**SUPPLEMENTAL INFORMATION**

Supplemental Figure 1: Results for the main effects of valence, direction and type (presented at p < 0.005 to maximise overlap)

**Tables Index:**

Supplemental Table 1: Significant areas of activation from the main analysis not reported in main Table 2

Supplemental Table 2: Excluding participants with PTSD

Supplemental Table 3: Excluding participants with MDD

Supplemental Table 4: Excluding participants using stimulants

Supplemental Table 5: Excluding participants using antidepressants

Supplemental Table 6: Excluding participants using antipsychotics

Supplemental Table 7: Follow-up analyses with other maltreatment as added covariate

Supplemental Table 1. Significant areas of activation from the main group based (participants subjected to sexual abuse, comparison) analysis, not reported in main Table 2. Activations are effects observed in whole brain analyses significant at †p < 0.001), corrected for multiple comparisons (significant at p < 0.05).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **REGION** | **BA** | **Voxels** | **X** | **Y** | **Z** | **F-value** | **ηp²** |
|  |  |  |  |  |  |  |  |
| ***Direction***  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| R superior frontal gyrus | 10 | 20 | 14 | 56 | 26 | 34.49 | 0.434 |
| L middle frontal gyrus | 46 | 148 | -40 | 26 | 20 | 32.23 | 0.417 |
| L middle frontal gyrus | 9/6 | 36 | -43 | 5 | 38 | 46.18 | 0.506 |
| R inferior frontal gyrus | 47 | 54 | 26 | 29 | -7 | 35.29 | 0.440 |
| R inferior frontal gyrus | 46 | 86 | 50 | 29 | 14 | 30.88 | 0.407 |
| R precentral gyrus | 6 | 30 | 41 | -4 | 32 | 48.06 | 0.516 |
| R putamen/ lentiform nucleus/ amygdala |  | 162 | 17 | 5 | 11 | 67.27 | 0.599 |
| L parahippocampal gyurs/ amygdala |  | 188 | -28 | -1 | -25 | 72.39 | 0.617 |
| L thalamus |  | 46 | -19 | -25 | -1 | 60.04 | 0.572 |
| R thalamus |  | 28 | 17 | -28 | 2 | 26.52 | 0.371 |
| R superior temporal gyrus |  | 26 | 32 | 14 | -19 | 36.60 | 0.449 |
| L/R culmen/ fusiform gyrus/ cuneus/ inferior occipital gyrus |  | 3961 | 29 | -52 | -10 | 151.19 | 0.771 |
|  |  |  |  |  |  |  |  |
| ***Type***  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| R medial frontal gyrus | 10 | 65 | 5 | 44 | -7 | 26.41 | 0.370 |
| R precunues | 31 | 64 | 5 | -58 | 32 | 36.66 | 0.449 |
| L thalamus |  | 23 | -16 | -28 | -1 | 35.51 | 0.441 |
| L/R culmen/ fusiform gyrus/ cuneus/ inferior occipital gyrus |  | 6132 | 26 | -31 | -19 | 165.87 | 0.787 |
|  |  |  |  |  |  |  |  |
| ***Valence***  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| R superior frontal gyrus | 6/8 | 108 | 11 | 20 | 56 | 24.27 | 0.350 |
| L middle frontal gyrus | 10 | 40 | -34 | 44 | 8 | 23.58 | 0.344 |
| R middle frontal gyrus | 10 | 21 | 44 | 47 | 5 | 24.77 | 0.355 |
| R middle frontal gyrus | 6 | 25 | 35 | 11 | 50 | 22.21 | 0.330 |
| L middle frontal gyrus |  | 78 | -16 | 2 | 62 | 33.61 | 0.428 |
| R lingual gyrus | 19 | 21 | 20 | -49 | -1 | 24.61 | 0.353 |
| R cuneus | 23 | 618 | 14 | -70 | 11 | 27.87 | 0.381 |
|  |  |  |  |  |  |  |  |
| ***Direction-by-Type*** |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| R middle occipital gyrus | 19 | 26 | 38 | -70 | 11 | 20.22 | 0.310 |
| R cuneus | 17 | 26 | 8 | -79 | 8 | 29.26 | 0.394 |
|  |  |  |  |  |  |  |  |
| ***Type-by-Valence*** |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| L fusiform gyrus | 19 | 26 | -31 | -82 | -13 | 22.33 | 0.332 |

