**Supplementary Materials**

**Table S1.** Within-scanner image ratings by Group.

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Anxiety Ratings** |  | **Disgust Ratings** |
| **Condition** | **Controls (n=17)** | **OCD (n=31)** |  | **Controls (n=17)** | **OCD (n=31)** |
| Neutral | 1.0 (0.2) | *1.2 (0.6)* |  | 1.0 (0.0) | 1.1 (0.3) |
| Hoarding | 1.8 (1.1) | **2.9 (1.8)** |  | 1.6 (1.1) | **2.6 (1.9)** |
| Contamination / Washing  | 1.4 (0.7) | **2.9 (2.0)** |  | 1.6 (0.9) | **2.8 (2.1)** |
| Safety / Checking | 1.4 (0.7) | **2.4 (1.5)** |  | 1.1 (0.4) | *1.4 (1.0)* |
| Disgust | 3.0 (1.7) | **5.3 (2.3)** |  | 5.3 (2.0) | **6.6 (2.2)** |

Values in **bold** represent significant differences relative to the Control group at *p* < .05, values in *italics* represent marginal differences relative to the control group at *p* < .01*.*

**Table S2.** Within-scanner image ratings by Group including Subtype.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Anxiety Ratings** |   | **Disgust Ratings** |
| **Condition** | **Controls** **(n = 17)** | **Washers** **(n = 12)** | **Checkers** **(n = 19)** |   | **Controls** **(n = 17)** | **Washers** **(n = 12)** | **Checkers** **(n = 19)** |
| Neutral | 1.0 (0.2) | 1.2 (0.7) | 1.2 (0.5) |  | 1.0 (0.0) | 1.1 (0.5) | 1.0 (0.2) |
| Hoarding | 1.8 (1.1) | **3.0 (2.0)** | **2.9 (1.7)** |  | 1.6 (1.1) | **2.7 (2.1)** | **2.5 (1.7)** |
| Contamination / Washing  | 1.4 (0.7) | **3.8 (2.5)** | *2.3 (1.3)***\*** |  | 1.6 (0.9) | **3.4 (2.6)** | 2.3 (1.6) |
| Safety / Checking | 1.4 (0.7) | **2.4 (1.4)** | **2.3 (1.6)** |  | 1.1 (0.4) | **1.7 (1.3)** | 1.3 (0.7) |
| Disgust | 3.0 (1.7) | **5.4 (2.4)** | **5.2 (2.2)** |   | 5.3 (2.0) | 6.5 (2.3) | 6.6 (2.2) |

Values in **bold** represent significant differences relative to the Control group at *p* < .05, values in *italics* represent marginal differences relative to the control group at *p* < .01, and the \* indicates a significant difference between the OCD subgroups at *p < .05.*

