**Reduced structure-function coupling converges to brain hubs and correlates with symptoms of chronic attention-deficit hyperactivity disorder**

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**Supplementary information**

**Supplementary Table 1.** Table of Schaefer 214 coordinates, network assignments, hub status for control and ADHD

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | MNI | | |  | Control hubs | | ADHD hubs | |
| Node | X | Y | Z | Network | Group | Individual (%) | Group | Individual (%) |
| 1 | -25.4 | -76.7 | -13.5 | 1 | 1 | 34.7 | 1 | 25.6 |
| 2 | -26.3 | -95 | -12.3 | 1 | 0 | 3.4 | 0 | 6.4 |
| 3 | -5.5 | -92.7 | -4.1 | 1 | 1 | 55.1 | 1 | 56.4 |
| 4 | -22.6 | -96.8 | 5.9 | 1 | 0 | 14.4 | 0 | 19.2 |
| 5 | -39.9 | -84.5 | 10.2 | 1 | 0 | 0.8 | 0 | 2.6 |
| 6 | -23.1 | -87.1 | 24 | 1 | 1 | 22.9 | 1 | 30.8 |
| 7 | -23.8 | -53 | -9.1 | 1 | 0 | 17.8 | 1 | 15.4 |
| 8 | -9.6 | -67 | -4.6 | 1 | 1 | 31.4 | 1 | 42.3 |
| 9 | -14.1 | -44.7 | -2.9 | 1 | 0 | 10.2 | 0 | 6.4 |
| 10 | -11.3 | -69.8 | 7.5 | 1 | 1 | 51.7 | 1 | 52.6 |
| 11 | -12.1 | -72.7 | 22.4 | 1 | 0 | 4.2 | 0 | 12.8 |
| 12 | -7.5 | -87.5 | 27.3 | 1 | 1 | 88.1 | 1 | 97.4 |
| 13 | -6.9 | -12.4 | 46.4 | 1 | 0 | 0.8 | 0 | 2.6 |
| 14 | -48.2 | -28.4 | 57 | 1 | 0 | 0 | 0 | 2.6 |
| 15 | -39.4 | -24 | 57.5 | 2 | 0 | 3.4 | 0 | 1.3 |
| 16 | -31.3 | -19.8 | 63.8 | 2 | 0 | 7.6 | 0 | 7.7 |
| 17 | -26.1 | -38.1 | 67.4 | 2 | 0 | 0 | 0 | 0 |
| 18 | -20.3 | -10.6 | 68.1 | 2 | 0 | 2.5 | 0 | 1.3 |
| 19 | -6.6 | -30.5 | 66.3 | 2 | 0 | 38.1 | 0 | 35.9 |
| 20 | -19.1 | -30.8 | 67.7 | 2 | 0 | 0 | 0 | 0 |
| 21 | -50.5 | -5.1 | -2.1 | 2 | 1 | 44.1 | 0 | 34.6 |
| 22 | -52.6 | -24.9 | 9.3 | 2 | 0 | 21.2 | 0 | 12.8 |
| 23 | -36.9 | -21 | 15.3 | 2 | 0 | 0 | 0 | 0 |
| 24 | -54.9 | -4.5 | 10.2 | 2 | 0 | 6.8 | 0 | 3.8 |
| 25 | -55.7 | -40 | 20.5 | 2 | 0 | 3.4 | 0 | 2.6 |
| 26 | -52.9 | -22.4 | 18.4 | 2 | 0 | 0 | 0 | 0 |
| 27 | -56.2 | -8.2 | 30.4 | 2 | 0 | 1.7 | 0 | 0 |
| 28 | -47.3 | -8.9 | 46.3 | 2 | 0 | 0.8 | 0 | 1.3 |
| 29 | -43.4 | -48.2 | -19.4 | 2 | 1 | 49.2 | 1 | 44.9 |
| 30 | -45.3 | -69.4 | -8.5 | 2 | 0 | 10.2 | 0 | 10.3 |
| 31 | -47.1 | -69.7 | 9.7 | 3 | 0 | 2.5 | 0 | 1.3 |
| 32 | -25.8 | -69.9 | 38.2 | 3 | 0 | 5.9 | 0 | 3.8 |
| 33 | -16.7 | -73 | 54.1 | 3 | 0 | 44.1 | 0 | 19.2 |
| 34 | -29.1 | -59.8 | 59.4 | 3 | 0 | 6.8 | 0 | 6.4 |
| 35 | -54 | -26.4 | 42 | 3 | 0 | 0 | 0 | 0 |
| 36 | -40.7 | -35.1 | 47.8 | 3 | 0 | 0 | 0 | 0 |
| 37 | -30.7 | -46.3 | 62.5 | 3 | 0 | 5.1 | 0 | 3.8 |
| 38 | -17.2 | -52.7 | 68.4 | 3 | 0 | 10.2 | 0 | 14.1 |
| 39 | -31.6 | -4.3 | 53.2 | 3 | 0 | 0.8 | 0 | 1.3 |
| 40 | -61 | -25.4 | 28.6 | 3 | 0 | 2.5 | 0 | 2.6 |
| 41 | -39.2 | -3.9 | -3.6 | 3 | 1 | 66.1 | 1 | 60.3 |
| 42 | -38.9 | 0.9 | 11 | 3 | 0 | 0 | 0 | 0 |
| 43 | -51 | 8.7 | 10.5 | 3 | 0 | 0.8 | 0 | 1.3 |
| 44 | -10.7 | -35.3 | 46.3 | 4 | 0 | 5.1 | 0 | 9 |
| 45 | -5.7 | 9.6 | 41.4 | 4 | 0 | 8.5 | 0 | 7.7 |
| 46 | -6.3 | -3.1 | 65.1 | 4 | 0 | 3.4 | 0 | 10.3 |
| 47 | -59.7 | -39.4 | 36.3 | 4 | 0 | 0 | 0 | 0 |
| 48 | -28.6 | 42.8 | 31.4 | 4 | 0 | 11 | 0 | 9 |
| 49 | -33.5 | 20.4 | 4.8 | 4 | 0 | 5.1 | 0 | 2.6 |
| 50 | -5.6 | 30 | 24.3 | 4 | 1 | 26.3 | 0 | 26.9 |
| 51 | -23.7 | 21.7 | -19.9 | 4 | 0 | 5.9 | 0 | 7.7 |
| 52 | -9.4 | 35.5 | -20.4 | 4 | 0 | 11 | 0 | 16.7 |
| 53 | -29.3 | -5.8 | -38.6 | 4 | 1 | 77.1 | 1 | 70.5 |
| 54 | -45.4 | -20.7 | -30.3 | 4 | 0 | 47.5 | 1 | 42.3 |
| 55 | -27.5 | 10 | -34.2 | 5 | 0 | 35.6 | 1 | 41 |
| 56 | -42.4 | 7.7 | -18.8 | 5 | 0 | 14.4 | 0 | 10.3 |
| 57 | -57 | -60.2 | -1.4 | 5 | 0 | 14.4 | 0 | 12.8 |
| 58 | -34.8 | -62.3 | 48 | 5 | 0 | 4.2 | 0 | 1.3 |
| 59 | -45.3 | -41.7 | 46.5 | 5 | 0 | 0 | 0 | 0 |
| 60 | -33.3 | -48.9 | 47.2 | 5 | 0 | 4.2 | 0 | 0 |
| 61 | -22.5 | 5.6 | 61.4 | 6 | 0 | 2.5 | 0 | 6.4 |
| 62 | -41.8 | 40.2 | 16.5 | 6 | 0 | 16.1 | 0 | 23.1 |
| 63 | -44.3 | 20.1 | 27.3 | 6 | 0 | 5.9 | 0 | 2.6 |
| 64 | -47.7 | 5.6 | 28.9 | 6 | 0 | 3.4 | 0 | 1.3 |
| 65 | -42.6 | 6 | 43.5 | 6 | 0 | 0 | 0 | 0 |
| 66 | -3.1 | 5.3 | 29 | 6 | 0 | 2.5 | 0 | 1.3 |
| 67 | -60.9 | -42.8 | -13.3 | 6 | 0 | 6.8 | 0 | 6.4 |
| 68 | -52.9 | -50.9 | 45.8 | 6 | 0 | 0 | 0 | 0 |
| 69 | -39.7 | 18.7 | 49.5 | 6 | 0 | 10.2 | 0 | 2.6 |
| 70 | -41.8 | 49.5 | -5.8 | 6 | 0 | 8.5 | 0 | 11.5 |
| 71 | -27.5 | 58 | 8 | 6 | 0 | 16.9 | 0 | 11.5 |
| 72 | -9.5 | -73.1 | 37.4 | 6 | 0 | 31.4 | 0 | 33.3 |
| 73 | -5.6 | -59.3 | 57.1 | 6 | 0 | 29.7 | 0 | 28.2 |
| 74 | -4.7 | -28.9 | 26.9 | 7 | 0 | 14.4 | 0 | 20.5 |
| 75 | -45.9 | -65.7 | 38.2 | 7 | 0 | 12.7 | 0 | 11.5 |
| 76 | -23.7 | 24.7 | 49 | 7 | 0 | 0.8 | 0 | 2.6 |
| 77 | -5.3 | -55 | 27.1 | 7 | 1 | 38.1 | 0 | 32.1 |
| 78 | -3.8 | -29.4 | 36.6 | 7 | 0 | 5.9 | 0 | 2.6 |
| 79 | -6.3 | -54.5 | 41.9 | 7 | 0 | 9.3 | 0 | 6.4 |
| 80 | -5.8 | 35.8 | -9.7 | 7 | 0 | 12.7 | 0 | 20.5 |
| 81 | -13.2 | 62.6 | -5.7 | 7 | 1 | 89.8 | 1 | 83.3 |
| 82 | -6.3 | 44.5 | 7.3 | 7 | 0 | 16.9 | 0 | 14.1 |
| 83 | -46.6 | 8.2 | -32.3 | 7 | 1 | 89 | 1 | 89.7 |
| 84 | -60.3 | -18.8 | -22.6 | 7 | 0 | 16.1 | 1 | 14.1 |
| 85 | -56.4 | -5.8 | -12.2 | 7 | 0 | 18.6 | 0 | 16.7 |
| 86 | -58 | -30.4 | -3.5 | 7 | 1 | 11.9 | 0 | 9 |
| 87 | -56.9 | -53.8 | 28.2 | 7 | 0 | 0 | 0 | 0 |
| 88 | -8.4 | 58.5 | 19.7 | 7 | 1 | 57.6 | 0 | 51.3 |
| 89 | -11.1 | 46.4 | 45 | 7 | 0 | 22 | 0 | 25.6 |
| 90 | -3.5 | 33.3 | 43.2 | 7 | 0 | 16.9 | 0 | 11.5 |
| 91 | -9.3 | 17 | 63.2 | 7 | 0 | 16.9 | 0 | 7.7 |
| 92 | -34.9 | 20.8 | -13 | 7 | 1 | 20.3 | 0 | 19.2 |
| 93 | -31.8 | 42.4 | -13.4 | 7 | 0 | 0 | 0 | 0 |
| 94 | -45.9 | 31 | -7.4 | 7 | 0 | 4.2 | 0 | 7.7 |
| 95 | -51.2 | 22.6 | 7.9 | 7 | 0 | 21.2 | 0 | 28.2 |
| 96 | -38.4 | -79.4 | 31.6 | 7 | 0 | 12.7 | 0 | 17.9 |
| 97 | -11.1 | -56 | 13.4 | 7 | 0 | 22 | 0 | 23.1 |
| 98 | -25.9 | -31.5 | -17.9 | 7 | 1 | 70.3 | 1 | 61.5 |
| 99 | -58.2 | -41.9 | 7.4 | 7 | 0 | 5.9 | 0 | 6.4 |
| 100 | -48.7 | -57.4 | 17.9 | 7 | 0 | 0 | 0 | 0 |
| 101 | 28.7 | -68.5 | -12.5 | 1 | 1 | 37.3 | 1 | 35.9 |
