**Supplementary table1** Regions Showing Causal Effect from the Seed of left hippocampus by Using CaSCN Analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Brain area | Voxel size | MNI coordinates | | | Z value | GC value |
| x | y | z |
| Temporal\_Mid\_L | 1661 | -48.5 | -25.5 | -5.5 | 5.7597 | 1.2759 |
| Frontal\_Inf\_Orb\_R | 2179 | 49.5 | -11.5 | -17.5 | 5.2291 | 1.0517 |
| Temporal\_Pole\_Sup\_L | 113 | -22.5 | 20.5 | -33.5 | 4.2340 | 0.6895 |
| Temporal\_Inf\_L | 63 | -42.5 | -29.5 | -21.5 | 3.9345 | 0.59539 |
| Frontal\_Inf\_Orb\_L | 142 | -46.5 | 26.5 | -15.5 | 4.1780 | 0.67137 |
| Frontal\_Med\_Orb\_R | 70 | 13.5 | 52.5 | -1.5 | 4.0715 | 0.63759 |
| Fusiform\_R | 91 | 25.5 | -79.5 | -5.5 | 4.6520 | 0.83236 |
| Temporal\_Sup\_R | 322 | 45.5 | -41.5 | 16.5 | 4.8879 | 0.9189 |
| Calcarine\_L | 2117 | -16.5 | -67.5 | 4.5 | 5.5470 | 1.1834 |
| Putamen\_R | 269 | 25.5 | -5.5 | 4.5 | 4.6497 | 0.83152 |
| Putamen\_L | 76 | -26.5 | -11.5 | 4.5 | 4.2439 | 0.69273 |
| Occipital\_Mid\_L | 195 | -32.5 | -79.5 | 10.5 | 5.3742 | 1.1108 |
| Occipital\_Mid\_R | 173 | 35.5 | -77.5 | 8.5 | 4.3718 | 0.73511 |
| Frontal\_Inf\_Tri\_R | 242 | 59.5 | 36.5 | 20.5 | 5.0176 | 0.96832 |
| Frontal\_Mid\_R | 71 | 37.5 | 62.5 | 16.5 | 4.3678 | 0.73376 |
| Frontal\_Inf\_Oper\_L | 472 | -44.5 | 10.5 | 18.5 | 4.6432 | 0.8292 |
| Frontal\_Mid\_L | 148 | -32.5 | 50.5 | 16.5 | 4.5527 | 0.79721 |
| Occipital\_Sup\_R | 376 | 17.5 | -91.5 | 36.5 | 4.9195 | 0.93083 |
| Angular\_R | 232 | 43.5 | -61.5 | 38.5 | 4.8579 | 0.90768 |
| Frontal\_Inf\_Oper\_R | 95 | 31.5 | 8.5 | 32.5 | 4.9359 | 0.93703 |
| Precuneus\_R | 251 | 15.5 | -65.5 | 44.5 | 5.2376 | 1.0551 |
| Frontal\_Mid\_R | 52 | 35.5 | 28.5 | 36.5 | 4.3855 | 0.73971 |
| Frontal\_Mid\_R | 231 | 43.5 | 8.5 | 62.5 | 4.5774 | 0.80587 |
| Parietal\_Sup\_R | 205 | 25.5 | -73.5 | 58.5 | 4.7531 | 0.8689 |
| Postcentral\_R | 1167 | 45.5 | -39.5 | 66.5 | 5.6158 | 1.213 |
| Parietal\_Sup\_L | 607 | -50.5 | -39.5 | 62.5 | 4.6680 | 0.83807 |
| Precentral\_L | 53 | -34.5 | 0.5 | 68.5 | 4.4333 | 0.75594 |
| Postcentral\_L | 322 | -10.5 | -45.5 | 82.5 | 4.8216 | 0.89415 |

**Supplementary table2** Regions Showing Causal Effect from the Seed of right hippocampus by Using CaSCN Analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Brain area | Voxel size | MNI coordinates | | | Z value | GC value |
| x | y | z |
| Temporal\_Pole\_Mid\_L | 70 | -52.5 | 14.5 | -37.5 | 4.1642 | 0.66693 |