**Table S3. List of Neural Regions Demonstrating Emotional Reactivity Effects**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Brodmann** | **Cluster** |  |  | **Co-ordinates (MNI)** |
| **Description** | **Area** | **Size** | **Peak Z** |  | **x** | **y** | **z** |
| *Reactive Activation (Valenced > Neutral)* |  |  |  |  |  |  |
|  | Visual Cortex | 17,18,19 | 4090 | 7.19 |  | -33 | -93 | 3 |
|  | Dorsolateral PFC | 8,9,44,47 | 849 | 5.29 |  | -45 | 12 | 39 |
|  | Orbitofrontal / Anterior Insula | 47 | 570 | 4.90 |  | 33 | 27 | -12 |
|  | Dorsomedial PFC | 32 | 621 | 4.72 |  | -3 | 36 | 42 |
|  | Supplementary Motor Area | 6 | 236 | 4.31 |  | -27 | 9 | -27 |
|  | Posterior Cingulate | 23,26 | 132 | 4.30 |  | 0 | -42 | 27 |
|  | Dorsolateral PFC | 9,44 | 460 | 4.08 |  | 42 | 9 | 51 |
|  |  |  |  |  |  |  |  |  |
| *Reactive Deactivation (Valence < Neutral)* |  |  |  |  |  |  |
|  | Occiptotemporal Cortex | 37 | 573 | 4.86 |  | -30 | -51 | 9 |
|  | Occiptotemporal Cortex | 37 | 367 | 4.50 |  | 15 | -66 | -60 |
|  | Cerebellum | - | 477 | 4.40 |  | 12 | -90 | 9 |
|  |  |  |  |  |  |  |  |  |
| *OCD > Controls* |  |  |  |  |  |  |  |
|  | Posterior Cingulate (PCg) | 23,26 | 289 | 4.35 |  | -9 | -51 | 12 |
|  |  |  |  |  |  |  |  |  |
| *OCD < Controls* |  |  |  |  |  |  |  |
|  | Cerebellum | - | 175 | 3.56 |  | 21 | -69 | -51 |
|  |  |  |  |  |  |  |  |  |
| Checkers > Washers |  |  |  |  |  |  |  |
|  | Posterior Cingulate (PCg) | 26 | 85 | 3.90 |  | -15 | -42 | 27 |
|  |  |  |  |  |  |  |  |  |
| Washers > Checkers |  |  |  |  |  |  |  |
|  | Orbitofrontal / Anterior Insula | 47 | 50 | 3.80 |  | 39 | 27 | -18 |
|  | Orbitofrontal / Anterior Insula | 47 | 55 | 3.65 |  | -39 | 15 | -21 |
|   |   |   |   |   |   |   |   |   |

Please note that the Checker vs. Washer Comparisons are performed at an exploratory cluster extent threshold of K > 50 instead of K > 150.

**Table S4. List of Neural Regions Demonstrating Emotion-Dependent Connectivity Effects (PPI)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   |  | **Brodmann** | **Cluster** | **Peak** | **Co-ordinates (MNI)** |
| **Description** | **Area** | **size** | **Z** | **x** | **y** | **Z** |
| *Positive PPI* |  |  |  |  |  |  |
|  | Visual Cortices | 17, 18, 19 | 5151 | 6.22 | -33 | -66 | -18 |
|  | Frontolimbic Cluster |  | 6975 |  |  |  |  |
|  |  Thalamus | - |  | 5.76 | 6 | -9 | 6 |
|  |  Putamen / Anterior Insula | 6, 44 |  | 5.54 | 21 | 12 | -6 |
|  |  Dorsolateral Prefrontal Cortex | 6, 44 |  | 5.19 | -45 | 6 | 24 |
|  |  Putamen / Anterior Insula | - |  | 5.17 | -21 | 6 | 3 |
|  |  Dorsolateral Prefrontal Cortex | 6, 44 |  | 4.98 | 51 | 18 | 30 |
|  |  Dorsomedial Prefrontal Cortex | 6, 8, 32 |  | 4.69 | -3 | 24 | 30 |
|  |  |  |  |  |  |  |  |
| *Negative PPI* |  |  |  |  |  |  |
|  | Posterior Cingulate / Precuneus | 23 | 758 | 4.98 | -18 | -42 | 15 |
|  | Posterior Cingulate / Precuneus | 23 | 443 | 4.70 | 30 | -48 | 15 |
|  | Cerebellum | - | 596 | 4.63 | 9 | -45 | -36 |
|  | Angular Gyrus | 7 | 216 | 3.84 | 42 | -72 | 45 |
|  |  |  |  |  |  |  |  |
| *Group Modulated PPI: Patient > Control* |  |  |  |  |  |  |
|  | Posterior Cingulate | 23 | 259 | 3.81 | -33 | -63 | 21 |
|  |  |  |  |  |  |  |  |
| *Group Modulated PPI: Control > Patient*  |  |  |  |  |  |  |
|  | Cerebellum | - | 220 | 4.07 | 45 | -60 | -30 |
|  | Anterior Insula / Orbitofrontal Cortex | - / 47 | 214 | 3.84 | 39 | 6 | 24 |
|  | Visual Cortices (Lateral Occipital / Fusiform Gyrus) | 18, 19 | 335 | 3.68 | -39 | -75 | -6 |
|   |   |   |   |   |   |   |   |
|  |  |  |