Supplemental Table 2. Significant areas of activation from the analysis exluding participants wth a diagnosis of PTSD. Activations are from whole brain analyses significant at p < 0.005, corrected for multiple comparisons significant at p < 0.05.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **REGION** | **BA** | **Voxels** | **X** | **Y** |  **Z** | **F-value** |
|  |  |  |  |  |  |  |
| ***Group-by-Direction-by-Valence*** |  |  |  |  |  |  |
| L/R medial frontal gyrus  | 10 | 167 | 2 | 56 | 5 | 28.05 |
| L superior frontal gyrus  | 10 | 42 | -22 | 53 | 26 | 17.70 |
| L superior frontal gyrus  | 8 | 61 | -11 | 44 | 53 | 14.48 |
| R posterior cingulate cortex | 31 | 126 | 5 | -43 | 11 | 17.17 |
| R superior temporal gyrus | 38 | 53 | 41 | 14 | -31 | 20.75 |
| R inferior temporal gyrus | 20 | 29 | 50 | -7 | -19 | 19.76 |

Supplemental Table 3. Significant areas of activation from the analysis exluding participants wth a diagnosis of MDD. Activations are from whole brain analyses significant at p< 0.005, corrected for multiple comparisons significant at p < 0.05.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **REGION** | **BA** | **Voxels** | **X** | **Y** |  **Z** | **F-value** |
|  |  |  |  |  |  |  |
| ***Group-by-Direction-by-Valence*** |  |  |  |  |  |  |
| L medial frontal gyrus/ superior frontal gyrus  | 10 | 294 | -1 | 56 | 5 | 21.56 |
| L superior frontal gyrus  | 8 | 52 | -11 | 29 | 53 | 16.13 |
| L posterior cingulate cortex | 31 | 196 | -4 | -49 | 32 | 18.48 |
| R superior temporal gyrus | 38 | 93 | 41 | 14 | -31 | 24.73 |
| R inferior temporal gyrus | 20 | 37 | 50 | -7 | -19 | 21.48 |

Supplemental Table 4. Stimulants use as an added covariate. Significant areas of activation from the 2 (Group: Exposed to sexual abuse, Comparison) by 2 (Direction: Looming, Receding) by 2 (Type: Human, Animal) by 2 (Valence: Threatening, Neutral) ANCOVA with use of stimulants (ON, OFF) as covariate. Activations are effects observed in whole brain analyses significant at p < 0.001, corrected for multiple comparisons (significant at p < 0.05).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **REGION** | **BA** | **Voxels** | **X** | **Y** |  **Z** | **F-value** | **ηp²** |
|  |  |  |  |  |  |  |  |
| ***Group-by-Direction-by-Valence*** |  |  |  |  |  |  |  |
| R medial frontal gyrus/ ACC  | 10/ 24 | 175 | 5 | 35 | -1 | 21.42 | .327 |
| L superior frontal gyrus  | 8 | 26 | -13 | 44 | 41 | 18.90 | .300 |
| L posterior cingulate cortex | 31 | 75 | -1 | -46 | 29 | 17.73 | .287 |
| R superior temporal gyrus^005 | 38 | 71 | 44 | 14 | -34 | 26.52 |  .376 |
| R inferior temporal gyrus | 20 | 21 | 50 | -7 | -19 | 30.86 |  .412 |
| L middle frontal gyrus | 11 | 24 | -28 | 41 | -4 | 20.29  |  .316 |

Supplemental Table 5. Antidepressants use as an added covariate. Significant areas of activation from the 2 (Group: Exposed to sexual abuse, Comparison) by 2 (Direction: Looming, Receding) by 2 (Type: Human, Animal) by 2 (Valence: Threatening, Neutral) ANCOVA with use of antidepressants (ON, OFF) as covariate. Activations are effects observed in whole brain analyses significant at p < 0.005, corrected for multiple comparisons (significant at p < 0.05).