| 102 | 48.6 | -71.5 | -6 | 1 | 0 | 3.4 | 0 | 2.6 |
| 103 | 11.3 | -92.1 | -5 | 1 | 0 | 57.6 | 0 | 66.7 |
| 104 | 30.3 | -93.6 | -3.8 | 1 | 0 | 13.6 | 0 | 16.7 |
| 105 | 42.3 | -79.8 | 9.7 | 1 | 0 | 0 | 0 | 0 |
| 106 | 19.4 | -90.2 | 21.4 | 1 | 1 | 59.3 | 1 | 65.4 |
| 107 | 12.4 | -64.3 | -4.6 | 1 | 0 | 25.4 | 1 | 37.2 |
| 108 | 16.3 | -46.3 | -1.3 | 1 | 0 | 19.5 | 0 | 15.4 |
| 109 | 8.5 | -75 | 8.1 | 1 | 0 | 26.3 | 1 | 26.9 |
| 110 | 21.1 | -59.9 | 7.5 | 1 | 0 | 14.4 | 0 | 17.9 |
| 111 | 11.3 | -73.8 | 25.4 | 1 | 1 | 33.1 | 1 | 32.1 |
| 112 | 16.2 | -84.6 | 39.4 | 1 | 1 | 62.7 | 1 | 62.8 |
| 113 | 50.9 | -22.4 | 51.8 | 1 | 0 | 0.8 | 0 | 0 |
| 114 | 46.7 | -11 | 48 | 1 | 0 | 0 | 0 | 0 |
| 115 | 7 | -10.9 | 51.6 | 1 | 0 | 0.8 | 0 | 0 |
| 116 | 39.2 | -23.7 | 57.5 | 2 | 0 | 0 | 0 | 0 |
| 117 | 31.7 | -40.6 | 63.4 | 2 | 0 | 0.8 | 0 | 0 |
| 118 | 32 | -19.7 | 64.4 | 2 | 0 | 1.7 | 0 | 1.3 |
| 119 | 29 | -34.1 | 65.4 | 2 | 0 | 0 | 0 | 1.3 |
| 120 | 22.4 | -8.8 | 67.2 | 2 | 0 | 6.8 | 0 | 3.8 |
| 121 | 10.2 | -39.1 | 68.7 | 2 | 0 | 1.7 | 0 | 1.3 |
| 122 | 6.9 | -23.3 | 67.3 | 2 | 0 | 5.9 | 0 | 7.7 |
| 123 | 20 | -29.6 | 70 | 2 | 0 | 0 | 0 | 0 |
| 124 | 51.9 | -14.4 | 5.3 | 2 | 0 | 4.2 | 0 | 9 |
| 125 | 63.7 | -23.5 | 7.4 | 2 | 0 | 2.5 | 0 | 1.3 |
| 126 | 38.4 | -13.3 | 14.6 | 2 | 0 | 0 | 0 | 0 |
| 127 | 44 | -26.6 | 18 | 2 | 0 | 0 | 0 | 1.3 |
| 128 | 59 | 0.6 | 10.9 | 2 | 0 | 0 | 0 | 0 |
| 129 | 56.7 | -11.5 | 14.4 | 2 | 0 | 0 | 0 | 0 |
| 130 | 57.5 | -5 | 30.2 | 2 | 0 | 0.8 | 0 | 2.6 |
| 131 | 50.3 | -53.2 | -15.1 | 2 | 1 | 35.6 | 1 | 39.7 |
| 132 | 51.6 | -59.6 | 9.6 | 2 | 1 | 5.1 | 0 | 2.6 |
| 133 | 32.4 | -74.6 | 31.8 | 2 | 0 | 23.7 | 1 | 15.4 |
| 134 | 15 | -73.1 | 52.9 | 2 | 0 | 17.8 | 0 | 17.9 |
| 135 | 34.7 | -47.9 | 50.8 | 3 | 0 | 1.7 | 0 | 5.1 |
| 136 | 26.3 | -61.3 | 58 | 3 | 0 | 44.1 | 0 | 29.5 |
| 137 | 59.7 | -16.7 | 34.4 | 3 | 0 | 0 | 0 | 0 |
| 138 | 41.7 | -31.4 | 46.3 | 3 | 0 | 0 | 0 | 0 |
| 139 | 8.5 | -55.9 | 61.3 | 3 | 0 | 25.4 | 0 | 21.8 |
| 140 | 21.4 | -48.1 | 70.3 | 3 | 0 | 9.3 | 0 | 10.3 |
| 141 | 34.3 | -4.5 | 52.5 | 3 | 0 | 0 | 0 | 0 |
| 142 | 60 | -26.2 | 27.8 | 3 | 0 | 1.7 | 0 | 5.1 |
| 143 | 50.8 | 3.6 | 40.5 | 3 | 0 | 0.8 | 0 | 0 |
| 144 | 41.2 | 5.9 | -15.4 | 3 | 0 | 0.8 | 0 | 0 |
| 145 | 46.2 | -3.4 | -4.3 | 3 | 0 | 28 | 0 | 26.9 |
| 146 | 43.7 | 6.8 | 3.9 | 3 | 0 | 11 | 0 | 6.4 |
| 147 | 7.5 | 9 | 41.2 | 3 | 0 | 0.8 | 0 | 1.3 |
| 148 | 9.4 | -15 | 41.2 | 4 | 0 | 0 | 0 | 0 |
| 149 | 10.6 | -35.5 | 46.8 | 4 | 0 | 2.5 | 0 | 3.8 |
| 150 | 8.7 | 3.5 | 65.6 | 4 | 0 | 5.9 | 0 | 10.3 |
| 151 | 62.1 | -37.5 | 37.2 | 4 | 0 | 0 | 0 | 0 |
| 152 | 43.3 | 44.9 | 10.5 | 4 | 0 | 6.8 | 0 | 14.1 |
| 153 | 29.7 | 48.1 | 27.1 | 4 | 0 | 9.3 | 0 | 5.1 |
| 154 | 34 | 21 | -8.4 | 4 | 0 | 0 | 0 | 1.3 |
| 155 | 36.2 | 23.8 | 4.8 | 4 | 0 | 0 | 0 | 0 |
| 156 | 7.2 | 30.4 | 27.9 | 4 | 1 | 12.7 | 0 | 14.1 |
| 157 | 12 | 38.6 | -21.5 | 4 | 0 | 8.5 | 0 | 10.3 |
| 158 | 28.6 | 22.4 | -18.9 | 4 | 0 | 14.4 | 0 | 17.9 |
| 159 | 4.9 | 36.4 | -14 | 5 | 0 | 28.8 | 0 | 29.5 |
| 160 | 14.9 | 64.5 | -7.6 | 5 | 1 | 83.9 | 1 | 78.2 |
| 161 | 29.9 | 8.2 | -37.6 | 5 | 1 | 60.2 | 1 | 66.7 |
| 162 | 46.9 | -12.8 | -34.8 | 5 | 1 | 66.9 | 1 | 74.4 |
| 163 | 25.3 | -11.4 | -31.3 | 5 | 0 | 31.4 | 0 | 26.9 |
| 164 | 38.6 | -34.7 | -23 | 5 | 1 | 30.5 | 1 | 28.2 |
| 165 | 37.6 | -62.9 | 47.3 | 6 | 0 | 8.5 | 0 | 11.5 |
| 166 | 46.2 | -36.9 | 48.6 | 6 | 0 | 0 | 0 | 0 |
| 167 | 26 | 7.1 | 57.7 | 6 | 0 | 4.2 | 0 | 1.3 |
| 168 | 51.4 | 10.6 | 20.3 | 6 | 0 | 2.5 | 0 | 0 |
| 169 | 45.4 | 22.9 | 26 | 6 | 0 | 7.6 | 0 | 10.3 |
| 170 | 4.8 | 3.6 | 29.6 | 6 | 0 | 4.2 | 0 | 9 |
| 171 | 60.7 | -13.1 | -21 | 6 | 1 | 15.3 | 1 | 16.7 |
| 172 | 62.6 | -41.9 | -11.4 | 6 | 0 | 1.7 | 0 | 3.8 |
| 173 | 50.9 | -58.7 | 44.3 | 6 | 0 | 1.7 | 0 | 2.6 |
| 174 | 52.8 | -41.7 | 48.2 | 6 | 0 | 0 | 0 | 0 |
| 175 | 40.6 | 33 | 37.2 | 6 | 0 | 0 | 0 | 0 |
| 176 | 42.1 | 14.3 | 49 | 6 | 0 | 11.9 | 0 | 15.4 |
| 177 | 35.3 | 46.4 | -12.5 | 6 | 0 | 8.5 | 0 | 19.2 |
| 178 | 29.6 | 58.2 | 4.9 | 6 | 0 | 5.9 | 0 | 6.4 |
| 179 | 7.9 | 25.6 | 54.7 | 6 | 0 | 4.2 | 0 | 10.3 |
| 180 | 23.5 | 24.3 | 52.7 | 6 | 0 | 0.8 | 0 | 0 |
| 181 | 14.4 | -69.6 | 36.4 | 6 | 0 | 22 | 0 | 11.5 |
| 182 | 6.5 | -58.2 | 44.3 | 7 | 0 | 5.1 | 0 | 5.1 |
| 183 | 5.2 | -25.5 | 30.6 | 7 | 0 | 21.2 | 0 | 23.1 |
| 184 | 54.4 | -50.1 | 28.3 | 7 | 0 | 0.8 | 0 | 0 |
| 185 | 28.3 | 29.9 | 42.9 | 7 | 0 | 0 | 0 | 0 |
| 186 | 6.6 | -48.8 | 30.4 | 7 | 1 | 55.1 | 1 | 51.3 |
| 187 | 7.9 | 41.9 | 4 | 7 | 0 | 25.4 | 1 | 23.1 |
| 188 | 6 | 29.1 | 14.9 | 7 | 0 | 0 | 0 | 1.3 |
| 189 | 9 | 57.5 | 18.8 | 7 | 1 | 88.1 | 1 | 83.3 |
| 190 | 62.4 | -26.6 | -5.4 | 7 | 0 | 0 | 0 | 1.3 |
| 191 | 47.1 | 12.7 | -29.5 | 7 | 0 | 46.6 | 1 | 47.4 |
| 192 | 15.1 | 46.1 | 43.7 | 7 | 0 | 23.7 | 0 | 29.5 |
| 193 | 50.9 | 27.8 | 0 | 7 | 0 | 39.8 | 0 | 44.9 |
| 194 | 47.1 | -69.5 | 27.9 | 7 | 0 | 3.4 | 0 | 10.3 |
| 195 | 12.8 | -54.5 | 15 | 7 | 0 | 10.2 | 0 | 15.4 |
| 196 | 27.4 | -35.3 | -14.7 | 7 | 0 | 34.7 | 0 | 47.4 |
| 197 | 54.8 | -6.3 | -9.9 | 7 | 0 | 11.9 | 0 | 10.3 |
| 198 | 52.2 | -31.3 | 1.5 | 7 | 0 | 0 | 0 | 0 |
| 199 | 56.9 | -45.3 | 9.4 | 7 | 0 | 0 | 0 | 0 |
| 200 | 60 | -38.6 | 16.7 | 7 | 0 | 0 | 0 | 0 |
| 201 | -10.1 | -18.9 | 6.7 | 8 | 0 | 19.5 | 0 | 9 |
| 202 | -12.7 | 10 | 9.6 | 8 | 0 | 0.8 | 0 | 1.3 |
| 203 | -25.1 | 0.7 | 0.5 | 8 | 0 | 29.7 | 0 | 23.1 |
| 204 | -19.3 | -4.9 | -1.1 | 8 | 0 | 3.4 | 0 | 0 |
| 205 | -25.5 | -21.6 | -15.1 | 8 | 0 | 17.8 | 0 | 19.2 |
| 206 | -23.1 | -4.6 | -18.2 | 8 | 0 | 0.8 | 0 | 0 |
| 207 | -9.5 | 11.6 | -7.3 | 8 | 0 | 0 | 0 | 0 |
| 208 | 11.2 | -18.1 | 7 | 8 | 0 | 11 | 0 | 17.9 |
| 209 | 13.3 | 11 | 10.3 | 8 | 0 | 0 | 0 | 0 |
| 210 | 25.6 | 2 | 0.4 | 8 | 0 | 14.4 | 0 | 17.9 |
| 211 | 20 | -3.9 | -1.1 | 8 | 0 | 0 | 0 | 2.6 |
| 212 | 27.1 | -20.1 | -15.2 | 8 | 0 | 12.7 | 0 | 10.3 |
| 213 | 23.4 | -3.5 | -18.3 | 8 | 0 | 0 | 0 | 0 |
| 214 | 9.5 | 12.3 | -6.6 | 8 | 0 | 0 | 0 | 1.3 |

