**DATA SUPPLEMENT**

A. Sample Characteristics and Comparison Between Study Completer and Noncompleter

Sixty OCD patients (women, N=31) and 60 healthy comparison participants (women, N=32) participated in the first testing session of the current study. Of these Forty-five patients (women, N=22) and 39 healthy comparison subjects (women, N=21) completed both testing sessions (T1 and T2). In the complete sample (including study completer and noncompleter) 26 patients had one to three comorbid diagnoses as follows: affective disorders (major depression, N=15; dysthymia, N=2), anxiety disorders (social phobia, N=10; panic disorder, N=3; generalized anxiety disorder, N=2; specific phobia, N=2), eating disorders (bulimia, N=1), somatoform disorders (hypochondria, N=1), tic disorder (N=2) and personality disorders (obsessive-compulsive, N=8; avoidant, N=3). Twenty-eight patients were medicated (selective serotonin reuptake inhibitors, N=22, tricyclic antidepressants N=6). Figure A displays subject flow and reasons for drop out. The overall dropout rate was 34.2%. 30% of all participants did not complete the second testing session for various reasons. The remaining 4.2% had to be excluded from data analysis due to poor quality recordings or insufficient number of error-trials during one of the two testing sessions (see Figure A). Importantly Completer and Non-Completer did not differ with regard to clinical characteristics (OCD patients and healthy comparison subjects: BDI-II: t=0.49, df=118, p=0.62, OCI-R: t=0.59, df=118, p=0.55, patients only: Y-BOCS: t=0.87, df=58, p=0.39, MADRS: t=1.32, df=58, p=0.19) as well as gender (x^2=0.43, p=0.51) and verbal IQ (t=1.47, df=118, p=0.14). However, the completer group was younger compared with the noncompleter group (age: t=3.24, df=118, p<0.01, completer: mean age=34.36, SD=9.35; noncompleter: mean age=41.31, SD=13.37).

FIGURE A. Subjects Flow Depicting Sample Sizes and Drop Out Reasons from the Initial Testing to the Analyzed Sample
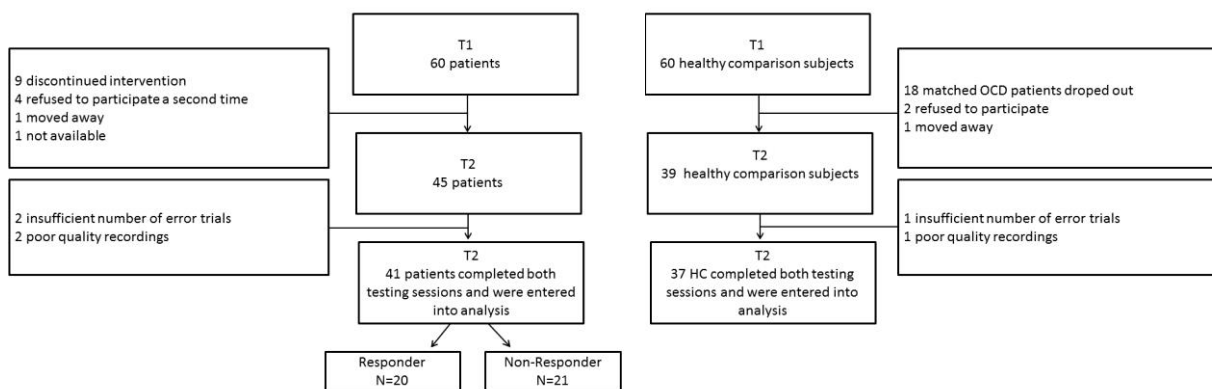
B. List of Medications of OCD Patients (Final Analysis Sample)

TABLE A. List of Medications

Medication	Number of Patients at T1	Number of Patients at T2
Paroxetine	5	4
Citalopram	4	3
Escitalopram	3	4
Fluoxetine	3	1
Venlafaxine and Citalopram	1	1
Trimpramine	1	1
Clomipramine	4	3

C. Behavioral Data

Behavioral data indicate that OCD patients committed fewer errors than healthy control participants (F=5.33, df=1, 76, p<0.05). Numbers of errors did not differ between sessions (F=0.18, df=1, 76, p=0.67), and there was no interaction between *session* and *group* (F=0.01, df=1, 76, p=0.92). Response times did not significantly differ between groups (F=0.55, df=1, 76, p=0.46). In accordance with other studies using flanker tasks (e.g. Carrasco et al., 2013; Endrass et al., 2014; Riesel et al. 2014; Weinberg et al. 2010), correct reaction times were slower compared with error reaction times (F=1120.15, df=1, 76, p<0.001). There was no main effect of *session* (F=0.04, df=1, 76, p=0.85). A significant interaction between *session* and *response type* (F=28.61, df=1, 76, p<0.001) reflected a smaller difference between correct and incorrect reaction times in the second testing session (T1: mean=97, SD=26, T2: mean=82, SD=24). No interaction between *session*, *response type* and *group* was observed (F=0.72, df=1,76, p=0.40).

