|  |
| --- |
| **Supplemental Table 1.** Whole brain activation for all participants during the SLLT |
|   |   | Talairach coordinates |   |   |
| Contrast/lobe | BA | x | y | z | mm3 | Z |
| **Blk, Encoding minus Silent Rehearsal** |  |  |  |  |  |  |
| Frontal |  |  |  |  |  |  |
|  Precentral | 6 | 26 | -17 | 48 | 2704 | 4.86 |
|  Middle Frontal | 11 | 22 | 30 | -13 | 1280 | 4.06 |
|  Medial Frontal | 6 | 6 | -19 | 60 | 664 | 3.76 |
|  | 11 | 8 | 30 | -13 | 568 | 4.45 |
|  | 8 | -11 | 30 | 47 | 512 | 4.21 |
|  Insula | 13 | 43 | -25 | 16 | 536 | 3.42 |
|  Inferior Frontal | 47 | -27 | 32 | -9 | 480 | 3.44 |
| Parietal |  |  |  |  |  |  |
|  Postcentral | 2 | -34 | -25 | 41 | 22048 | 6.59 |
| Temporal |  |  |  |  |  |  |
|  Uncus | 20 | -29 | 1 | -32 | 25096 | 5.31 |
|  Superior Temporal | 38 | 38 | 14 | -33 | 16880 | 5.77 |
|  Inferior Temporal | 20 | 59 | -15 | -19 | 1120 | 4.94 |
|  | 20 | -59 | -21 | -21 | 968 | 5 |
| Occipital |  |  |  |  |  |  |
|  Fusiform | 18 | -29 | -91 | -14 | 20800 | 7.12 |
|  Inferior Occipital | 17 | 27 | -93 | -9 | 13432 | 7.78 |
| Subcortical |  |  |  |  |  |  |
|  Caudate Nucleus, head |  | 3 | 4 | -2 | 2048 | 4.43 |
| **ER, Words Recalled** |  |  |  |  |  |  |
| Frontal |  |  |  |  |  |  |
|  Paracentral Lobule | 5 | 10 | -38 | 56 | 8032 | 5.07 |
|  | 5 | -11 | -40 | 58 | 2480 | 4.68 |
|  Inferior Frontal | 47 | -31 | 32 | -11 | 5768 | 5.17 |
|  Middle Frontal | 8 | -17 | 32 | 38 | 3368 | 4.97 |
|  | 11 | 29 | 34 | -11 | 1608 | 4.71 |
|  Subgenual Cingulate | 25 | -4 | 1 | -6 | 472 | 3.4 |
|  Insula | 13 | 47 | -9 | 19 | 344 | 3.69 |
| Temporal |  |  |  |  |  |  |
|  Uncus | 20 | 31 | -7 | -31 | 7144 | 5.02 |
|  Parahippocampal | 36 | 22 | -40 | -6 | 912 | 4.2 |
|  Inferior Temporal | 20 | -59 | -17 | -19 | 424 | 3.78 |
|  Middle Temporal | 39 | -43 | -71 | 17 | 352 | 3.37 |
| Occipital |  |  |  |  |  |  |
|  Lingual | 17 | -15 | -95 | -14 | 2480 | 6.05 |
|  Fusiform | 18 | 24 | -93 | -12 | 848 | 4 |
| Subcortical |  |  |  |  |  |  |
|  Cerebellum, Culmen of Vermis |  | -27 | -36 | -14 | 11728 | 5.22 |
|  |  | 17 | -36 | -20 | 640 | 3.72 |
|  Claustrum |   | 33 | -15 | 11 | 2176 | 4.56 |

**Supplemental Table 2.** Correlations of SLLT Performance with Other Memory, Processing Speed, and Executive Functioning Measures

