Eisen). For this analysis, we restricted the adult sample to the 221 adults who met full DSM-IV criteria for OCD at study intake and completed at least two years of follow-up. Briefly, the adult sample was % male and the average age at time of intake was 39 (SD=12). The mean age at onset of OCD was 17

(SD=9) and mean age of first treatment for OCD was 29 (SD=11). Most adults reported a substantial gap between onset of OCD and initial treatment (mean =11 years, SD=11). OCD symptom severity as indicated by mean scores on the Y-BOCS, were in the moderate range (mean YBOCS=23, SD=5) and psychosocial functioning was in the severe range (mean GAF score=48, SD=9).

Procedures

The study was approved by the Butler Hospital and Brown University institutional review boards. Children and adolescents provided written assent and a parent completed written consent procedures before enrollment. The Schedule for Affective Disorders and Schizophrenia for School-Age (K-SADS-PL; [15] was administered as part of the intake assessment by a psychologist with expertise in child assessments. All other assessments were conducted by interviewers who had at least a bachelor's degree and were closely supervised by the psychologist. All interviewers completed a rigorous training protocol including didactic seminars (on DSM-IV diagnoses and each of the study instruments), viewing and rating sample tapes, rating several live mock participants, observing and coding actual interviews conducted by a senior rater. More detailed information regarding interviewer training and interrater reliability procedures can be found elsewhere [12].

Assessments consisted of a semi-structured clinical interview, rater-administered measures, and self-report questionnaires. For children (ages 6–12), the parent was interviewed first followed by the child. For adolescent participants (ages 13–18), the adolescent was interviewed first followed by the parent. At the end of the interview, the rater met with both the participant and the parent and attempted to clarify discrepancies. Raters then prepared a narrative summary report describing psychiatric symptoms and DSM-IV diagnoses and presented each case at weekly research staff meetings. Discrepancies between parent and child report were resolved by expert consensus ratings (a psychiatrist and psychologist with expertise in OCD) at these meeting. Prior to data entry, interview data were reviewed by senior staff members for clinical and clerical accuracy.

Measures

A semi-structured rater administered questionnaire was used to collect detailed information on demographic and clinical features of OCD as well as treatment history [16]. Structured diagnostic interviews were used to obtain Axis I diagnoses. The K-SADS-PL[15] was used for children and the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-P; [17] was used to assess adolescents. Family history of OCD in first-degree relatives (probable or definite diagnoses) was obtained by asking participants if any of their relatives have/had similar problems and by rephrasing the SCID questions for OCD.

Current OCD symptoms were assessed using the child version of the Yale-Brown Obsessive Compulsive Scale (CY-BOCS) [18]. The CY-BOCS is a rater-administered, semi-structured interview comprised of a checklist of various types of OCD symptoms and a 10-item severity scale. The CY-BOCS was slightly modified to include developmentally-appropriate probes and has demonstrated psychometric properties equivalent to those of the original adult version [18].

Insight into OCD symptoms was assessed in adolescent participants using the adolescent version of the Brown Assessment of Beliefs Scale (A-BABS) [19], a 6-item scale yielding scores from 0 (excellent insight) to 24 (delusional). Insight into OCD for children was not assessed as there is no comparable measure of insight that has been validated for this age group.

The Multidimensional Anxiety Scale for Children (MASC) [20] a 39-item self-report measure, was used to assess severity of anxiety. The MASC total score ranges from 0 to 117 with higher scores indicating higher levels of anxiety. Overall level of psychopathology and functioning during the worst week of the past month was measured using the Children's Global Assessment Scale (CGAS) [21] which yields global ratings of 0 to 100 with similar anchor points. Lower scores indicate greater severity and impairment in functioning [22].

Follow-up interviews were conducted yearly using a child and adolescent adaptation of the Longitudinal Interval Follow-up Evaluation (LIFE) [23] a semi-structured interview designed to assess the longitudinal course of Axis I disorders and psychosocial functioning. Using the information obtained from the interview, the youth version of the LIFE (Y-LIFE) provides weekly psychiatric status ratings (PSRs) for each DSM-IV disorder. The 6-point OCD PSR scale indicates whether subjects meet full criteria for OCD [at moderate (PSR4), severe (PSR5), or extreme (PSR6) levels of distress and impairment], and whether they are in partial remission (PSR3) or full remission (PSR2, PSR1). Consistent with prior investigations [14, 24] full remission was defined as 8 consecutive weeks at a PSR≤2 and partial remission was defined as 8 consecutive weeks as a PSR≤3. Relapse was defined as meeting full criteria for OCD (i.e. PSR 4–6) for 4 consecutive weeks after having achieved a partial or full remission of symptoms. The Y-LIFE also assesses weekly medication usage as well as psychosocial treatments received during each follow-up interval. Whenever possible, clinical records were consulted to verify participant reports of treatments received.