| Temporal\_Mid\_R | 2982 | 31.5 | 14.5 | 32.5 | 5.5171 | 1.1707 |
| Temporal\_Pole\_Mid\_L | 156 | -26.5 | 24.5 | -33.5 | 4.2978 | 0.71044 |
| Fusiform\_R | 54 | 41.5 | -27.5 | -27.5 | 3.8439 | 0.56828 |
| Temporal\_Mid\_L | 1825 | -50.5 | -19.5 | -9.5 | 5.6398 | 1.2233 |
| Calcarine\_L | 3010 | -16.5 | -63.5 | 0.5 | 5.3791 | 1.1129 |
| Angular\_R | 1531 | 41.5 | -55.5 | 26.5 | 5.7833 | 1.2864 |
| Frontal\_Sup\_Medial\_R | 365 | 13.5 | 52.5 | 2.5 | 5.2699 | 1.0682 |
| Fusiform\_R | 87 | 25.5 | -75.5 | -3.5 | 4.3158 | 0.71639 |
| Putamen\_L | 213 | -28.5 | -11.5 | 4.5 | 4.6546 | 0.83328 |
| Putamen\_R | 336 | 25.5 | -5.5 | 4.5 | 5.0674 | 0.98763 |
| Occipital\_Mid\_L | 155 | -30.5 | -79.5 | 12.5 | 5.3192 | 1.0882 |
| Frontal\_Mid\_L | 379 | -36.5 | 56.5 | 28.5 | 4.7901 | 0.88248 |
| Frontal\_Mid\_R | 78 | 37.5 | 62.5 | 16.5 | 4.1933 | 0.67631 |
| Frontal\_Inf\_Oper\_L | 248 | -38.5 | 0.5 | 24.5 | 4.2976 | 0.71035 |
| Frontal\_Sup\_Medial\_R | 134 | 13.5 | 68.5 | 28.5 | 5.1341 | 1.0138 |
| Cingulum\_Mid\_L | 192 | -8.5 | -21.5 | 28.5 | 4.6400 | 0.82805 |
| SupraMarginal\_L | 245 | -54.5 | -21.5 | 30.5 | 5.0383 | 0.97634 |
| Frontal\_Sup\_Medial\_L | 112 | -8.5 | 22.5 | 42.5 | 4.0954 | 0.64508 |
| Parietal\_Sup\_L | 94 | -16.5 | -63.5 | 44.5 | 4.1498 | 0.66233 |
| Frontal\_Mid\_R | 50 | 55.5 | 26.5 | 32.5 | 4.2374 | 0.69061 |
| Precuneus\_R | 152 | 17.5 | -63.5 | 48.5 | 4.5570 | 0.79871 |
| Postcentral\_R | 130 | 45.5 | -25.5 | 36.5 | 4.5641 | 0.80119 |
| Frontal\_Mid\_R | 186 | 33.5 | 26.5 | 40.5 | 4.4896 | 0.77525 |
| Frontal\_Sup\_Medial\_R | 63 | 13.5 | 60.5 | 42.5 | 4.7008 | 0.84991 |
| Frontal\_Mid\_L | 72 | -34.5 | 16.5 | 44.5 | 4.5803 | 0.80689 |
| Precentral\_R | 735 | 43.5 | 6.5 | 62.5 | 5.1574 | 1.023 |
| Postcentral\_R | 981 | 45.5 | -49.5 | 64.5 | 5.6859 | 1.2435 |
| Precuneus\_L | 731 | 1.5 | -53.5 | 62.5 | 4.7562 | 0.87007 |
| Parietal\_Sup\_R | 139 | 27.5 | -73.5 | 56.5 | 5.1268 | 1.0109 |
| Postcentral\_L | 212 | -52.5 | -37.5 | 62.5 | 4.8819 | 0.91666 |
| Precentral\_L | 170 | -32.5 | 2.5 | 68.5 | 5.4832 | 1.1563 |

**Supplementary table3** Regions Showing Causal Effect from the Seed of left lingual gyrus by Using CaSCN Analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Brain area | Voxel size | MNI coordinates | | | Statistical value | GC value |
| x | y | z |
| Lingual\_L | 74 | -10.5 | -75.5 | -3.5 | 5.4196 | 1.1297 |
| Parietal\_Sup\_L | 79 | -16.5 | -61.5 | 42.5 | 5.4151 | 1.1278 |