|  |  |  |
| --- | --- | --- |
|  | **SLLT**% AccuracyMDD (NDC) | **CVLT-II Trial 1**  % RecallMDD (NDC) |
| Primacy | Middle | Recency | Primacy | Middle | Recency |
| **SLLT**% Accuracy | Primacy |  1(1) | 0.81\*\*(0.78\*\*) | 0.81\*\*(0.73\*\*) | 0.32\*(0.34) | 0.17(0.22) | 0.07(-0.15) |
| Middle | -- | 1(1) | 0.83\*\*(0.80\*\*) | 0.15(0.28) | 0.15(0.29) | 0.10(-0.08) |
| Recency | -- | -- | 1(1) | 0.15(0.23) | 0.05(0.15) | 0.13(-0.16) |
| **CVLT-II** **Trial 1** | -- | -- | -- | 1(1) | -0.10(0.07) | -0.18(-0.14) |
| % Recall | Primacy |
|  | Middle | -- | -- | -- | -- | 1(1) | -0.13(-0.12) |
|  | Recency | -- | -- | -- | -- | -- | 1(1) |
| **CVLT-II** | Long-Delay Free Recall- % Recall | 0.56\*\*(0.52\*) | 0.53\*\*(0.45\*) | 0.48\*\*(0.33) | 0.29(0.43\*) | 0.17(0.41\*) | -0.08(-0.06) |
|  | Semantic Clustering | 0.40\*(0.24) | 0.33\*(0.18) | 0.28(0.01) | 0.17(0.28) | 0.41\*(0.54\*\*) | -0.04(-0.17) |
| **Attention** | PGNG % Correct | 0.19(0.37\*) | 0.28(0.26) | 0.19(0.10) | 0.10(0.02) | 0.22(0.36) | -0.21(0.14) |
| **Inhibition** | PGNG % Correct Inhibitions | 0.07(0.12) | -0.03(0.16) | -0.05(0.09) | 0.37\*(0.13) | 0.05(0.53\*\*) | -0.16(0.41\*) |
| **Set-Shifting** | WCST % Correct | 0.14(0.09) | -0.05(-0.05) | -0.11(-0.05) | 0.13(-0.18) | 0.10(0.19) | -0.26(0.04) |
|  | WCST PerseverativeErrors | -0.11(-0.22) | 0.03(-0.11) | 0.13(-0.08) | -0.11(0.13) | -0.10(-0.13) | 0.36\*(-0.11) |
|   | Trails B time | -0.34\*(0.14) | -0.20(-0.11) | -0.20(-0.05) | -0.36\*(0.17) | -0.25(-0.43\*) | 0.37\*(0.04) |
| **Processing****Speed** | PGNG mean RT | -0.22(-0.59\*\*) | -0.18(-0.51\*\*) | -0.08(-0.45\*\*) | -0.19(-0.47\*) | 0.05(-0.17) | 0.26(0.25) |
| Trails A Time | -0.17(-0.10) | 0.08(-0.13) | 0.06(-0.003) | -0.22(-0.15) | -0.23(-0.46\*) | 0.06(0.16) |
| \**p* < 0.05. MDD = Major Depressive Disorder. NDC = Never Depressed Controls. CVLT-II = California Verbal Learning Test – Second Edition. PGNG = Parametric go/No-go Test. WCST = Wisconsin Card Sort Test. |
| \*\**p* < 0.01. |

**Supplemental Table 3.** MDD Demographic Information and Memory Performance by Medication Status

|  |  |  |  |
| --- | --- | --- | --- |
|  | Medicated\* MDD(*n* = 18) | Unmedicated MDD(*n* = 18) | *p* |
| Sex (M:F) | 4:14 | 10:8 | 0.09 |
| Age (years) | 48.2 | 36.9 | **0.04** |
| Education (years) | 15.9 | 16.1 | 0.77 |
| Estimated Verbal IQ# | 114.1 | 109.5 | 0.23 |
| Hamilton Depression Rating Scale | 14.2 | 16.9 | 0.20 |
| Beck Depression Inventory | 19.4 | 25.6 | 0.09 |
| Global Assessment of Functioning | 64.6 | 62.6 | 0.56 |
| Total Number of MDEs | 39.4 | 22.3 | 0.20 |
| Age of MDD Onset | 22.9 | 19.3 | 0.37 |
| CVLT-II Trial 1 Recall | 6.2 | 6.5 | 0.60 |
| CVLT-II Long-Delay Free Recall | 12.7 | 12.1 | 0.58 |
| CVLT-II Long-Delay False Positives | 0.3 | 0.3 | 0.92 |
| SLLT Total Recall | 69.2 | 68.7 | 0.96 |
| SLLT False Positives | 9.2 | 9.3 | 0.99 |

\*Current use of at least one psychotropic medication. MDE = Major Depressive Episode.

#Measured using the Shipley-2, Verbal subscale.