**Supplementary Material**

**Imaging Results**

**Covariate analysis.** Examination of the covariates revealed that in the incongruent > congruent contrast, number of pre-deployment TBIs was positively associated with activation in the left superior parietal lobe and left superior frontal gyrus. In no region was there a significant negative association between pre-deployment TBIs and activation level. Neither age nor PTSD symptom severity was significantly associated with activation in the incongruent > congruent contrast.

Examination of the covariates in the incorrect > correct contrast revealed a significant negative association between PTSD symptom severity and the right inferior frontal gyrus. Pre-deployment TBI was negatively associated with activation in the right lateral occipital cortex and right supramarginal gyrus. There were no significant positive associations for either PTSD symptom severity or pre-deployment TBI and functional activation. Further, there were no significant positive or negative associations between age and functional activation.

Table S1. *Significant brain regions for incongruent > congruent contrast in each group.*

|  |  |  |  |
| --- | --- | --- | --- |
| Brain Region | Cluster Size  | Peak Voxel(MNI coordinates) | Z-statistic |
| Control group map of Incongruent > Congruent |
| Right Superior Parietal Lobe | 160 | 52 -26 50 | 3.35 |
| mTBI group map of Incongruent > Congruent |
| Left dACC | 446 | -8 8 48 | 4.50 |
| Right Lateral Occipital Cortex | 315 | 22 -60 60  | 3.89 |
| Left Superior Parietal Lobe/ Lateral Occipital Cortex | 279 | -26 -58 56 | 3.74 |
| Right Supramarginal Gyrus/ Postcentral Gyrus | 187 | 32 -36 38 | 3.31 |

*Note:* Cluster size is number of voxels*.* Only clusters are reported; sub-clusters are not reported. dACC=dorsal

anterior cingulate cortex; mTBI=mild traumatic brain injury.

Table S2. *Significant brain regions for incorrect > correct contrast in each group.*

|  |  |  |  |
| --- | --- | --- | --- |
| Brain Region | Cluster Size | Peak Voxel (MNI coordinates) | Z-statistic |
| Control group map of Incorrect > Correct |
| Left and Right dACC | 3041 | 4 24 42 | 5.13 |
| Right Insula | 799 | 42 24 -8 | 4.03 |
| Left Insula | 668 | -54 16 -8 | 4.22 |
| Left Middle Frontal Gyrus/DLPFC | 624 | -46 6 42 | 4.40 |
| Left Precuneus | 473 | -8 -75 50 | 3.95 |
| Left Frontal Pole | 418 | -34 54 6  | 3.71 |
| mTBI group map of Incorrect > Correct |
| Right Insula | 4832 | 42 22 -6 | 5.14 |
| Left Occipital Cortex | 1854 | -8 -86 8 | 4.44 |
| Left Insula | 1364 | -32 20 4 | 5.04 |
| Right Superior Parietal Lobe/ Supramarginal Gyrus | 1291 | 52 -40 50 | 4.51 |
| Right Middle Frontal Gyrus/ DLPFC | 749 | 32 38 24 | 4.13 |
| Left Superior Parietal Lobe/ Supramarginal Gyrus | 504 | -36 -50 38 | 4.23 |

*Note:* Cluster size is number of voxels. Only clusters are reported; sub-clusters are not reported. dACC=dorsal

anterior cingulate cortex; DLPFC=dorsolateral prefrontal cortex; mTBI=mild traumatic brain injury.