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **REGION** | **BA** | **Voxels** | **X** | **Y** |  **Z** | **F-value** | **ηp²** |
|  |  |  |  |  |  |  |  |
| ***Group-by-Direction-by-Valence*** |  |  |  |  |  |  |  |
| R medial frontal gyrus  | 10 | 56 | 2 | 59 | 17 | 31.75 | .419 |
| L superior frontal gyrus^ | 8/6 | 26 | -10 | 29 | 53 | 20.76 | .321 |
| L superior frontal gyrus  | 10 | 38 | -22 | 53 | 26 | 23.14 | .345 |
| L posterior cingulate cortex | 31 | 24 | -1 | -49 | 29 | 27.53 | .385 |
| R superior temporal gyrus^ | 38 | 51 | 44 | 14 | -34 | 26.43 |  .376 |
| R inferior temporal gyrus^ | 20 | 33 | 53 | -7 | -19 | 20.27 |  .315 |

Supplemental Table 6. Antipsychotics use as an added covariate. Significant areas of activation from the 2 (Group: Exposed to sexual abuse, Comparison) by 2 (Direction: Looming, Receding) by 2 (Type: Human, Animal) by 2 (Valence: Threatening, Neutral) ANCOVA with use of antipsychoatics (ON, OFF) as covariate. Activations are effects observed in whole brain analyses significant at p < 0.005, corrected for multiple comparisons (significant at p < 0.05).

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **REGION** | **BA** | **Voxels** | **X** | **Y** |  **Z** | **F-value** | **ηp²** |
|  |  |  |  |  |  |  |  |
| ***Group-by-Direction-by-Valence*** |  |  |  |  |  |  |  |
| R medial frontal gyrus/ ACC  | 10/ 24 | 156 | 5 | 35 | -1 | 28.22 | .391 |
| L superior frontal gyrus^ | 8/6 | 67 | -10 | 29 | 53 | 25.79 | .370 |
| L posterior cingulate cortex | 65 | 24 | -1 | -22 | 38 | 17.49 | .284 |
| R superior temporal gyrus | 38 | 21 | 44 | 14 | -34 | 38.51 |  .467 |
| R inferior temporal gyrus^ | 20 | 38 | 50 | -7 | -19 | 21.27 |  .344 |

Supplemental Table 7. Significant areas of activation from the 2 (Direction: Looming, Receding) by 2 (Type: Human, Animal) by 2 (Valence: Threatening, Neutral) ANCOVA with the participants’ Blom transformed CTQ other maltreatment (emotional abuse, physical abuse, emotional neglect, physical neglect) scores as a added continuous variate. Activations are from whole brain analyses significant at p < 0.005, significant at p < 0.05.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **REGION** | **BA** | **Voxels** | **X** | **Y** |  **Z** | **F-value** | **ηp²** |
|  |  |  |  |  |  |  |  |
| ***CTQ sexual abuse scores-by-Direction-by-Valence*** |
| L medial frontal gyrus  | 10/9 | 25 | -1 | 56 | 26 | 20.66 | .319 |
| L superior frontal gyrus  | 8 | 31 | -10 | 29 | 50 | 28.47 | .393 |
| R inferior frontal gyrus | 20 | 20 | 53 | -7 | -19 | 15.32 | .258 |

**FIGURE LEGENDS**

Supplemental Figure 1. Main effects of Valence, Direction and Type Task illustration.

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