Note: Coordinates and percentages are rounded to one decimal place. For a full description of the Schaefer parcellation please see (Schaefer et al., 2018). The hub-group and hub-individual columns represent the data presented in **Figure 3A** and **Figure 3B** respectively. Network assignments: 1=visual; 2=sensorisomatomotor; 3=dorsal attention; 4=salience/ventral attention; 5=affective; 6=frontoparietal; 7=default-mode; 8=miscellaneous (subcortical). Group assignment of the hub: 1=hubs; 0=non-hubs (peripheral regions).

**Supplementary Table 2.** Hubs of the control group in across 3 parcellations

**Schaefer-214**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **MNI** | | |  |  |
| **#** | **X** | **Y** | **Z** | **Network** | **Region** |
| 10 | -11.3 | -69.8 | 7.5 | 1 | Calcarine\_L\_2 |
| 12 | -7.5 | -87.5 | 27.3 | 1 | Cuneus\_L\_2 |
| 19 | -6.6 | -30.5 | 66.3 | 2 | Paracentral\_Lobule\_L\_1 |
| 21 | -50.5 | -5.1 | -2.1 | 2 | Temporal\_Sup\_L\_1 |
| 29 | -43.4 | -48.2 | -19.4 | 2 | Temporal\_Inf\_L\_1 |
| 41 | -39.2 | -3.9 | -3.6 | 3 | Insula\_L\_1 |
| 50 | -5.6 | 30 | 24.3 | 4 | Cingulum\_Ant\_L\_1 |
| 53 | -29.3 | -5.8 | -38.6 | 4 | Fusiform\_L\_2 |
| 54 | -45.4 | -20.7 | -30.3 | 4 | Temporal\_Inf\_L\_2 |
| 71 | -27.5 | 58 | 8 | 6 | Frontal\_Sup\_L\_2 |
| 72 | -9.5 | -73.1 | 37.4 | 6 | Precuneus\_L\_1 |
| 73 | -5.6 | -59.3 | 57.1 | 6 | Precuneus\_L\_2 |
| 77 | -5.3 | -55 | 27.1 | 7 | Precuneus\_L\_3 |
| 81 | -13.2 | 62.6 | -5.7 | 7 | Frontal\_Med\_Orb\_L\_2 |
| 83 | -46.6 | 8.2 | -32.3 | 7 | Temporal\_Pole\_Mid\_L\_2 |
| 88 | -8.4 | 58.5 | 19.7 | 7 | Frontal\_Sup\_Medial\_L\_1 |
| 95 | -51.2 | 22.6 | 7.9 | 7 | Frontal\_Inf\_Tri\_L\_2 |
| 98 | -25.9 | -31.5 | -17.9 | 7 | Fusiform\_L\_3 |
| 133 | 32.4 | -74.6 | 31.8 | 2 | Occipital\_Mid\_R\_2 |
| 158 | 28.6 | 22.4 | -18.9 | 4 | Frontal\_Inf\_Orb\_R\_1 |
| 160 | 14.9 | 64.5 | -7.6 | 5 | Frontal\_Sup\_Orb\_R\_2 |
| 161 | 29.9 | 8.2 | -37.6 | 5 | Temporal\_Pole\_Mid\_R\_1 |
| 162 | 46.9 | -12.8 | -34.8 | 5 | Temporal\_Inf\_R\_3 |
| 176 | 42.1 | 14.3 | 49 | 6 | Frontal\_Mid\_R\_4 |
| 181 | 14.4 | -69.6 | 36.4 | 6 | Cuneus\_R\_3 |
| 186 | 6.6 | -48.8 | 30.4 | 7 | Precuneus\_R\_3 |
| 189 | 9 | 57.5 | 18.8 | 7 | Frontal\_Sup\_Medial\_R\_2 |
| 191 | 47.1 | 12.7 | -29.5 | 7 | Temporal\_Pole\_Mid\_R\_2 |
| 192 | 15.1 | 46.1 | 43.7 | 7 | Frontal\_Sup\_R\_5 |
| 201 | -10.1 | -18.9 | 6.7 | 8 | Thalamus\_L\_1 |
| 203 | -25.1 | 0.7 | 0.5 | 8 | Putamen\_L\_1 |
| 210 | 25.6 | 2 | 0.4 | 8 | Putamen\_R\_1 |

**Brainnetome-244**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **MNI** | | |  |  |
| **#** | **X** | **Y** | **Z** | **Network** | **Region** |
| 6 | 12.8 | 48.5 | 39.9 | 7 | Frontal\_Sup\_Medial\_R\_1 |
| 13 | -7.9 | 56.0 | 15.1 | 7 | Frontal\_Sup\_Medial\_L\_3 |
| 14 | 7.6 | 58.5 | 13.0 | 7 | Frontal\_Sup\_Medial\_R\_3 |
| 19 | -28.0 | 55.9 | 12.1 | 6 | Frontal\_Mid\_2\_L\_3 |
| 27 | -25.4 | 60.4 | -5.9 | 7 | Frontal\_Sup\_2\_L\_3 |
| 28 | 25.3 | 61.6 | -3.6 | 5 | Frontal\_Sup\_2\_R\_4 |
| 41 | -6.6 | 53.4 | -6.9 | 7 | Frontal\_Med\_Orb\_L\_1 |
| 47 | -6.3 | 51.8 | -19.5 | 4 | Rectus\_L\_1 |
| 48 | 6.5 | 57.1 | -16.3 | 5 | Rectus\_R\_1 |
| 49 | -10.2 | 17.8 | -18.8 | 4 | Rectus\_L\_2 |
| 50 | 9.2 | 20.3 | -19.3 | 5 | Rectus\_R\_2 |
| 69 | -32.0 | 13.9 | -34.3 | 5 | Temporal\_Pole\_Mid\_L\_1 |
| 73 | -50.0 | -10.6 | 1.3 | 2 | Temporal\_Sup\_L\_2 |
| 78 | 47.0 | 12.2 | -19.6 | 7 | Temporal\_Pole\_Sup\_R\_1 |
| 83 | -53.1 | 2.1 | -29.6 | 7 | Temporal\_Mid\_L\_3 |
| 93 | -43.5 | -2.5 | -41.3 | 7 | Temporal\_Inf\_L\_3 |
| 103 | -32.7 | -16.1 | -32.4 | 4 | Fusiform\_L\_1 |
| 104 | 33.5 | -15.1 | -33.4 | 5 | Fusiform\_R\_1 |
| 145 | -53.7 | -31.2 | 22.7 | 3 | SupraMarginal\_L\_2 |
| 147 | -4.5 | -63.8 | 50.7 | 6 | Precuneus\_L\_2 |
| 151 | -12.0 | -66.6 | 25.4 | 6 | Precuneus\_L\_4 |
| 176 | 4.8 | -37.0 | 31.5 | 7 | Cingulate\_Mid\_R\_1 |
| 178 | 4.4 | 21.2 | 12.2 | 6 | Cingulate\_Ant\_R\_1 |
| 181 | -8.3 | -47.6 | 9.3 | 7 | Precuneus\_L\_6 |
| 182 | 8.5 | -44.3 | 10.8 | 7 | Precuneus\_R\_5 |
| 194 | 8.2 | -89.7 | 12.5 | 1 | Calcarine\_R\_2 |
| 195 | -16.4 | -60.6 | -6.4 | 1 | Lingual\_L\_3 |
| 196 | 18.3 | -59.6 | -6.9 | 1 | Lingual\_R\_2 |
| 197 | -12.9 | -68.4 | 12.3 | 1 | Calcarine\_L\_3 |
| 198 | 14.7 | -63.5 | 12.3 | 1 | Lingual\_R\_3 |
| 208 | 16.5 | -85.3 | 34.3 | 1 | Occipital\_Sup\_R\_2 |
| 210 | 28.6 | -74.3 | 36.4 | 2 | Occipital\_Mid\_R\_2 |
| 215 | -22.0 | -13.7 | -18.8 | 8 | Hippocampus\_L\_1 |
| 216 | 21.8 | -12.7 | -19.9 | 8 | Hippocampus\_R\_1 |
| 223 | -16.7 | 3.4 | -9.2 | 8 | Caudate\_L\_2 |
| 224 | 14.1 | 7.7 | -8.8 | 8 | Caudate\_R\_2 |

