



Screening Utility of the Dimensional Obsessive-Compulsive Scale in OCD Assessment

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BACKGROUND

OBSESSIVE COMPULSIVE DISORDER

- Given its high prevalence, chronicity, and associated burden, OCD necessitates accurate assessment to ensure timely treatment.
- The Dimensional Obsessive-Compulsive Scale (DOCS) was developed to measure the severity of the four most consistently identified OCD symptom dimensions:
 - Contamination;
 - Responsibility for harm;
 - Symmetry;
 - Unacceptable thoughts.
- To date, no study has examined the validity of the DOCS subscales as a way of distinguishing OCD from nonclinical controls.

The present study compares the diagnostic accuracy of the DOCS scale and subscales in discriminating OCD from nonclinical controls.

METHOD

PARTICIPANTS

Participants ($N = 1078$) were recruited from specialty anxiety clinics (OCD; $N = 245$) and universities (non-clinical controls; $N = 833$) across the US between 2005 and 2008. DOCS severity scores were as follows: OCD patients ($M = 30.62$, $SD = 15.16$), non-clinical controls ($M = 12.72$, $SD = 9.69$).

MEASURES

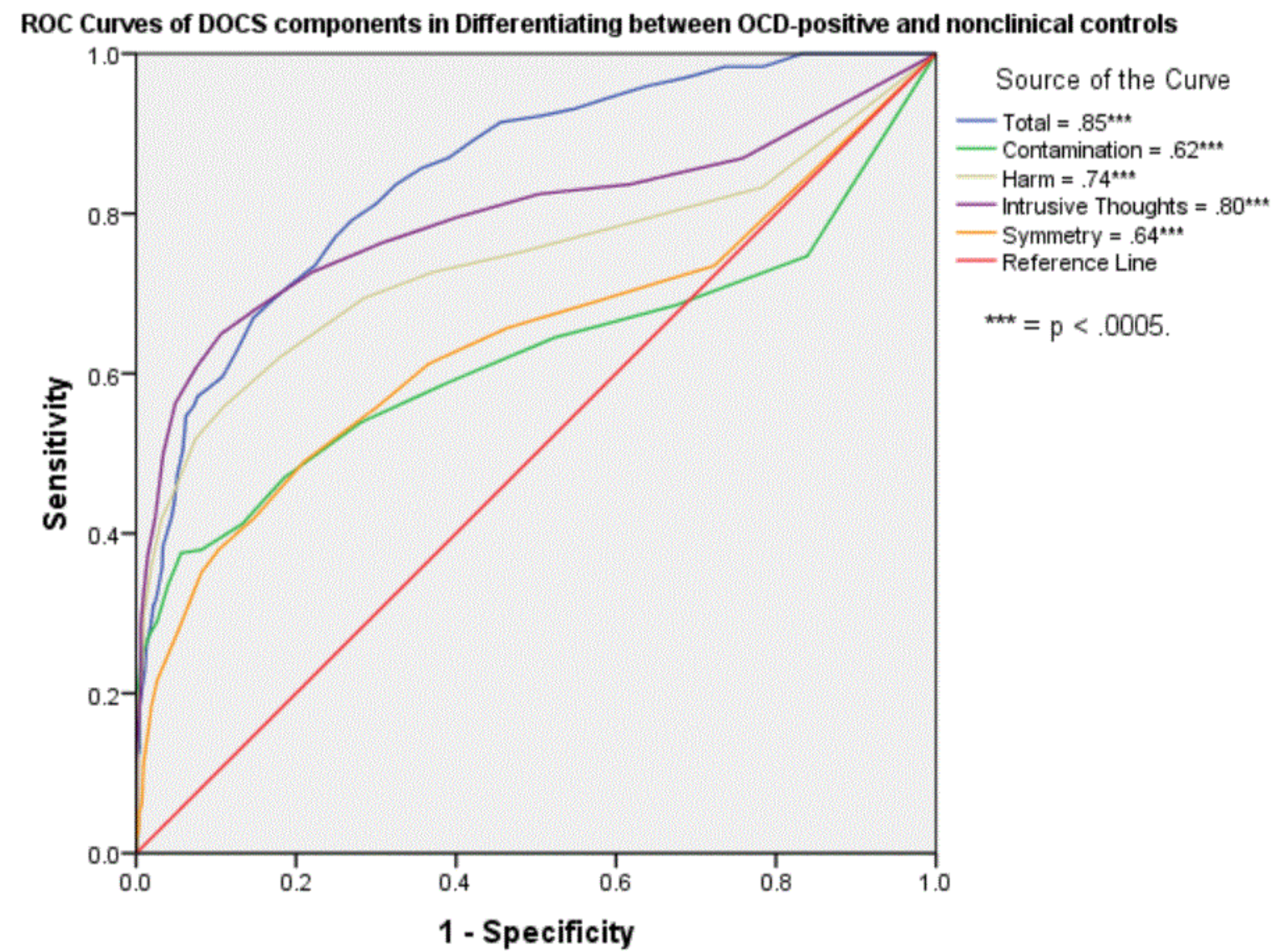
- DSM-IV diagnoses for OCD participants were established using the MINI and SCID (First et al., 2002) administered by trained mental health professionals.
- The DOCS (Abramowitz et al., 2010) was administered as part of a self-report battery (for OCD patients) and an online survey (for non-clinical controls).