Data Analysis

Descriptive analyses consisted of frequencies, percentages, means, and standard deviations. Group differences were explored using Pearson χ^2 tests for categorical variables and Fisher's exact test when expected frequencies were small (less than 5 per cell). One-way analysis of variance (ANOVA) was used for continuous variables. All analyses were two-tailed and used the .05 level of statistical significance.

Three-year course data were examined using standard survival analysis methods, incorporating Kaplan-Meier life tables for probabilities of remission. Stratified life table survival estimates were used to compare rates of remission of the pediatric sample to those of the adult sample. Cox proportional hazards regression [25] was used to estimate relative hazards for predictors of remission (full or partial) during the 3-year follow-up period. To maximize power, a forward stepwise regression method was selected to examine the following intake predictors: early onset of DSM-IV OCD (before age 10), sex, latency to initial treatment (years between initial treatment and onset), OCD severity (total CY-BOCS), and psychosocial functioning (CGAS). Criteria for entry into the model was $p < .05$ and for removal from the model was $p > .10$. To avoid multicollinearity among predictors, duration

of illness was not entered as a predictor because it was highly correlated with latency to initial treatment (r= .53; P < .0001).

Given the limited sample size, we were unable to test *a priori* hypotheses regarding presence of specific OCD symptoms (e.g. hoarding) and comorbid disorders (e.g. tics) as predictors of subsequent remission. To assess the influence of these factors, we compared characteristics of participants who achieved and sustained remission to those with an unremitting course in a post-hoc exploratory analysis.

Results

Characteristics of Pediatric Sample

Two-thirds of the sample was male and 90% were white, non-Hispanic. Age at study entry ranged from 6 to 18 years (mean=13.7, SD=3.0). Participants and parents recalled onset of minor symptoms in early childhood (mean=7.0, SD=3.4). The average age at onset of DSM-IV OCD symptoms was 9.2 ± 3.6 years and duration of illness was 4.5 ± 3.0 years. Only five of 60 participants and their parents reported a sudden onset of OCD symptoms (i.e. major symptoms onset within one month). More than half had a concurrent Axis I disorder: 32% had another anxiety disorder, 22% had an externalizing disorder, 20% had an impulse control disorder, 15% had a tic disorder, and 10% had a mood disorder.

At intake, 46 participants met DSM-IV criteria for current OCD, 12 were in partial remission (no longer met full DSM-IV criteria for OCD; median of 28 weeks), and 2 were in full remission (symptom-free). As expected, participants with OCD in remission at study intake were less symptomatic than participants with current OCD (mean ±SD CY-BOCS = 9.8±5.0 versus 23.5±6.1 respectively, F=58.09, df=59, P < .001) and had improved psychosocial functioning (mean ±SD CGAS = 72.5±10.7 versus 51.0±11.6 respectively, F=37.95, df=59, P < .001). There were no other significant differences in demographic or clinical characteristics between participants with and without current OCD at study entry.

The average age at initial treatment of OCD was 10.8 years (SD=3.3). On average, 1.5 years (SD=2.0) elapsed between OCD onset and first treatment. Three-quarters (n=46) had been on an SRI and all but one continued on SRI at study intake. Those with OCD at intake were more likely to have ever received an SRI than participants with OCD in remission (83% versus 57% respectively, χ^2 = 3.89, df = 1, p = .049). Two-thirds of the sample reported receiving CBT prior to intake. There were no significant differences in total number of CBT sessions received among participants with and without current OCD (mean 13.02±17.5 versus mean 13.71±13.5 sessions, respectively, F=0.18, df=57, p = .893).