**Shen-213**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | MNI | | |  |  |
| Node | X | Y | Z | Network | Region |
| 6 | 14.6 | 64.8 | 3.7 | 7 | Frontal\_Sup\_Medial\_R\_1 |
| 10 | 8.5 | 53.3 | 23.9 | 7 | Frontal\_Sup\_Medial\_R\_2 |
| 12 | 14.6 | 36.7 | 49.1 | 7 | Frontal\_Sup\_Medial\_R\_3 |
| 44 | 7.6 | -57.3 | 61.8 | 3 | Precuneus\_R\_2 |
| 53 | 52.9 | 10.8 | -21.8 | 7 | Temporal\_Pole\_Mid\_R\_3 |
| 58 | 40.3 | -11.1 | -35.8 | 5 | Fusiform\_R\_1 |
| 67 | 25.1 | -44.5 | -12.2 | 7 | Fusiform\_R\_5 |
| 74 | 19.0 | -81.8 | 41.5 | 1 | Occipital\_Sup\_R\_1 |
| 82 | 8.0 | 34.7 | 17.2 | 4 | Cingulate\_Ant\_R\_1 |
| 94 | 28.0 | -28.5 | -13.7 | 7 | ParaHippocampal\_R\_1 |
| 98 | 19.2 | -7.7 | -14.8 | 8 | Hippocampus\_R\_3 |
| 101 | 12.6 | 20.1 | -0.8 | 8 | Caudate\_R\_4 |
| 103 | 14.3 | 8.5 | -9.6 | 8 | Putamen\_R\_2 |
| 104 | 10.7 | -26.8 | -2.0 | 8 | Thalamus\_R\_1 |
| 111 | -6.8 | 48.2 | -5.7 | 7 | Frontal\_Med\_Orb\_L\_1 |
| 112 | -18.2 | 57.0 | -14.3 | 7 | OFCant\_L\_1 |
| 114 | -11.7 | 65.1 | 4.2 | 7 | Frontal\_Sup\_Medial\_L\_1 |
| 121 | -11.1 | 34.3 | 51.5 | 7 | Frontal\_Sup\_Medial\_L\_3 |
| 143 | -37.7 | -12.9 | -1.4 | 3 | Insula\_L\_4 |
| 148 | -25.4 | -54.7 | 64.1 | 3 | Parietal\_Sup\_L\_1 |
| 151 | -9.6 | -66.1 | 55.3 | 6 | Precuneus\_L\_2 |
| 163 | -57.6 | -6.4 | -22.6 | 7 | Temporal\_Mid\_L\_2 |
| 177 | -17.0 | -50.8 | 0.7 | 1 | Lingual\_L\_1 |
| 180 | -16.5 | -85.0 | 33.1 | 1 | Occipital\_Sup\_L\_1 |
| 188 | -22.1 | -66.7 | 7.5 | 1 | Calcarine\_L\_3 |
| 190 | -5.8 | 34.2 | 26.3 | 4 | Cingulate\_Ant\_L\_3 |
| 192 | -5.0 | 13.3 | 28.6 | 4 | Cingulate\_Mid\_L\_4 |
| 202 | -22.8 | -12.7 | -17.3 | 8 | Hippocampus\_L\_3 |
| 205 | -30.6 | -23.9 | -26.7 | 7 | Fusiform\_L\_5 |
| 208 | -10.4 | 10.9 | -8.1 | 8 | Caudate\_L\_3 |
| 212 | -4.7 | -10.2 | 5.9 | 8 | Thalamus\_L\_2 |

Anatomical regions are defined using the automatic anatomical labeling (AAL) atlas. Network assignments: 1=visual; 2=sensorisomatomotor; 3=dorsal attention; 4=salience/ventral attention; 5=affective; 6=frontoparietal; 7=default-mode; 8=miscellaneous (subcortical).

**Supplementary Table 3.** Principle component analysis loadings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Component1 | Component2 | Component3 | Component4 |
| Inattention SNAP-IV (parent-rated) | .50 | -.5 | -.47 | -.53 |
| Hyperactivity/Impulsivity SNAP-IV (parent-rated) | .48 | -.52 | .56 | .44 |
| Inattention ASRS (self-rated) | .52 | .41 | -.5 | .56 |
| Hyperactivity/Impulsivity ASRS (self-rated) | .50 | .56 | .46 | -.46 |
| Variance explained (%) | 80.72 | 9.49 | 6.68 | 3.11 |

Abbreviation: SNAP-IV=Swanson, Nolan, and Pelham, Version IV; ASRS=Adult ADHD Self-Report Scale.

**Supplementary Table 4.** Empirical comparison across brain parcellations

|  |  |  |  |
| --- | --- | --- | --- |
|  | Schaefer-214 | Shen-213 | Brainnetome-244 |
| Degree (p) | .235 | .225 | .367 |
| Weighted degree (p) | .895 | .796 | .889 |
| SC Hubs (p) | .864 | .999 | .414 |
| SC Feeder (p) | .619 | .619 | .77 |
| SC Local (p) | .228 | .254 | .205 |
| SC-FC (p) | .012 | .011 | .003 |
| SC-FC Hubs (p) | .583 | .021 | .008 |
| SC-FC Feeders (p) | .002 | .021 | .007 |
| SC-FC Local (p) | .11 | .173 | .058 |
| Feeder-behavior correlation (r) | -.25\* | -.21\* | -.23\* |

Note: *p*-values differ from main text as they have not been corrected for multiple comparisons in the follow-up structural-functional connectivity (SC-FC) contrasts. The main findings, whole brain SC-FC coupling differences, feeder SF-FC coupling differences and brain-behaviour correlations replicate across all three templates. In addition, in the replication templates (Shen and Brainnetome) differences were found in hub connections. Gray shading indicates significant results. Asterisk\* represents *p* < .05.

**Supplementary Table 5.** Center of mass and corresponding automatic anatomical labeling match for each parcellation region of Brainnetome-246