D. Associations with Obsessive-Compulsive Symptoms and Scatterplots

Table B presents correlations between performance monitoring and obsessive-compulsive symptoms at each of the two testing sessions as well as the changes in symptom-severity and performance monitoring between testing sessions. Figure B depicts scatterplots of the correlations. No significant association was observed for obsessive-compulsive symptoms and performance monitoring activity in both groups. In addition, the correlations between symptom reduction in obsessive-compulsive symptoms (i.e. T1 minus T2, separately for OCI-R and Y-BOCS scores) and changes in performance monitoring between testing sessions were not significant (p values>0.40).

TABLE B. Pearson's Coefficients for Correlations (r) between Obsessive-Compulsive Symptoms and Error-Related and Correct-Related Negativity Amplitudes at Fronto-Central Electrode (FCz), Separately for Obsessive-Compulsive Disorder (OCD) Patients and Healthy Comparison Subjects and each Testing Session.

Measures	Healthy controls (N=37)				OCD Patients (N=41)			
	Correct		Errors		Correct		Errors	
	r	p	r	p	r	p	r	p
T1								
Obsessive-Compulsive Inventory-Revised	-.03	.85	-.07	.67	-.14	.40	-.15	.35
Yale-Brown Obsessive Compulsive Scale	-		-		-.03	.86	.02	.88
T2								
Obsessive-Compulsive Inventory-Revised	.16	.34	-.14	.43	.06	.70	-.06	.70
Yale-Brown Obsessive Compulsive Scale	-		-		.13	.41	.13	.40
	Correct (T1-T2)		Errors (T1-T2)		Correct (T1-T2)		Errors (T1-T2)	
Measures	r	p	r	p	r	p	r	p
T1 minus T2								
Obsessive-Compulsive Inventory-Revised	-.10	.56	.02	.91	-.01	.93	.13	.44
Yale-Brown Obsessive Compulsive Scale	-		-		-.09	.55	-.07	.66

FIGURE B. Scatterplots depicting the associations between Neural Correlates of Performance Monitoring and Symptom Severity for Healthy Comparison Subjects (left) and OCD Patients (right).[a]
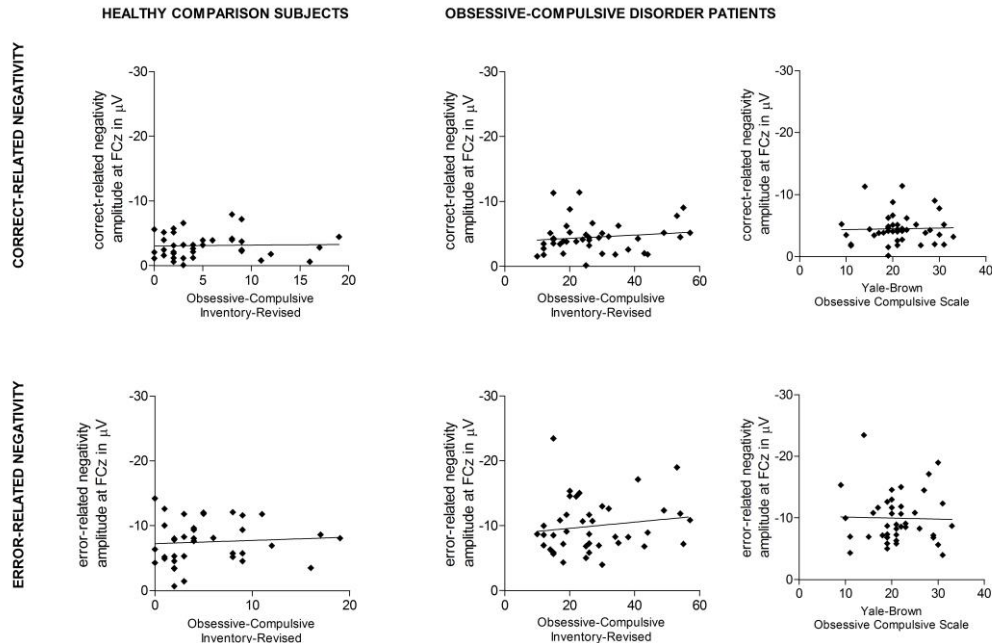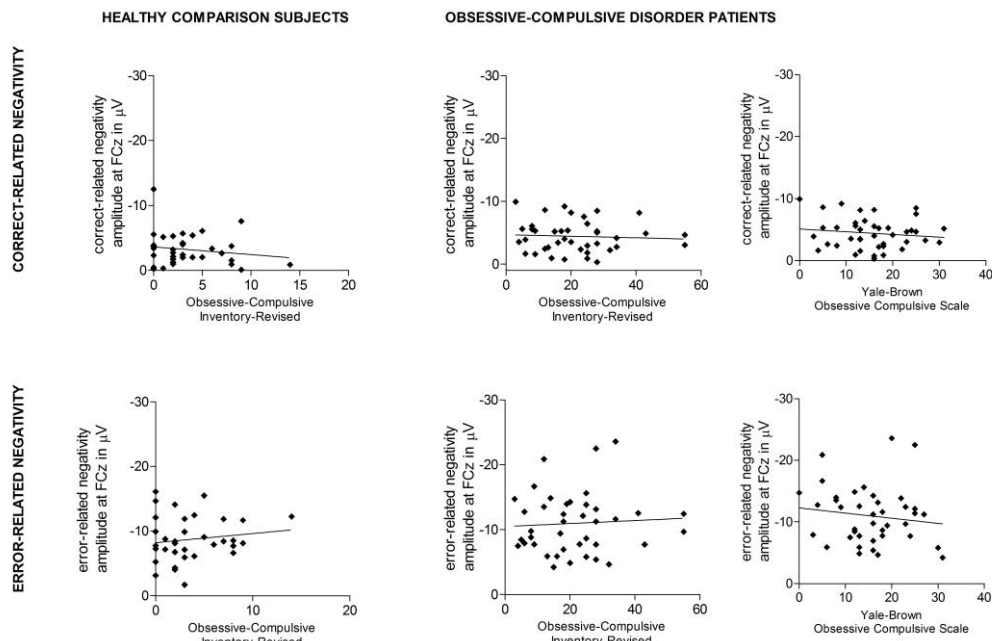
[a] The top images (panel A) depict scatterplots of the first test session (T1). The bottom images (panel B) depict scatterplots of the second test session (T2).

E. Obsessive-Compulsive Disorder Symptom Dimensions

Dimensional scores of OCD symptoms at T1 were derived from the Yale-Brown Obsessive-Compulsive checklist (Goodman et al., 1989) for each patient according to a method recently described by Katerberg et al. (2010). The five resulting dimensions are: taboo, contamination/cleaning, doubt, rituals/superstitious and hoarding/symmetry. Multiple regression analyses were performed for the OCD patient group analyzing the prediction of performance monitoring by symptom dimensional scores to explore the unique contributions of symptom dimensions. Table C and D summarize the regression model for error-related (Table C) and correct-related negativity (Table D) including the zero-order and partial correlations. The analysis revealed no significant association between symptom dimensions and performance monitoring. This suggests that overactive performance-monitoring represents a common neural correlate that is shared across all symptom dimensions in OCD.

TABLE C. Multivariate Regression Model and Correlations for the Error-Related Negativity at T1 as Dependent Variable and the Lifetime (Past and Present) Symptom Dimension Scores as Predictors.

	Regression							Correlation	
	R^2	B	B (SE)	β	t	p	F	R (zero order)	R (partial)
Composite score	.12						.52		
Taboo		-2.08	5.09	-.11	-.41	.68		-.27	-.07
Contamination/cleaning		-2.1	2.01	-.18	-1.05	.30		-.25	-.18
Doubts		-.92	2.72	-.06	-.32	.75		-.21	-.06
Superstitions/rituals		-.48	3.15	-.04	-.17	.86		-.19	-.03
Symmetry/hoarding		-1.31	2.87	-.1	-.41	.41		-.27	-.06

Note: B (unstandardized coefficient), SE (standard error), β (standardized coefficient)

TABLE D. Multivariate Regression Model and Correlations for the Correct-Related Negativity at T1 as Dependent Variable and the Lifetime (Past and Present) Symptom Dimension Scores as Predictors.

	Regression							Correlation	
	R^2	B	B (SE)	β	t	p	F	R (zero order)	R (partial)
Composite score	.1						.65		
Taboo		.25	3.38	.02	.08	.94		-.08	-.01
Contamination/cleaning		-2.25	1.31	-.31	-1.72	.1		-.31	-.29
Doubts		-.16	1.87	-.02	-.08	.93		-.08	-.02
Superstitions/rituals		-.47	1.78	-.06	-.27	.79		-.08	-.05
Symmetry/hoarding		.08	2.06	.01	-.04	.97		-.09	-.01

Note: B (unstandardized coefficient), SE (standard error), β (standardized coefficient)

References Data Supplement

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