Patterns of Course

Among the 14 participants who entered the study in remission, 7 (50%) sustained remission throughout follow-up; 4 (29%) experienced from 5 to 19 weeks of clinical OCD symptoms; and in 3 (21%), OCD recurred and persisted from 50 to 155 weeks. Less than half (n=6, 42%) of these participants received CBT (range=5–67 sessions, median=38.0). Seventy-one percent of participants (n=10) received SRIs, and duration of time on SRI ranged from 4% to 100% of the follow-up period (median=73.4%). There were no significant differences in

type or amount of treatments received during follow-up between participants who sustained remission and those who experienced a recurrence of symptoms.

Rates and Predictors of Remission Across Three Years of Follow-Up

Twenty-four (52%) of the 46 youth who entered the study with DSM-IV OCD experienced at least a partial remission at some point during the first three years of follow-up. The probability of achieving partial remission of OCD was 0.53 and the probability of achieving full remission was 0.27. Nineteen (79%) of these 24 remitters stayed well during the remainder of the study period (mean weeks=88.2±44.4) and 5 (21%) subsequently relapsed. Compared to adults in the BLOCS study, youth experienced significantly shorter times to remission (Table 1). For adults who entered the study with current OCD, the probability of full remission over three years was .13; the probability of partial remission was .34.

Using a forward stepwise Cox proportional hazard regression analysis, we found that better psychosocial functioning at intake (CGAS: HR=1.09, p<.001, CI=1.04–1.14) and shorter latency to initial treatment (HR=0.68, p=.009, CI=0.51–0.91) were associated with shorter time to remission. Early-onset OCD, age at study entry, sex, and symptom severity (CY-BOCS) did not contribute significantly to the model.

Clinical Correlates of Chronic and Remitting Course

We compared intake characteristics of participants who entered the study with DSM-IV OCD and continued to have OCD to those of participants who remitted during the 3- year observation period (Table 2). Participants with a chronic course reported being on psychotropic medications longer than participants with a remitting course (F=5.70, df=45, p=.02). Participants with a chronic course also had more severe OCD symptoms (F=4.67, df=45, p=.03), poorer psychosocial functioning (F=11.2, df=45, p=.002), and higher levels of anxiety on the MASC (F=5.6, df=45, p=.02) than those with a remitting course.

Number of participants with a concurrent Axis I disorder was similar for participants with and without chronic symptoms. Rates of current tic disorders were equally represented in both groups as was history of tic disorders (36% of chronic vs 29% of remitting, χ^2=0.27, df=1, p=.60). However, significantly more participants with chronic OCD had a concurrent internalizing disorder than participants with a remitting course (χ^2=5.59, df=1, p=.01). Specifically, participants with a chronic course were more likely to have another anxiety disorder at intake than participants with a remitting course (45% vs 16% respectively, χ^2=4.49, df=1, p=.03).

Frequencies of OC symptoms reported at intake are listed in Table 3. There were no significant differences in principal OC symptoms between participants with and without chronic OCD. Although no participants (or their parents) identified hoarding as their principal symptom, 39% of participants endorsed hoarding symptoms, and hoarding symptoms were equally represented in chronic (40%) versus remitting (37%) OCD (χ^2=0.56, df=1, p=.81).

Participants with chronic OCD were more likely to have been treated with SRIs prior to study entry than participants with a remitting course (95% vs 70%, respectively, Fishers

exact test p=.049). There were no significant differences in CBT history: 45% of participants with a chronic course and 41% of participants with a remitting course reported CBT prior to study entry. Table 4 describes treatments received during follow-up. Most participants were on SRI during the study and more than half also received CBT. Although a greater proportion of participants with remitting OCD received CBT, this difference was not statistically significant.

Discussion

To our knowledge, this is the first prospective study to examine course of OCD in a clinically representative sample of youth and adults with primary DSM-IV OCD. The rate of achieving partial or full remission for youth was .53 and significantly higher than that of adults in the same study (.34) suggesting that youth remit from OCD at a faster rate than adults. Two-thirds of youth who experienced remission (26 of 38 remitters) sustained remission for a mean of two years. These data support the hypothesis of distinguishable patterns of course in pediatric OCD and are in contrast to long-term studies of adults with pediatric-onset OCD which have found remission to be rare. Our data also suggest that latency to treatment and impairment in functioning predict course. Youth who were less impaired and reported a shorter gap between onset of the disorder and initial treatment had higher rates of remission. These findings underscore the importance of early intervention and treatment in the long-term course of OCD.

In contrast to other studies that have found the presence of tics in childhood to be associated with remission in adulthood [8, 9], we did not find a relationship between comorbid tics and early course. Rates of comorbid tics in our sample were lower (32%) than those reported in the Bloch study [8], and this may have limited our power to detect an effect on course. Our finding that concurrent anxiety disorders were overrepresented in the subset of participants who experienced a chronic course is consistent with that in OCD cases when the latter are ascertained as adults [26].

We did not find any significant differences in course based on principal OCD symptoms (i.e. symptom participant identified as the most distressing). In other work, prominent hoarding in childhood was the only symptom dimension linked to OCD persistence in adulthood [8]. However, although rates of hoarding in our study were similar to rates of hoarding reported in other pediatric OCD samples [27, 28], no participants (or parents) identified hoarding as their principal symptom. This finding is consistent with studies of hoarding that report a very gradual course of symptoms [29]that peaks in middle to late-adulthood [30]. Future work will examine the course of hoarding symptoms as these participants transition into adulthood.

The observational design of the study limits our interpretation of the findings in several ways. Our results are limited to treatment-seeking individuals and not generalizable to the broader population of youth with OCD. Treatment was uncontrolled and therefore we cannot draw conclusions regarding the impact of treatment on course. Nevertheless, our findings complement those from controlled treatment studies such as the Pediatric Obsessive Compulsive Treatment Studies (POTS I and POTS II) designed to assess efficacy of specific

treatment approaches [31, 32] by examining the long-term effectiveness of treatments in clinical settings for treatment-seeking individuals, including those who are typically excluded from efficacy trials. In contrast to the POTS I finding that lower OCD severity predicted greater post-treatment improvement [33], we did not find a relationship between OCD severity and time to remission. Although univariate analyses supported that youths who remitted had less severe OCD symptoms at intake, a multivariate model indicates that psychosocial functioning appears to be a better predictor of a remitting course. Further, the small sample size limited the number of predictors investigated thus we were unable to examine variables such as comorbidity and symptom presentation as predictors of remission.

Strengths of this study include a well-characterized sample, use of well-established longitudinal methodology allowing for direct comparison with our adult sample, and the lack of exclusion criteria found in many OCD outcome studies. While our findings overall suggest a better prognosis for youth with OCD than adults, they also serve to highlight the critical importance of early recognition and intervention in pediatric OCD. Our findings also point to the importance of future studies examining how best to intervene to prevent disability and facilitate the transition from adolescence to adulthood for individuals with OCD.

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Table 1

Cumulative Probability of Full or Partial Remission From OCD in Adult and Youth participants

	Full Remission*		Full or Partial Remission**	
	Adults (n=221)	Youth (n=46)	Adults (n=221)	Youth (n=46)
T (months)	n (probability)	n (probability)	n (probability)	n (probability)
0–6	5 (0.02)	2 (0.04)	24 (0.11)	4 (0.09)
7–12	10 (0.05)	4 (0.09)	42 (0.19)	10 (0.22)
13–18	14 (0.06)	6 (0.13)	49 (0.22)	14 (0.30)
19–24	20 (0.09)	9 (0.20)	61 (0.28)	19 (0.41)
25–30	24 (0.11)	11 (0.24)	67 (0.30)	22 (0.48)
31–36	28 (0.13)	12 (0.27)	75 (0.34)	24 (0.53)

* Log-Rank Chi Square =5.94, df=1, p=.015

** Log-Rank Chi Square =5.07, df=1, p=.024

Table 2

Intake Characteristics of Participants with Chronic versus Remitting Course Across Follow-up[a].

	Chronic OCD (n=22)	Remitting OCD (n=24)	*P*[*]
Demographic Characteristics			
Sex, male, n (%)	15 (68.2)	17 (70.8)	0.84
Age at intake, Mn±SD, years	14.5±2.5	13.7±3.0	0.29
Clinical Characteristics at Intake			
Sudden onset of OCD, n(%)	0 (0.0)	1 (4.2)	0.33
Family history of OCD, n(%)	6 (27.3)	8 (33.3)	0.66
Early Childhood Onset (prior to age 10), n (%)	12 (54.5)	11 (45.8)	0.55
Age first experienced minor symptoms, Mn±SD, years[c]	7.0±3.4	7.2±3.8	0.87
Age of onset of OCD, Mn±SD, years	9.3±3.9	10.0±3.5	0.49
Duration of illness, Mn±SD, years	5.2±2.7	3.6±3.3	0.09
Age of first treatment for OCD, yrs Mn±SD, years	11.1±2.9	11.0±3.7	0.92
Treatment latency, Mn±SD, years	1.8±2.2	0.9±1.6	0.14
Duration of psychotropic medications, Mn±SD, years	4.5±2.9	2.3±3.2	0.02
Symptom Severity			
C-YBOCS, total score (0–40)	25.5±5.2	21.7±6.3	0.03
A-BABS, total score (0–24)	8.8±3.4	6.9±3.9	0.18
CGAS, rating (0–100)	45.5±10.6	55.9±10.3	0.002
MASC, total score (0–117)	56.4±16.7	43.4±17.1	0.02
Concurrent Axis I Disorder, n (%)	15 (68.2)	11 (45.8)	0.12
Tic Disorder, n (%)	4 (18.2)	4 (16.7)	0.89
Internalizing Disorder, n (%)	12 (54.5)	5 (20.8)	0.01
Externalizing Disorder, n (%)	8 (36.4)	4 (16.7)	0.12
Impulse Disorder, n (%)	6 (27.3)	5 (20.8)	0.60

Note: A-BABS = Adolescent-Brown Assessment Beliefs Scale; CGAS = Children's Global Assessment Scale; C-YBOCS = Children's Yale Brown Obsessive Scale; MASC= Multidimensional Anxiety Scale for Children.

[*] *P*-value based on chi-squared statistics for categorical variables and analyses of variances for continuous variables.

Table 3

Frequency of Current Obsessions and Compulsion by C-YBOCS Category for Participants in Episode at Intake (n=46).

Number of Symptom Categories (possible range)	**Mean (SD)**	
Obsessions (0–9)	3.8 (1.7)	
Compulsions (0–8)	4.3 (1.4)	
Obsessions	**Present N (%)**	**Principal N (%)**
None	1 (2.2)	1 (2.2)
Contamination	31 (67.4)	13 (28.3)
Responsibility for harm/catastrophic thoughts	31 (67.4)	15 (32.6)
Symmetry	29 (63.0)	6 (13.0)
Aggressive	20 (43.5)	5 (10.9)
Hoarding	18 (39.0)	0 (0.0)
Somatic	13 (28.3)	1 (2.2)
Religious	13 (28.3)	1 (2.2)
Sexual	9 (19.6)	2 (4.3)
Miscellaneous[a] (superstitious/magical thoughts)	14 (30.5)	2 (4.3)
Compulsions	**Present N (%)**	**Principal N (%)**
Repeating routine activities	32 (69.6)	7 (15.2)
Checking	30 (65.2)	7 (15.2)
Ordering/arranging	29 (63.0)	1 (2.2)
Cleaning/washing	24 (52.2)	8 (17.4)
Incompleteness[b]	17 (37.0)	7 (15.2)
Hoarding	14 (30.4)	0 (0.0)
Counting	5 (10.9)	0 (0.0)
Miscellaneous[c] (tic-like compulsions, rituals involving others)	44 (95.7)	16 (34.7)

[a] Most common obsessions under miscellaneous category were superstitious/magical thoughts and fear of losing things.

[b] Incompletenes defined as having to complete rituals “until it feels right” with no feared consequence.

[c] Most common compulsions in miscellaneous category were rituals involving others people, tic-like compulsions, and need to ask or confess.

Table 4

Treatments Received During Follow-up

	Chronic OCD (n=22)	Remitting OCD (n=24)	*P**
Received Serotonin Reuptake Inhibitor (SRI), n(%)	19 (86.4)	20 (83.3)	0.77
Proportion of time on SRI (0–100%), Mn±SD	67.7±40.7	60.5±42.2	0.56
Received Cognitive Behavioral Therapy (CBT), n(%)	10 (45.5)	17 (70.8)	0.08
Number of CBT sessions, Mn±SD	14.0±26.0	19.4±18.7	0.41

* *P*-value based on chi-squared statistics for categorical variables and analyses of variances for continuous variables.