# Diagnosing Obsessive-Compulsive Disorder: Diagnostic Validity of the DOCS Scale

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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 Other Anxiety Disorders (OADs).

**The present study compares the diagnostic accuracy of the DOCS scale and its subscales in discriminating OCD from OADs.**

## METHOD

### PARTICIPANTS

Participants (*N* = 366) were recruited from specialty anxiety clinics across the US between 2005 and 2008. DOCS severity scores were as follows: OCD condition (*M* = 30.62, *SD* = 15.16), other anxiety disorders (*M* = 17.64, *SD* = 13.12).

### MEASURES

• DSM-IV diagnoses were established using the MINI and SCID (First et al., 2002) administered by trained mental health professionals

• Dimensional Obsessive Compulsive Scale (DOCS; Abramowitz et al., 2010) as part of a self-report battery.

### PROCEDURES

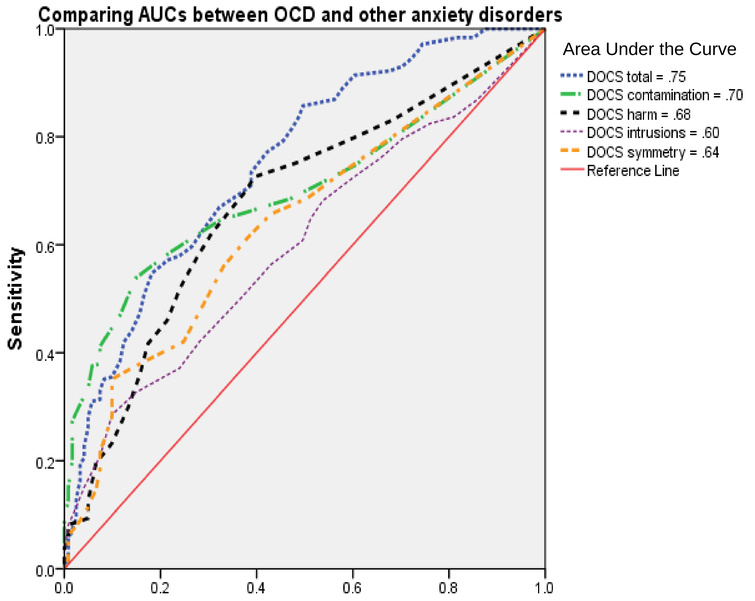
• Receiver operating characteristic (ROC) analyses determined diagnostic accuracy of DOCS scales and subscales in distinguishing OCD from OADs.

• 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




*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.

| Scale | AUC (SE) | 95% CI | Diagnostic Likelihood Ratios (DLRs) | | |
|---|---|---|---|---|---|
| | | | Low (0-9) | Indeterminate (20-27) | High (28+) |
| **Total** | .75 (.03)*** | .70-.80 | 0.23 | 0.74 | 2.82 |
| | | | Low (0-2) | Indeterminate (3-5) | High (6+) |
| **Contamination** | .70 (.03)*** | .65-.75 | 0.52 | 0.85 | 4.04 |
| | | | Low (0-2) | Indeterminate (3-6) | High (7+) |
| **Harm** | .68 (.03)*** | .62-.74 | 0.48 | 0.89 | 2.12 |
| | | | Low (0-3) | Indeterminate (4-9) | High (10+) |
| **Intrusions** | .60 (.03)*** | .54-.66 | 0.68 | 0.85 | 1.31 |
| | | | Low (0-3) | Indeterminate (4-9) | High (10+) |
| **Symmetry** | .64 (.03)*** | .58-.70 | 0.63 | 0.71 | 1.69 |

***$p < .0005$.

*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 OAD group, ranging from slightly above chance level to good (all *p*s < .0005). See Figure 1 and Table 1.

**Diagnostic Likelihood Ratios (DLRs)**

Using the DOCS, odds of being diagnosed with OCD were in the clinically helpful range (DLR+ = 2.82 if DOCS-Total score > 28, DLR- = .23 if score < 3). Using the DOCS-Contamination scale, odds of being diagnosed with OCD were in the clinically helpful range (DLR+ = 4.04 if Contamination score > 5, DLR- = .52 if score = 0). DLRs for Harm, Symmetry, and Intrusive Thoughts were not deemed to be large enough for clinical use.

**Binary logistic regressions:**

• Logistic regressions indicated that the Contamination subscale was strongest in discriminating between OCD and OADs after controlling for age and gender, $\Delta R^2 = 22\%$, $p < .0005$.

• Adding the Harm subscale had an incremental effect in differentiating OAD and OCD diagnoses after controlling for age and gender, $\Delta R^2 = 4\%$, $p < .0005$.

## DISCUSSION

- The DOCS-Contamination subscale is clinically useful for differentiating between OCD and OADs, with higher scores indicating increased risk of OCD.
- Contamination scores may be particularly salient in differentiating individuals with OCD from those with OADs.
- Subscale scores Responsibility for Harm, Symmetry, and Intrusive Thoughts are common between OCD and OADs, suggesting symptom overlap.
- Future research should examine whether administering the Harm subscale to differentiate a suspected OCD diagnosis from an anxiety disorder diagnosis is beneficial.
- These are conservative analyses in that they are concentrated on a clinically meaningful comparison group, inasmuch as OCD can be difficult to differentiate from anxiety disorders.

## 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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