PROCEDURES

- Receiver operating characteristic (ROC) analyses determined diagnostic accuracy of DOCS scales and subscales in distinguishing OCD from non-clinical controls.
- The Venkatraman method determined any significant difference in area under the curve (AUC) values between all scales.
- DLRs were also generated (DLR+ = ↑ odds, DLR- = ↓ odds)
- Binary logistic regressions tested for incremental value in combining subscales versus interpreting the more discriminating subscale.

RECEIVER OPERATING CHARACTERISTICS

Figure 1.



Note: Venkatraman test for two correlated ROCs indicated that DOCS-Total outperformed all other scales, $p < .0001$, despite the overlap in CIs for the point estimates of the AUCs.

Table 1.

Scale	AUC (SE)	95% CI	Diagnostic Likelihood Ratios (DLRs)		
Total	.85 (.01)***	.82-.88	Low (0-9) 0.15	Indeterminate (10-27) 0.73	High (28+) 7.76
Contamination	.62 (.03)***	.57-.67		Low (0-5) 0.63	High (6+) 2.54
Harm	.74 (.02)***	.70-.78		Low (0-6) 0.5	High (7+) 5.08
Intrusions	.80 (.02)***	.76-.84		Low (0-9) 0.5	High (10+) 11.5
Symmetry	.64 (.02)***	.60-.69		Low (0-4) 0.69	High (5+) 1.84

*** $p < .0005$.

Note: DLRs between 3 to 7 (or 1/3 and 1/7) are considered clinically helpful. DLRs > 10 (or < 0.1) are often clinically decisive.

RESULTS

ROC

ROC analyses indicated the DOCS scales achieved statistical significance in distinguishing members of the OCD group from the non-clinical group, ranging from slightly above chance level to excellent (all $ps < .0005$). See Figure 1 and Table 1.

Diagnostic Likelihood Ratios (DLRs)

Odds of a OCD diagnosis were in the clinically decisive range for intrusive thoughts (DLR+ = 11.5 if Intrusions score > 10, DLR- = .34 if score was 0-3). DOCS-Harm and DOCS-Total were in the clinically useful range (Harm: DLR+ = 5.08 if score > 7, DLR- = .48 if score < 3; Total: DLR+ = 7.76 if score > 28, DLR- = .15 if score < 10). DLRs for Symmetry and Contamination were not clinically useful.

Binary logistic regressions:

- Logistic regressions indicated that the Total scale was strongest in discriminating between OCD and nonclinical controls after controlling for age and gender, $\Delta R^2 = 16\%$, $p < .0005$, followed by intrusive thoughts (15%), Harm (12%), Symmetry and Contamination (6%).

DISCUSSION

- The DOCS-Total, Harm, and Intrusions subscales are clinically useful for differentiating between OCD and nonclinical controls, with higher scores indicating increased risk of OCD.
- Intrusive thoughts subscale scores may be particularly salient in differentiating individuals with OCD from nonclinical controls.
- Low DOCS-Total scores can be used to “rule out” an OCD diagnosis, with low scores indicating a ten-fold decrease in risk of OCD.
- Future research should use ROC analyses and DLRs to compare the DOCS (Total and subscales) to other screeners commonly used for diagnosing OCD (i.e., OCI-R).

REFERENCES

- Abramowitz, J. S., Deacon, B. J., Olatunji, B. O., Wheaton, M. G., Berman, N. C., Losardo, D., ... & Hale, L. R. (2010). Assessment of obsessive-compulsive symptom dimensions: development and evaluation of the Dimensional Obsessive-Compulsive Scale. *Psychological assessment*, 22, 180.
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