



Behavioral Measurement of Intolerance of Uncertainty in OCD, Generalized Anxiety Disorder, and Other Anxiety Disorders

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Introduction

- Intolerance of uncertainty (IU) is a cognitive bias in OCD and anxiety disorders such as generalized anxiety disorder (GAD).
- Current research on IU relies on two self-report measures: the Intolerance of Uncertainty Scale and the Perfectionism/Certainty subscale of the Obsessive Beliefs Questionnaire-44.
- There is need to develop other measures of IU, such as behavioral measures, and to examine whether IU is unique to OCD and GAD, or is a transdiagnostic characteristic of anxiety disorders.
- This study evaluated a probabilistic inference task (the Beads Task) in which individuals high in IU are expected to request more pieces of information (i.e., more beads) before feeling certain enough to make a decision about which of two jars a series of beads have come from (Ladouceur et al., 1997).

Method

Participants

- 69 patients with anxiety disorders as determined by the MINI
- 73% female, 70% Caucasian, M age = 28.11 years (SD = 12.97)

Self-Report Measures

- Intolerance of Uncertainty Scale-12 (IUS-12)** - 2 subscales: (1) Prospective IU, (2) Inhibitory IU
- Dimensional Obsessive-Compulsive Scale (DOCS)** - 4 dimensions: (1) Germs / Contamination, (2) Responsibility for Harm, Injury, or Bad Luck, (3) Unacceptable Thoughts, and (4) Symmetry, Completeness, and Need for Things to be "Just right"
- Obsessive Beliefs Questionnaire (OBQ-44)** - 3 subscales: (1) Responsibility / Threat Estimation (RT), (2) Perfectionism / Certainty (PC), and (3) Importance / Control of Thoughts (ICT)
- Penn State Worry Questionnaire (PSWQ)**
- Depression Anxiety and Stress Scale (DASS)**

Beads Task : 3 levels of difficulty/uncertainty: (1) low uncertainty (85:15), (2) intermediate uncertainty (60:40), and (3) high uncertainty (44:28:28). Draws to Decision (DTD); max = 30 beads.

Results

Regression Analyses Predicting DTD

- The DASS (Step 1) accounted for <1% of the variance in DTD on the intermediate version of the Beads Task ($p = ns$).
- In the first regression, addition of IU measures (Step 2), collectively explained an additional 10% of the variance ($p = .02$). OBQ-PC but not IUS-12 subscales accounted for significant unique variance.
- In the second regression, when the symptom measures (DOCS subscales and PSWQ) were added (Step 2), they collectively accounted for an additional 4% of the variance, which was not significant.

ANOVA Analyses Predicting DTD

- A 3 (task difficulty) x 4 (diagnostic group) repeated measures ANOVA revealed a main effect of task difficulty level on the number of beads requested, such that participants requested more beads the more uncertain the task, $F(2, 172) = 98.91$, $p < .001$.
- However, there was no main effect of diagnostic group on DTD, $F(3, 86) = .62$, $p = .60$, and no task version by diagnostic group interaction, $F(6, 172) = .85$, $p = .53$.

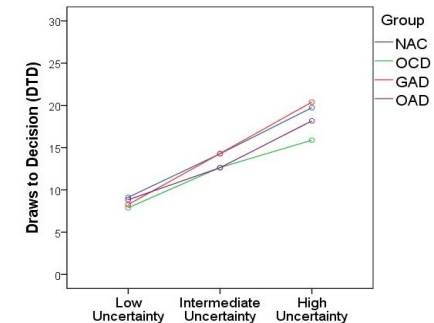
Group mean scores on study measures

| Measure | M (SD) |
|----------------------------------|---------------|
| IUS-12 | |
| Prospective IU | 20.13 (7.16) |
| Inhibitory IU | 11.41 (5.34) |
| DOCS | |
| Contamination | 3.87 (4.51) |
| Harm | 5.37 (4.68) |
| Unacceptable Thoughts | 5.20 (5.30) |
| Symmetry | 4.16 (4.44) |
| OBQ-44 | |
| Responsibility / Threat | 63.64 (22.56) |
| Perfectionism / Certainty | 69.63 (22.52) |
| Importance / Control of Thoughts | 37.31 (17.24) |
| PSWQ | 58.86 (16.85) |
| DASS | 38.81 (27.11) |
| DTD | |
| Low Uncertainty | 8.59 (6.28) |
| Intermediate Uncertainty | 13.83 (7.78) |
| High Uncertainty | 19.07 (7.24) |

Predicting Beads Task performance from cognitions and symptoms

| Predicting Intermediate DTD | ΔR^2 | β | t | p |
|---------------------------------|--------------|---------|-------|------|
| Step 1: DASS | .01 | | | .66 |
| Step 2: IU Measures | .10 | | | .02 |
| Prospective IU | | -.06 | -.33 | .74 |
| Inhibitory IU | | -.06 | -.37 | .71 |
| Perfectionism / Certainty | | .42 | 2.97 | .004 |
| Step 2: Symptom measures | .04 | | | .63 |
| DOCS Contamination | | -.14 | -1.15 | .25 |
| DOCS Symmetry | | .09 | .64 | .53 |
| DOCS Harm | | -.02 | -.17 | .87 |
| DOCS Unacceptable Thoughts | | .19 | 1.40 | .17 |
| PSWQ | | .04 | .27 | .79 |

Predicting Beads Task performance from anxiety disorder diagnosis



Discussion

- Beads Task performance can be predicted by a self-report measure of perfectionism and IU, but is better explained by general distress than by symptoms specific to OCD or GAD or by anxiety disorder diagnosis.
- Research should further investigate whether the Beads Task measures IU or perfectionism, and whether an idiographic version would improve clinical utility.
- The lack of diagnostic differences on Beads Task performance supports IU as a transdiagnostic process.
- Behavioral measures of IU could be evaluated as mediators of treatment outcome studies in order to better understand the mechanisms of anxiety disorder symptom change.