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **X** | **Y** | **Z** | **Regions** | **Network** | **#** | **X** | **Y** | **Z** | **Regions** | **Network** |
| 1 | -4.7 | 15.5 | 53.7 | Supp\_Motor\_Area\_L\_1 | 7 | 124 | 56.9 | -40.1 | 12.6 | Temporal\_Sup\_R\_5 | 7 |
| 2 | 7.0 | 16.5 | 54.2 | Supp\_Motor\_Area\_R\_1 | 6 | 125 | -16.4 | -60.0 | 62.7 | Parietal\_Sup\_L\_1 | 3 |
| 3 | -18.2 | 23.9 | 52.7 | Frontal\_Sup\_2\_L\_1 | 7 | 126 | 19.4 | -56.8 | 64.9 | Parietal\_Sup\_R\_1 | 3 |
| 4 | 21.7 | 25.8 | 51.5 | Frontal\_Sup\_2\_R\_1 | 6 | 127 | -15.8 | -70.6 | 51.7 | Parietal\_Sup\_L\_2 | 3 |
| 5 | -11.0 | 48.8 | 39.4 | Frontal\_Sup\_Medial\_L\_1 | 7 | 128 | 18.5 | -68.9 | 53.7 | Parietal\_Sup\_R\_2 | 2 |
| 6 | 12.8 | 48.5 | 39.9 | Frontal\_Sup\_Medial\_R\_1 | 7 | 129 | -33.4 | -46.9 | 49.9 | Parietal\_Inf\_L\_1 | 5 |
| 7 | -17.9 | -0.7 | 65.1 | Frontal\_Sup\_2\_L\_2 | 6 | 130 | 35.3 | -42.1 | 54.3 | Postcentral\_R\_1 | 3 |
| 8 | 20.3 | 4.2 | 63.8 | Frontal\_Sup\_2\_R\_2 | 6 | 131 | -22.5 | -47.5 | 65.0 | Parietal\_Sup\_L\_3 | 3 |
| 9 | -5.9 | -5.0 | 58.0 | Supp\_Motor\_Area\_L\_2 | 4 | 132 | 23.0 | -43.5 | 67.1 | Postcentral\_R\_2 | 3 |
| 10 | 7.4 | -3.6 | 59.9 | Supp\_Motor\_Area\_R\_2 | 4 | 133 | -27.2 | -58.8 | 53.9 | Parietal\_Sup\_L\_4 | 3 |
| 11 | -4.7 | 35.9 | 38.5 | Frontal\_Sup\_Medial\_L\_2 | 7 | 134 | 30.9 | -54.1 | 53.4 | Parietal\_Sup\_R\_3 | 3 |
| 12 | 6.1 | 37.8 | 34.9 | Frontal\_Sup\_Medial\_R\_2 | 4 | 135 | -34.1 | -80.5 | 29.0 | Occipital\_Mid\_L\_1 | 7 |
| 13 | -7.9 | 56.0 | 15.1 | Frontal\_Sup\_Medial\_L\_3 | 7 | 136 | 45.4 | -71.2 | 20.3 | Temporal\_Mid\_R\_5 | 7 |
| 14 | 7.6 | 58.5 | 13.0 | Frontal\_Sup\_Medial\_R\_3 | 7 | 137 | -37.7 | -61.3 | 46.4 | Parietal\_Inf\_L\_2 | 5 |
| 15 | -27.3 | 42.7 | 30.8 | Frontal\_Mid\_2\_L\_1 | 4 | 138 | 39.4 | -65.0 | 43.7 | Angular\_R\_1 | 6 |
| 16 | 30.2 | 37.3 | 35.4 | Frontal\_Mid\_2\_R\_1 | 4 | 139 | -51.4 | -33.3 | 41.5 | Parietal\_Inf\_L\_3 | 5 |
| 17 | -41.4 | 13.2 | 36.2 | Frontal\_Mid\_2\_L\_2 | 6 | 140 | 47.6 | -34.7 | 45.1 | SupraMarginal\_R\_1 | 6 |
| 18 | 41.7 | 11.5 | 38.5 | Frontal\_Mid\_2\_R\_2 | 6 | 141 | -55.7 | -49.3 | 37.7 | SupraMarginal\_L\_1 | 6 |
| 19 | -28.0 | 55.9 | 12.1 | Frontal\_Mid\_2\_L\_3 | 6 | 142 | 57.5 | -43.7 | 38.3 | SupraMarginal\_R\_2 | 4 |
| 20 | 27.7 | 55.0 | 16.8 | Frontal\_Sup\_2\_R\_3 | 4 | 143 | -46.8 | -64.8 | 25.8 | Temporal\_Mid\_L\_8 | 7 |
| 21 | -40.8 | 40.7 | 16.1 | Frontal\_Inf\_Tri\_L\_1 | 6 | 144 | 52.9 | -54.3 | 24.7 | Temporal\_Mid\_R\_6 | 7 |
| 22 | 41.8 | 44.0 | 13.7 | Frontal\_Mid\_2\_R\_3 | 4 | 145 | -53.7 | -31.2 | 22.7 | SupraMarginal\_L\_2 | 3 |
| 23 | -32.9 | 23.2 | 45.1 | Frontal\_Mid\_2\_L\_4 | 7 | 146 | 55.1 | -26.2 | 25.7 | SupraMarginal\_R\_3 | 3 |
| 24 | 41.9 | 26.5 | 39.4 | Frontal\_Mid\_2\_R\_4 | 6 | 147 | -4.5 | -63.8 | 50.7 | Precuneus\_L\_2 | 6 |
| 25 | -32.1 | 3.8 | 54.7 | Frontal\_Mid\_2\_L\_5 | 3 | 148 | 6.4 | -64.8 | 51.2 | Precuneus\_R\_1 | 7 |
| 26 | 33.5 | 7.7 | 54.4 | Frontal\_Mid\_2\_R\_5 | 6 | 149 | -8.3 | -47.1 | 57.0 | Precuneus\_L\_3 | 4 |
| 27 | -25.4 | 60.4 | -5.9 | Frontal\_Sup\_2\_L\_3 | 7 | 150 | 7.5 | -46.7 | 58.5 | Precuneus\_R\_2 | 3 |
| 28 | 25.3 | 61.6 | -3.6 | Frontal\_Sup\_2\_R\_4 | 5 | 151 | -12.0 | -66.6 | 25.4 | Precuneus\_L\_4 | 6 |
| 29 | -46.1 | 13.4 | 23.5 | Frontal\_Inf\_Tri\_L\_2 | 6 | 152 | 16.2 | -63.7 | 25.0 | Precuneus\_R\_3 | 6 |
| 30 | 45.4 | 16.2 | 25.0 | Frontal\_Inf\_Tri\_R\_1 | 6 | 153 | -6.3 | -54.7 | 33.8 | Precuneus\_L\_5 | 7 |
| 31 | -47.3 | 31.9 | 13.5 | Frontal\_Inf\_Tri\_L\_3 | 6 | 154 | 6.3 | -54.1 | 34.5 | Precuneus\_R\_4 | 7 |
| 32 | 47.6 | 35.0 | 13.2 | Frontal\_Inf\_Tri\_R\_2 | 4 | 155 | -50.0 | -16.3 | 42.9 | Postcentral\_L\_2 | 2 |
| 33 | -52.6 | 22.9 | 11.1 | Frontal\_Inf\_Tri\_L\_4 | 7 | 156 | 50.5 | -14.0 | 43.6 | Postcentral\_R\_3 | 2 |
| 34 | 54.2 | 23.8 | 11.9 | Frontal\_Inf\_Tri\_R\_3 | 7 | 157 | -56.1 | -14.0 | 16.2 | Postcentral\_L\_3 | 2 |
| 35 | -48.8 | 36.1 | -3.0 | Frontal\_Inf\_Orb\_2\_L\_1 | 7 | 158 | 55.8 | -10.2 | 15.2 | Rolandic\_Oper\_R\_2 | 2 |
| 36 | 51.3 | 36.2 | -0.4 | Frontal\_Inf\_Tri\_R\_4 | 7 | 159 | -45.6 | -30.3 | 50.7 | Postcentral\_L\_4 | 1 |
| 37 | -39.5 | 22.7 | 3.8 | Frontal\_Inf\_Tri\_L\_5 | 4 | 160 | 47.1 | -24.9 | 48.9 | Postcentral\_R\_4 | 1 |
| 38 | 42.0 | 21.9 | 3.5 | Frontal\_Inf\_Tri\_R\_5 | 4 | 161 | -21.1 | -34.6 | 68.4 | Postcentral\_L\_5 | 2 |
| 39 | -51.4 | 13.3 | 5.9 | Frontal\_Inf\_Oper\_L\_1 | 7 | 162 | 20.3 | -32.6 | 69.1 | Postcentral\_R\_5 | 2 |
| 40 | 53.6 | 13.9 | 11.2 | Frontal\_Inf\_Oper\_R\_1 | 6 | 163 | -36.1 | -20.3 | 9.8 | Insula\_L\_1 | 2 |
| 41 | -6.6 | 53.4 | -6.9 | Frontal\_Med\_Orb\_L\_1 | 7 | 164 | 37.3 | -17.8 | 8.0 | Insula\_R\_1 | 3 |
| 42 | 6.3 | 47.6 | -6.9 | Frontal\_Med\_Orb\_R\_1 | 5 | 165 | -32.1 | 13.9 | -13.1 | Insula\_L\_2 | 7 |
| 43 | -36.3 | 33.4 | -15.9 | OFCpost\_L\_1 | 7 | 166 | 33.0 | 14.1 | -13.0 | Insula\_R\_2 | 4 |
| 44 | 40.2 | 38.4 | -14.4 | OFCpost\_R\_1 | 6 | 167 | -34.5 | 18.0 | 1.0 | Insula\_L\_3 | 4 |
| 45 | -22.6 | 37.5 | -17.6 | OFCant\_L\_1 | 4 | 168 | 36.6 | 18.6 | 0.5 | Insula\_R\_3 | 4 |
| 46 | 23.5 | 36.1 | -18.2 | OFCant\_R\_1 | 4 | 169 | -38.4 | -3.8 | -9.2 | Insula\_L\_4 | 3 |
| 47 | -6.3 | 51.8 | -19.5 | Rectus\_L\_1 | 4 | 170 | 39.2 | -1.9 | -9.0 | Insula\_R\_4 | 3 |
| 48 | 6.5 | 57.1 | -16.3 | Rectus\_R\_1 | 5 | 171 | -38.4 | -8.1 | 8.3 | Insula\_L\_5 | 3 |
| 49 | -10.2 | 17.8 | -18.8 | Rectus\_L\_2 | 4 | 172 | 38.9 | -7.0 | 7.8 | Insula\_R\_5 | 2 |
| 50 | 9.2 | 20.3 | -19.3 | Rectus\_R\_2 | 5 | 173 | -37.8 | 4.9 | 4.7 | Insula\_L\_6 | 3 |
| 51 | -40.6 | 32.5 | -9.1 | Frontal\_Inf\_Orb\_2\_L\_2 | 7 | 174 | 38.1 | 5.5 | 4.9 | Insula\_R\_6 | 3 |
| 52 | 42.5 | 31.5 | -8.8 | Frontal\_Inf\_Orb\_2\_R\_1 | 7 | 175 | -3.5 | -39.7 | 31.0 | Cingulate\_Post\_L\_1 | 7 |
| 53 | -48.8 | -7.8 | 39.2 | Postcentral\_L\_1 | 2 | 176 | 4.8 | -37.0 | 31.5 | Cingulate\_Mid\_R\_1 | 7 |
| 54 | 54.6 | -2.2 | 32.9 | Precentral\_R\_1 | 2 | 177 | -3.2 | 8.2 | 25.1 | Cingulate\_Ant\_L\_1 | 6 |
| 55 | -31.5 | -8.9 | 57.7 | Precentral\_L\_1 | 3 | 178 | 4.4 | 21.2 | 12.2 | Cingulate\_Ant\_R\_1 | 6 |
| 56 | 32.8 | -6.8 | 56.6 | Frontal\_Sup\_2\_R\_5 | 3 | 179 | -5.5 | 34.4 | 20.1 | Cingulate\_Ant\_L\_2 | 4 |
| 57 | -26.2 | -25.0 | 62.6 | Precentral\_L\_2 | 2 | 180 | 4.8 | 27.6 | 27.4 | Cingulate\_Ant\_R\_2 | 4 |
| 58 | 34.4 | -18.7 | 58.4 | Precentral\_R\_2 | 2 | 181 | -8.3 | -47.6 | 9.3 | Precuneus\_L\_6 | 7 |
| 59 | -13.1 | -20.7 | 73.3 | Paracentral\_Lobule\_L\_1 | 2 | 182 | 8.5 | -44.3 | 10.8 | Precuneus\_R\_5 | 7 |
| 60 | 15.2 | -21.5 | 71.1 | Precentral\_R\_3 | 2 | 183 | -4.4 | 6.1 | 37.7 | Cingulate\_Mid\_L\_1 | 4 |
| 61 | -52.1 | 0.2 | 7.7 | Rolandic\_Oper\_L\_1 | 2 | 184 | 4.3 | 6.4 | 38.2 | Cingulate\_Mid\_R\_2 | 3 |
| 62 | 53.8 | 3.8 | 8.6 | Rolandic\_Oper\_R\_1 | 3 | 185 | -7.3 | -22.3 | 40.7 | Cingulate\_Mid\_L\_2 | 4 |
| 63 | -49.3 | 4.7 | 30.4 | Precentral\_L\_3 | 6 | 186 | 6.3 | -20.2 | 40.6 | Cingulate\_Mid\_R\_3 | 4 |
| 64 | 51.3 | 7.2 | 30.2 | Frontal\_Inf\_Oper\_R\_2 | 6 | 187 | -4.2 | 38.6 | -1.9 | Cingulate\_Ant\_L\_3 | 7 |
| 65 | -7.7 | -37.9 | 58.4 | Precuneus\_L\_1 | 2 | 188 | 5.6 | 40.9 | 6.6 | Cingulate\_Ant\_R\_3 | 7 |
| 66 | 10.3 | -34.4 | 54.0 | Paracentral\_Lobule\_R\_1 | 4 | 189 | -10.2 | -82.5 | -10.7 | Lingual\_L\_2 | 1 |
| 67 | -4.1 | -22.9 | 60.7 | Paracentral\_Lobule\_L\_2 | 2 | 190 | 10.3 | -85.6 | -8.5 | Lingual\_R\_1 | 1 |
| 68 | 4.6 | -21.1 | 61.6 | Supp\_Motor\_Area\_R\_3 | 2 | 191 | -5.0 | -80.3 | 10.3 | Calcarine\_L\_1 | 1 |
| 69 | -32.0 | 13.9 | -34.3 | Temporal\_Pole\_Mid\_L\_1 | 5 | 192 | 7.2 | -75.7 | 10.8 | Calcarine\_R\_1 | 1 |
| 70 | 31.2 | 14.9 | -33.5 | Temporal\_Pole\_Mid\_R\_1 | 5 | 193 | -5.6 | -94.3 | 1.3 | Calcarine\_L\_2 | 1 |
| 71 | -54.0 | -31.8 | 12.3 | Temporal\_Sup\_L\_1 | 2 | 194 | 8.2 | -89.7 | 12.5 | Calcarine\_R\_2 | 1 |
| 72 | 53.7 | -23.8 | 10.6 | Temporal\_Sup\_R\_1 | 2 | 195 | -16.4 | -60.6 | -6.4 | Lingual\_L\_3 | 1 |
| 73 | -50.0 | -10.6 | 1.3 | Temporal\_Sup\_L\_2 | 2 | 196 | 18.3 | -59.6 | -6.9 | Lingual\_R\_2 | 1 |
| 74 | 50.7 | -3.6 | -1.2 | Temporal\_Sup\_R\_2 | 3 | 197 | -12.9 | -68.4 | 12.3 | Calcarine\_L\_3 | 1 |
| 75 | -62.6 | -33.5 | 7.5 | Temporal\_Mid\_L\_1 | 7 | 198 | 14.7 | -63.5 | 12.3 | Lingual\_R\_3 | 1 |
| 76 | 66.4 | -20.3 | 6.4 | Temporal\_Sup\_R\_3 | 2 | 199 | -30.6 | -89.1 | 11.0 | Occipital\_Mid\_L\_2 | 1 |
| 77 | -44.8 | 10.5 | -19.5 | Temporal\_Pole\_Sup\_L\_1 | 5 | 200 | 34.5 | -85.9 | 10.8 | Occipital\_Mid\_R\_1 | 1 |
| 78 | 47.0 | 12.2 | -19.6 | Temporal\_Pole\_Sup\_R\_1 | 7 | 201 | -45.7 | -73.7 | 2.9 | Occipital\_Mid\_L\_3 | 3 |
| 79 | -55.0 | -3.4 | -10.3 | Temporal\_Sup\_L\_3 | 7 | 202 | 47.8 | -70.0 | -0.7 | Temporal\_Mid\_R\_7 | 1 |
| 80 | 55.7 | -12.4 | -5.7 | Temporal\_Sup\_R\_4 | 7 | 203 | -17.6 | -99.6 | 2.1 | Occipital\_Mid\_L\_4 | 1 |
| 81 | -65.2 | -30.6 | -11.5 | Temporal\_Mid\_L\_2 | 7 | 204 | 21.7 | -97.4 | 4.3 | Occipital\_Sup\_R\_1 | 1 |
| 82 | 64.7 | -28.7 | -13.4 | Temporal\_Mid\_R\_1 | 6 | 205 | -30.3 | -87.7 | -12.2 | Occipital\_Inf\_L\_1 | 1 |
| 83 | -53.1 | 2.1 | -29.6 | Temporal\_Mid\_L\_3 | 7 | 206 | 32.1 | -84.6 | -11.6 | Occipital\_Inf\_R\_1 | 1 |
| 84 | 51.2 | 5.7 | -32.0 | Temporal\_Pole\_Mid\_R\_2 | 7 | 207 | -10.6 | -87.9 | 30.7 | Occipital\_Sup\_L\_1 | 1 |
| 85 | -59.2 | -57.4 | 4.0 | Temporal\_Mid\_L\_4 | 5 | 208 | 16.5 | -85.3 | 34.3 | Occipital\_Sup\_R\_2 | 1 |
| 86 | 60.3 | -53.2 | 2.8 | Temporal\_Mid\_R\_2 | 2 | 209 | -22.2 | -77.2 | 35.5 | Occipital\_Sup\_L\_2 | 3 |
| 87 | -58.2 | -19.4 | -9.6 | Temporal\_Mid\_L\_5 | 7 | 210 | 28.6 | -74.3 | 36.4 | Occipital\_Mid\_R\_2 | 2 |
| 88 | 58.5 | -15.8 | -9.9 | Temporal\_Mid\_R\_3 | 7 | 211 | -18.8 | -2.0 | -20.3 | Amygdala\_L\_1 | 8 |
| 89 | -45.2 | -25.8 | -27.2 | Temporal\_Inf\_L\_1 | 4 | 212 | 19.2 | -2.4 | -19.7 | ParaHippocampal\_R\_7 | 8 |
| 90 | 45.7 | -14.2 | -33.1 | Temporal\_Inf\_R\_1 | 5 | 213 | -27.0 | -3.8 | -20.2 | Amygdala\_L\_2 | 8 |
| 91 | -50.5 | -57.1 | -14.3 | Temporal\_Inf\_L\_2 | 2 | 214 | 27.9 | -3.0 | -20.4 | Amygdala\_R\_1 | 8 |
| 92 | 53.5 | -52.9 | -18.4 | Temporal\_Inf\_R\_2 | 2 | 215 | -22.0 | -13.7 | -18.8 | Hippocampus\_L\_1 | 8 |
| 93 | -43.5 | -2.5 | -41.3 | Temporal\_Inf\_L\_3 | 7 | 216 | 21.8 | -12.7 | -19.9 | Hippocampus\_R\_1 | 8 |
| 94 | 40.1 | 0.4 | -43.3 | Temporal\_Inf\_R\_3 | 5 | 217 | -27.9 | -30.0 | -10.0 | Hippocampus\_L\_2 | 8 |
| 95 | -55.8 | -15.5 | -27.6 | Temporal\_Inf\_L\_4 | 7 | 218 | 29.2 | -27.1 | -10.5 | Hippocampus\_R\_2 | 8 |
| 96 | 54.6 | -11.1 | -32.2 | Temporal\_Inf\_R\_4 | 5 | 219 | -12.2 | 14.2 | -0.3 | Caudate\_L\_1 | 8 |
| 97 | -55.0 | -60.3 | -6.0 | Temporal\_Inf\_L\_5 | 5 | 220 | 14.7 | 14.1 | -2.6 | Caudate\_R\_1 | 8 |
| 98 | 54.4 | -57.1 | -8.3 | Temporal\_Inf\_R\_5 | 2 | 221 | -21.8 | -1.8 | 3.7 | Putamen\_L\_1 | 8 |
| 99 | -59.2 | -41.7 | -16.0 | Temporal\_Inf\_L\_6 | 6 | 222 | 22.1 | -1.6 | 3.6 | Putamen\_R\_1 | 8 |
| 100 | 60.6 | -39.9 | -17.2 | Temporal\_Inf\_R\_6 | 6 | 223 | -16.7 | 3.4 | -9.2 | Caudate\_L\_2 | 8 |
| 101 | -54.8 | -31.1 | -27.0 | Temporal\_Inf\_L\_7 | 4 | 224 | 14.1 | 7.7 | -8.8 | Caudate\_R\_2 | 8 |
| 102 | 53.9 | -31.4 | -25.8 | Temporal\_Inf\_R\_7 | 5 | 225 | -22.9 | 6.4 | -3.8 | Putamen\_L\_2 | 8 |
| 103 | -32.7 | -16.1 | -32.4 | Fusiform\_L\_1 | 4 | 226 | 22.2 | 7.9 | -1.6 | Putamen\_R\_2 | 8 |
| 104 | 33.5 | -15.1 | -33.4 | Fusiform\_R\_1 | 5 | 227 | -14.3 | 2.0 | 16.6 | Caudate\_L\_3 | 8 |
| 105 | -30.6 | -64.9 | -14.2 | Fusiform\_L\_2 | 1 | 228 | 13.9 | 5.8 | 14.2 | Caudate\_R\_3 | 8 |
| 106 | 31.1 | -61.7 | -13.7 | Fusiform\_R\_2 | 1 | 229 | -28.2 | -5.1 | 1.5 | Putamen\_L\_3 | 8 |
| 107 | -42.0 | -50.2 | -17.6 | Temporal\_Inf\_L\_8 | 2 | 230 | 29.0 | -3.4 | 1.5 | Putamen\_R\_3 | 8 |
| 108 | 42.7 | -48.9 | -18.8 | Temporal\_Inf\_R\_8 | 2 | 231 | -6.4 | -12.3 | 5.1 | Thalamus\_L\_1 | 8 |
| 109 | -26.5 | -6.8 | -34.6 | Fusiform\_L\_3 | 4 | 232 | 7.1 | -11.0 | 5.9 | Thalamus\_R\_1 | 8 |
| 110 | 27.1 | -8.4 | -33.9 | ParaHippocampal\_R\_1 | 5 | 233 | -18.3 | -13.1 | 4.0 | Thalamus\_L\_2 | 8 |
| 111 | -24.9 | -25.2 | -25.9 | Fusiform\_L\_4 | 7 | 234 | 12.6 | -13.8 | 0.9 | Thalamus\_R\_2 | 8 |
| 112 | 26.6 | -23.2 | -26.9 | ParaHippocampal\_R\_2 | 5 | 235 | -17.8 | -22.4 | 3.3 | Thalamus\_L\_3 | 8 |
| 113 | -28.5 | -31.4 | -17.9 | Fusiform\_L\_5 | 7 | 236 | 17.8 | -21.8 | 3.3 | Thalamus\_R\_3 | 8 |
| 114 | 29.4 | -30.2 | -17.7 | ParaHippocampal\_R\_3 | 7 | 237 | -6.9 | -12.8 | 7.3 | Thalamus\_L\_4 | 8 |
| 115 | -18.4 | -11.6 | -29.9 | ParaHippocampal\_L\_1 | 4 | 238 | 2.6 | -12.7 | 5.5 | Thalamus\_R\_4 | 8 |
| 116 | 18.5 | -9.5 | -30.0 | ParaHippocampal\_R\_4 | 5 | 239 | -16.5 | -23.8 | 6.7 | Thalamus\_L\_5 | 8 |
| 117 | -23.2 | 1.7 | -31.8 | ParaHippocampal\_L\_2 | 5 | 240 | 15.4 | -25.1 | 6.2 | Thalamus\_R\_5 | 8 |
| 118 | 21.6 | 1.1 | -35.7 | ParaHippocampal\_R\_5 | 5 | 241 | -15.3 | -28.4 | 3.7 | Thalamus\_L\_6 | 8 |
| 119 | -16.4 | -39.5 | -9.8 | Lingual\_L\_1 | 7 | 242 | 13.6 | -26.9 | 7.5 | Thalamus\_R\_6 | 8 |
| 120 | 18.8 | -36.2 | -11.2 | ParaHippocampal\_R\_6 | 7 | 243 | -11.4 | -22.1 | 12.6 | Thalamus\_L\_7 | 8 |
| 121 | -54.2 | -39.9 | 4.1 | Temporal\_Mid\_L\_6 | 7 | 244 | 9.6 | -14.5 | 13.9 | Thalamus\_R\_7 | 8 |
| 122 | 52.4 | -37.0 | 3.4 | Temporal\_Mid\_R\_4 | 7 | 245 | -11.1 | -14.3 | 2.0 | Thalamus\_L\_8 | 8 |
| 123 | -52.5 | -50.3 | 10.8 | Temporal\_Mid\_L\_7 | 7 | 246 | 12.7 | -16.4 | 6.7 | Thalamus\_R\_8 | 8 |

Network assignments: 1=visual; 2=sensorisomatomotor; 3=dorsal attention; 4=salience/ventral attention; 5=affective; 6=frontoparietal; 7=default-mode; 8=miscellaneous (subcortical).

**Supplementary Table 6.** Center of mass and corresponding automatic anatomical labeling match for each parcellation region of Shen-213

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **X** | **Y** | **Z** | **Regions** | **Network** | **#** | **X** | **Y** | **Z** | **Regions** | **Network** |
| 1 | 14.1 | 56.7 | -16.7 | OFCant\_R\_1 | 5 | 108 | -18.2 | 19.0 | -21.1 | OFCmed\_L\_1 | 4 |
| 2 | 9.6 | 17.6 | -19.5 | Rectus\_R\_1 | 4 | 109 | -5.7 | 18.0 | -21.5 | Rectus\_L\_1 | 4 |
| 3 | 5.3 | 35.0 | -17.5 | Rectus\_R\_2 | 5 | 110 | -7.8 | 39.8 | -21.4 | Rectus\_L\_2 | 4 |
| 4 | 15.6 | 34.2 | -22.5 | OFCmed\_R\_1 | 4 | 111 | -6.8 | 48.2 | -5.7 | Frontal\_Med\_Orb\_L\_1 | 7 |
| 5 | 8.3 | 46.1 | -1.7 | Frontal\_Med\_Orb\_R\_1 | 7 | 112 | -18.2 | 57.0 | -14.3 | OFCant\_L\_1 | 7 |
| 6 | 14.6 | 64.8 | 3.7 | Frontal\_Sup\_Medial\_R\_1 | 7 | 113 | -5.8 | 48.0 | 11.8 | Cingulate\_Ant\_L\_2 | 7 |
| 7 | 30.4 | 54.8 | -3.3 | Frontal\_Mid\_2\_R\_1 | 6 | 114 | -11.7 | 65.1 | 4.2 | Frontal\_Sup\_Medial\_L\_1 | 7 |
| 8 | 44.5 | 46.1 | -4.9 | Frontal\_Mid\_2\_R\_2 | 6 | 115 | -29.3 | 54.2 | 2.5 | Frontal\_Sup\_2\_L\_1 | 6 |
| 9 | 28.8 | 51.1 | 18.8 | Frontal\_Mid\_2\_R\_3 | 4 | 116 | -42.7 | 47.3 | -6.9 | Frontal\_Mid\_2\_L\_1 | 6 |
| 10 | 8.5 | 53.3 | 23.9 | Frontal\_Sup\_Medial\_R\_2 | 7 | 117 | -28.9 | 50.1 | 21.7 | Frontal\_Mid\_2\_L\_2 | 4 |
| 11 | 37.6 | 35.4 | 31.1 | Frontal\_Mid\_2\_R\_4 | 6 | 118 | -10.0 | 55.6 | 30.4 | Frontal\_Sup\_Medial\_L\_2 | 7 |
| 12 | 14.6 | 36.7 | 49.1 | Frontal\_Sup\_Medial\_R\_3 | 7 | 119 | -27.4 | 34.1 | 36.3 | Frontal\_Mid\_2\_L\_3 | 4 |
| 13 | 24.0 | 30.7 | 36.4 | Frontal\_Sup\_2\_R\_1 | 7 | 120 | -46.1 | 28.2 | 26.8 | Frontal\_Inf\_Tri\_L\_1 | 6 |
| 14 | 40.6 | 14.6 | 48.3 | Frontal\_Mid\_2\_R\_5 | 6 | 121 | -11.1 | 34.3 | 51.5 | Frontal\_Sup\_Medial\_L\_3 | 7 |
| 15 | 6.8 | 21.4 | 31.4 | Cingulate\_Mid\_R\_1 | 4 | 122 | -39.4 | 17.1 | 46.7 | Frontal\_Mid\_2\_L\_4 | 6 |
| 16 | 53.6 | 24.8 | 0.9 | Frontal\_Inf\_Tri\_R\_1 | 7 | 123 | -4.8 | 17.8 | 46.2 | Supp\_Motor\_Area\_L\_1 | 4 |
| 17 | 33.4 | 37.3 | -16.4 | OFCant\_R\_2 | 6 | 124 | -46.2 | 28.3 | -7.2 | Frontal\_Inf\_Orb\_2\_L\_1 | 7 |
| 18 | 26.6 | 19.5 | -21.3 | OFCpost\_R\_1 | 4 | 125 | -28.4 | 36.0 | -15.7 | OFCant\_L\_2 | 7 |
| 19 | 48.2 | 35.8 | 15.2 | Frontal\_Inf\_Tri\_R\_2 | 4 | 126 | -32.1 | 20.4 | -16.0 | OFCpost\_L\_1 | 7 |
| 20 | 37.1 | 20.8 | 6.0 | Insula\_R\_1 | 4 | 127 | -43.1 | 41.9 | 11.0 | Frontal\_Inf\_Tri\_L\_2 | 6 |
| 21 | 55.3 | 9.6 | 22.0 | Frontal\_Inf\_Oper\_R\_1 | 6 | 128 | -32.5 | 22.2 | 5.9 | Insula\_L\_1 | 4 |
| 22 | 39.9 | 17.6 | 29.1 | Frontal\_Inf\_Oper\_R\_2 | 6 | 129 | -53.0 | 18.5 | 10.6 | Frontal\_Inf\_Tri\_L\_3 | 7 |
| 23 | 57.8 | -8.2 | 27.2 | Postcentral\_R\_1 | 2 | 130 | -46.2 | 7.9 | 28.5 | Precentral\_L\_1 | 6 |
| 24 | 6.2 | -22.2 | 65.6 | Supp\_Motor\_Area\_R\_1 | 2 | 131 | -41.6 | -14.8 | 44.7 | Postcentral\_L\_1 | 2 |
| 25 | 7.0 | -8.0 | 53.0 | Supp\_Motor\_Area\_R\_2 | 1 | 132 | -58.1 | -5.6 | 27.2 | Postcentral\_L\_2 | 2 |
| 26 | 26.4 | -13.0 | 66.2 | Frontal\_Sup\_2\_R\_2 | 2 | 133 | -16.2 | -19.0 | 69.5 | Paracentral\_Lobule\_L\_1 | 2 |
| 27 | 49.2 | -4.5 | 48.0 | Precentral\_R\_1 | 1 | 134 | -6.4 | -4.4 | 47.6 | Cingulate\_Mid\_L\_1 | 1 |
| 28 | 6.3 | 14.0 | 48.6 | Supp\_Motor\_Area\_R\_3 | 3 | 135 | -9.0 | 0.5 | 66.5 | Supp\_Motor\_Area\_L\_2 | 4 |
| 29 | 13.8 | 6.4 | 65.4 | Supp\_Motor\_Area\_R\_4 | 4 | 136 | -56.9 | -3.5 | 6.7 | Temporal\_Sup\_L\_1 | 2 |
| 30 | 25.2 | 12.4 | 49.4 | Frontal\_Sup\_2\_R\_3 | 6 | 137 | -23.2 | 10.7 | 53.5 | Frontal\_Mid\_2\_L\_5 | 6 |
| 31 | 39.8 | 3.5 | 34.1 | Precentral\_R\_2 | 3 | 138 | -45.9 | -0.5 | 49.2 | Precentral\_L\_2 | 3 |
| 32 | 32.2 | -5.3 | 51.8 | Precentral\_R\_3 | 3 | 139 | -27.4 | -9.0 | 55.9 | Precentral\_L\_3 | 3 |
| 33 | 42.0 | -23.3 | 53.4 | Postcentral\_R\_2 | 2 | 140 | -35.8 | -23.2 | 65.6 | Postcentral\_L\_3 | 2 |
| 34 | 41.8 | 4.9 | -7.5 | Insula\_R\_2 | 3 | 141 | -39.0 | 1.7 | 9.6 | Insula\_L\_2 | 3 |
| 35 | 41.3 | 3.5 | 7.3 | Insula\_R\_3 | 3 | 142 | -38.7 | 8.1 | -4.7 | Insula\_L\_3 | 3 |
| 36 | 37.6 | 21.2 | -10.1 | Insula\_R\_4 | 4 | 143 | -37.7 | -12.9 | -1.4 | Insula\_L\_4 | 3 |
| 37 | 38.3 | -12.4 | -1.1 | Insula\_R\_5 | 3 | 144 | -50.6 | -23.8 | 41.4 | Postcentral\_L\_4 | 3 |
| 38 | 32.6 | -39.1 | 49.5 | Postcentral\_R\_3 | 3 | 145 | -23.7 | -31.6 | 63.4 | Postcentral\_L\_5 | 2 |
| 39 | 20.1 | -33.3 | 69.7 | Postcentral\_R\_4 | 2 | 146 | -41.2 | -15.5 | 14.4 | Rolandic\_Oper\_L\_1 | 2 |
| 40 | 43.3 | -10.9 | 13.8 | Rolandic\_Oper\_R\_1 | 2 | 147 | -7.3 | -33.9 | 67.4 | Paracentral\_Lobule\_L\_2 | 2 |
| 41 | 25.3 | -52.4 | 68.0 | Parietal\_Sup\_R\_1 | 3 | 148 | -25.4 | -54.7 | 64.1 | Parietal\_Sup\_L\_1 | 3 |
| 42 | 14.6 | -68.4 | 35.0 | Precuneus\_R\_1 | 6 | 149 | -9.2 | -71.0 | 32.0 | Precuneus\_L\_1 | 6 |
| 43 | 31.6 | -60.7 | 49.3 | Angular\_R\_1 | 6 | 150 | -28.3 | -62.5 | 40.4 | Parietal\_Inf\_L\_1 | 3 |
| 44 | 7.6 | -57.3 | 61.8 | Precuneus\_R\_2 | 3 | 151 | -9.6 | -66.1 | 55.3 | Precuneus\_L\_2 | 6 |
| 45 | 52.9 | -27.3 | 40.8 | SupraMarginal\_R\_1 | 3 | 152 | -35.8 | -39.3 | 47.5 | Parietal\_Inf\_L\_2 | 3 |
| 46 | 58.0 | -29.3 | 19.6 | Temporal\_Sup\_R\_1 | 3 | 153 | -42.3 | -31.3 | 15.9 | Temporal\_Sup\_L\_2 | 2 |
| 47 | 54.2 | -45.2 | 37.0 | SupraMarginal\_R\_2 | 7 | 154 | -59.4 | -26.0 | 22.0 | SupraMarginal\_L\_1 | 3 |
| 48 | 47.8 | -61.6 | 34.7 | Angular\_R\_2 | 6 | 155 | -42.1 | -65.6 | 41.7 | Angular\_L\_1 | 7 |
| 49 | 41.4 | -75.3 | 27.9 | Occipital\_Mid\_R\_1 | 7 | 156 | -51.3 | -56.3 | 20.5 | Temporal\_Mid\_L\_1 | 7 |
| 50 | 48.9 | -58.0 | 14.3 | Temporal\_Mid\_R\_1 | 2 | 157 | -53.4 | -43.5 | 38.8 | SupraMarginal\_L\_2 | 4 |
| 51 | 27.2 | 11.6 | -39.2 | Temporal\_Pole\_Mid\_R\_1 | 5 | 158 | -37.8 | 6.1 | -37.7 | Temporal\_Inf\_L\_1 | 7 |
| 52 | 40.0 | 19.0 | -34.2 | Temporal\_Pole\_Mid\_R\_2 | 7 | 159 | -34.7 | 18.7 | -32.3 | Temporal\_Pole\_Sup\_L\_1 | 7 |
| 53 | 52.9 | 10.8 | -21.8 | Temporal\_Pole\_Mid\_R\_3 | 7 | 160 | -49.5 | 11.1 | -30.5 | Temporal\_Pole\_Mid\_L\_1 | 7 |
| 54 | 50.0 | -33.9 | -0.7 | Temporal\_Mid\_R\_2 | 7 | 161 | -49.8 | 6.4 | -15.1 | Temporal\_Pole\_Sup\_L\_2 | 7 |
| 55 | 61.3 | -22.8 | -22.5 | Temporal\_Inf\_R\_1 | 6 | 162 | -22.8 | 9.0 | -38.7 | Temporal\_Pole\_Mid\_L\_2 | 5 |
| 56 | 54.5 | -7.7 | -31.5 | Temporal\_Inf\_R\_2 | 5 | 163 | -57.6 | -6.4 | -22.6 | Temporal\_Mid\_L\_2 | 7 |
| 57 | 46.9 | 3.9 | -39.9 | Temporal\_Inf\_R\_3 | 7 | 164 | -58.9 | -30.0 | 3.5 | Temporal\_Mid\_L\_3 | 7 |
| 58 | 40.3 | -11.1 | -35.8 | Fusiform\_R\_1 | 5 | 165 | -57.8 | -47.5 | 5.3 | Temporal\_Mid\_L\_4 | 7 |
| 59 | 43.5 | -26.3 | -24.7 | Fusiform\_R\_2 | 5 | 166 | -59.9 | -27.5 | -18.1 | Temporal\_Inf\_L\_2 | 7 |
| 60 | 59.2 | -3.3 | 2.7 | Temporal\_Sup\_R\_2 | 2 | 167 | -49.3 | -4.7 | -37.5 | Temporal\_Inf\_L\_3 | 7 |
| 61 | 39.8 | -25.6 | 14.5 | Rolandic\_Oper\_R\_2 | 2 | 168 | -37.8 | -13.1 | -29.2 | Temporal\_Inf\_L\_4 | 4 |
| 62 | 61.9 | -23.6 | -2.7 | Temporal\_Mid\_R\_3 | 7 | 169 | -51.8 | -18.2 | -28.8 | Temporal\_Inf\_L\_5 | 4 |
| 63 | 56.5 | -8.6 | -14.3 | Temporal\_Mid\_R\_4 | 6 | 170 | -56.9 | -14.5 | -6.8 | Temporal\_Mid\_L\_5 | 7 |
| 64 | 59.2 | -43.7 | 8.6 | Temporal\_Mid\_R\_5 | 7 | 171 | -26.6 | -42.8 | -16.0 | Fusiform\_L\_1 | 7 |
| 65 | 46.5 | -59.8 | -14.7 | Temporal\_Inf\_R\_4 | 2 | 172 | -60.4 | -50.0 | -14.1 | Temporal\_Inf\_L\_6 | 6 |
| 66 | 36.6 | -69.3 | -17.4 | Fusiform\_R\_4 | 1 | 173 | -42.5 | -52.2 | -17.4 | Fusiform\_L\_2 | 2 |
| 67 | 25.1 | -44.5 | -12.2 | Fusiform\_R\_5 | 7 | 174 | -46.6 | -39.9 | -24.2 | Temporal\_Inf\_L\_7 | 2 |
| 68 | 55.3 | -56.3 | -4.8 | Temporal\_Inf\_R\_5 | 2 | 175 | -41.3 | -75.5 | 22.7 | Occipital\_Mid\_L\_1 | 7 |
| 69 | 60.8 | -43.4 | -17.7 | Temporal\_Inf\_R\_6 | 6 | 176 | -31.7 | -87.1 | 12.5 | Occipital\_Mid\_L\_2 | 1 |
| 70 | 41.7 | -45.7 | -22.6 | Fusiform\_R\_6 | 5 | 177 | -17.0 | -50.8 | 0.7 | Lingual\_L\_1 | 1 |
| 71 | 21.0 | -63.6 | -9.0 | Lingual\_R\_1 | 1 | 178 | -43.1 | -70.4 | -13.9 | Occipital\_Inf\_L\_1 | 2 |
| 72 | 30.1 | -83.0 | 20.5 | Occipital\_Mid\_R\_2 | 1 | 179 | -25.9 | -63.2 | -12.2 | Fusiform\_L\_4 | 1 |
| 73 | 45.1 | -74.2 | 2.6 | Temporal\_Mid\_R\_6 | 1 | 180 | -16.5 | -85.0 | 33.1 | Occipital\_Sup\_L\_1 | 1 |
| 74 | 19.0 | -81.8 | 41.5 | Occipital\_Sup\_R\_1 | 1 | 181 | -48.2 | -67.2 | 1.0 | Temporal\_Mid\_L\_6 | 3 |
| 75 | 18.0 | -83.4 | -11.3 | Lingual\_R\_2 | 1 | 182 | -36.0 | -84.1 | -3.9 | Occipital\_Mid\_L\_3 | 1 |
| 76 | 8.0 | -74.8 | 24.8 | Cuneus\_R\_1 | 1 | 183 | -8.9 | -70.6 | -1.8 | Lingual\_L\_2 | 1 |
| 77 | 23.7 | -95.9 | 6.6 | Occipital\_Mid\_R\_3 | 1 | 184 | -10.6 | -98.2 | 7.7 | Calcarine\_L\_1 | 1 |
| 78 | 7.2 | -75.6 | -2.8 | Lingual\_R\_3 | 1 | 185 | -14.6 | -84.0 | -13.0 | Lingual\_L\_3 | 1 |
| 79 | 8.3 | -88.4 | 12.2 | Calcarine\_R\_1 | 1 | 186 | -22.2 | -96.7 | -10.0 | Occipital\_Inf\_L\_2 | 1 |
| 80 | 31.0 | -91.9 | -10.8 | Occipital\_Inf\_R\_1 | 1 | 187 | -5.7 | -81.3 | 12.2 | Calcarine\_L\_2 | 1 |
| 81 | 14.9 | -68.4 | 8.3 | Calcarine\_R\_2 | 1 | 188 | -22.1 | -66.7 | 7.5 | Calcarine\_L\_3 | 1 |
| 82 | 8.0 | 34.7 | 17.2 | Cingulate\_Ant\_R\_1 | 4 | 189 | -7.5 | -22.3 | 46.2 | Cingulate\_Mid\_L\_2 | 1 |
| 83 | 5.5 | -0.9 | 35.5 | Cingulate\_Mid\_R\_2 | 3 | 190 | -5.8 | 34.2 | 26.3 | Cingulate\_Ant\_L\_3 | 4 |
| 84 | 5.4 | -39.1 | 26.9 | Cingulate\_Post\_R\_1 | 7 | 191 | -3.4 | -4.9 | 32.6 | Cingulate\_Mid\_L\_3 | 6 |
| 85 | 12.4 | -57.2 | 18.0 | Precuneus\_R\_3 | 7 | 192 | -5.0 | 13.3 | 28.6 | Cingulate\_Mid\_L\_4 | 4 |
| 86 | 28.4 | -53.9 | 7.0 | Calcarine\_R\_3 | 1 | 193 | -8.5 | -58.9 | 17.6 | Precuneus\_L\_4 | 7 |
| 87 | 7.3 | -18.9 | 30.0 | Cingulate\_Mid\_R\_3 | 7 | 194 | -4.9 | -36.1 | 32.0 | Cingulate\_Mid\_L\_5 | 7 |
| 88 | 8.0 | -22.9 | 45.0 | Cingulate\_Mid\_R\_4 | 4 | 195 | -7.3 | -18.3 | 30.0 | Cingulate\_Mid\_L\_6 | 7 |
| 89 | 6.3 | -57.2 | 38.1 | Precuneus\_R\_4 | 7 | 196 | -6.4 | -54.3 | 37.4 | Precuneus\_L\_5 | 7 |
| 90 | 8.4 | -39.8 | 48.1 | Precuneus\_R\_5 | 4 | 197 | -8.7 | -42.8 | 50.3 | Precuneus\_L\_6 | 4 |
| 91 | 31.2 | 3.7 | -21.7 | Amygdala\_R\_1 | 5 | 198 | -7.5 | -42.1 | 13.4 | