

Assessment of Obsessive-Compulsive Behavior in Childhood-Onset Bipolar Disorder Using the Yale-Brown Obsessive-Compulsive Scale

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Background

High rates of comorbid anxiety disorders have been found in adult and juvenile populations with bipolar disorder (Freeman et al., 2002; Chen and Dilsaver, 1995). Obsessive-compulsive disorder (OCD) is a common anxiety disorder characterized by intrusive, repetitive thoughts and/or behaviors that cause significant distress. In a systematic review of the child literature, Gellar et al. (1998) found that over 69% of children diagnosed with OCD had some associated mood disorder. Accurate description of the typology, and reliable assessment of the prevalence of obsessive compulsive symptoms in bipolar youth, are important both for treatment planning and for making progress towards the development of a more accurate nosology of the disorder.

Method

The Yale-Brown Obsessive and Compulsive Scale (YBOCS) is a well-validated instrument, widely-used to assess obsessive and compulsive behaviors/symptoms (Goodman et al. 1989). The children's version of the YBOCS scale (C-YBOCS) is recommended for use with children and adolescents (Goodman et al. 1991). C-YBOCS data were obtained from 96 subjects diagnosed according to DSM-IV criteria with juvenile-onset bipolar disorder (cases), and 32 comparison subjects of similar age (controls).

Results

The study sample consisted of 84 males (66%) and 44 females. Mean age was 10.7 ± 4.1 years (median 10.6). Study sample characteristics are summarized in Table 1.

OCD symptoms were very common among the cases. Nearly all had at least one OCD symptom reported (91/96, 95%). The median number of OCD symptoms among the cases was 5.5 (range 0 - 29) and the 75th percentile was 11.5. In contrast, the median number of symptoms in the comparison group was 2 (range 0 - 49). This case – control median difference was statistically significant (t[df=126] = 3.28, p<0.001) by quantile regression modeling.

YBOCS-defined frequency counts for eight categories of obsessions and seven categories of obsessions are summarized in Table 2. These YBOCS obsessions categories include [1] contamination obsessions, [2] aggressive obsessions, [3] sexual obsessions, [4] hoarding/saving obsessions, [5] magical thoughts/superstitious obsessions, [6] somatic obsessions, [7] religious obsessions, and [8] miscellaneous obsessions. The YBOCS compulsions categories include [1] washing/cleaning obsessions, [2] checking compulsions, [3] repeating rituals, [4] counting compulsions, [5] ordering/arranging compulsions, [6] hoarding/saving compulsions, and [7] miscellaneous compulsions/superstitious behaviors/rituals involving other persons.

The OCD symptoms that differed most strongly in prevalence between cases and controls were: violent or horrific images (p<0.00001), fear will act on unwanted impulses (p=0.0035), damaging or self-mutilating behaviors (p=0.0044), need to touch, tap, or rub (p=0.0188), fear harm will come to self (p=0.0225), fear harm will come to others (p=0.0376), fear of harming others (p=0.0385), and need to involve others in rituals (p=0.0385).

Two aggressive obsessions assessed by YBOCS were especially strongly correlated with obsessive/compulsive morbidity. Within the Cases subgroup, these obsessions ("Fear harm will come to self" and "Fear might harm self") were strongly predictive of both total count of YBOCS-defined obsessions (Spearman rs = 0.53, p<0.001) and total count of YBOCS-defined compulsions (Spearman rs = 0.74, p<0.001). These strongly-predictive associations are shown graphically in Figure 1 (total count of obsessions) and Figure 2 (total count of compulsions).

Discussion

These findings suggest that a specific set of OCD symptoms may be associated with bipolar disorder in youth or be associated with a more complex syndrome, or a subtype, whose recognition in the clinical setting may improve the identification and differential diagnoses of bipolar disorder in youth. The predominance of aggressive obsessions in the cases suggests the possibility that poor control of aggressive impulses, a characteristic feature of juvenile-onset bipolar disorder, may result in secondary anxiety symptoms and maladaptive behaviors expressed in the form of aggressive obsessions.

Table 1.

Age/sex characteristics in 96 juveniles diagnosed according to DSM-IV criteria with juvenile-onset bipolar disorder (cases) and 32 comparison subjects of similar age (controls) seen in a private medical practice

	Cases	Controls
Number (%)	96	32
Sex: Girls (N, %)	26 (27%)	18 (56%)
Boys	70 (73%)	14 (44%)
Age (years) ^a	$10.8 \pm 4.0 \ (2.5 - 23)$	$10.1 \pm 4.3 (3-18)$

a. Age in years is reported as mean \pm SD (range).

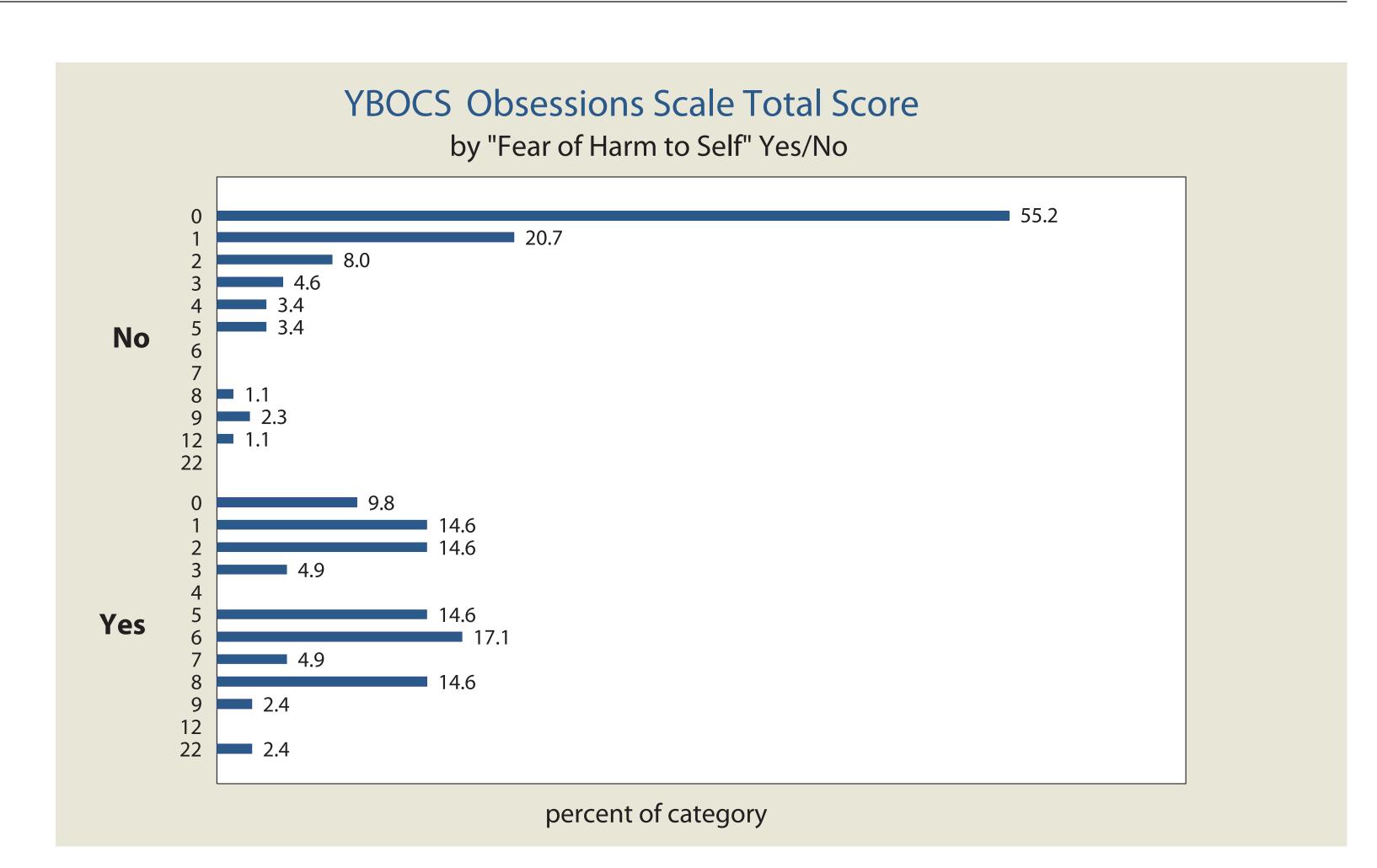
Table 2.

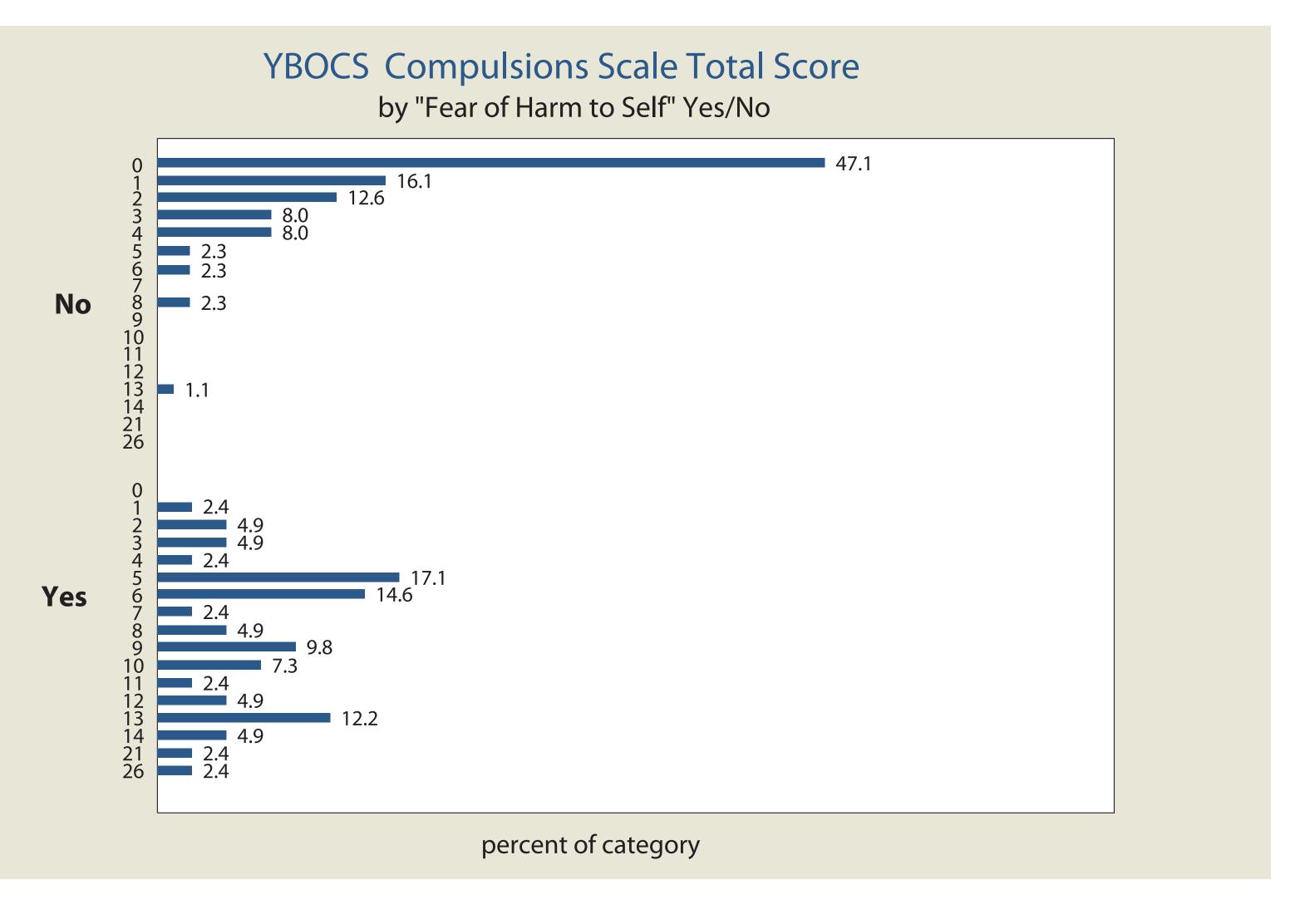
Obsessive-compulsive symptoms in 96 subjects diagnosed with juvenile-onset bipolar disorder based on DSM-IV criteria and 32 comparison subjects

Measure ^a	Cases	Controls	x^2 or t^b	р
Number (%)	96 (75.0)	32 (25.0)		
OCD symptoms >1 (N, %)	76 (79.2)	19 (59.4)	4.91	0.027
OCD symptoms (count)	$6.9 \pm 6.8 (0,28)$	$4.9 \pm 8.7 (0,24)$	1.42 ^b	0.16
YBOCS-defined-obsessions:				
Any YBOCS-obsession	66 (68.8)	10 (31.2)	14.0	< 0.001
Contamination obsessions	44 (45.8)	11 (34.3)	1.29	0.26
Aggressive obsessions	50 (52.1)	6 (18.8)	10.8	0.001
Sexual obsessions	15 (15.6)	4 (12.5)	exact	0.67
Hoarding/saving obsessions	14 (14.6)	5 (15.6)	exact	0.54
Superstitious obsessions	12 (12.5)	4 (12.5)	exact	0.61
Somatic obsessions	18 (18.7)	6 (18.7)	0.01	0.99
Religious obsessions	8 (83)	3 (9.4)	exact	0.55
Miscellaneous obsessions	30 (31.2)	7 (21.9)	1.03	0.31
YBOCS-defined-compulsions:				
Any YBOCS-compulsion	72 (75.0)	15 (46.9)	8.71	0.003
Washing/cleaning compulsions	16 (16.7)	1 (3.1)	exact	0.069
Checking compulsions	12 (12.5)	4 (12.5)	exact	0.61
Repeating rituals	16 (16.7)	5 (15.6)	exact	0.57
Counting compulsions	9 (9.4)	1 (3.1)	exact	0.23
Ordering/arranging compulsions	17 (17.7)	4 (12.5)	exact	0.35
Hoarding/saving compulsions	22 (22.9)	6 (18.7)	0.24	0.62
Miscellaneous compulsions	43 (44.8)	4 (12.5)	exact	< 0.001

a. Reported are number and percentage (%) of subjects with specified obsession/compulsion, except for OCD symptoms (count), for which mean \pm SD (range) are reported.

b. Degrees-of-freedom (df): df=1 for c2, df=126 for t (OCD symptoms count). Fisher's exact statistic used for contrasts with cell count < 5.





Figures 1&2 - "Fear of Harm to Self—Yes/No" is defined by a positive response to one or both of two YBOCS items: "Fear might harm self" and "Fear harm will come to self."

This "Fear of Harm" marker was positive for 37/96 (38.5%) of the cases and 4/32 (12.5%) of the comparison subjects (chi-sq[df=1] = 7.5, p=0.006). The Y-axis of the figure is separated into two subgroups (No [N= 87] and Yes [N=41]) according to this marker.

Within each subgroup on the Y-axis, the bars represent the percentage of subjects in that subgroup reporting 0, 1, 2, 3, ... YBOCS symptoms For example, for YBOCS obsessions symptoms, in the "No" subgroup, 55.2% (48/87) of the subjects had zero YBOCS items recorded positively, while only 9.8% (4/41) of the "Yes" subgroup had zero additional YBOCS items recorded positively.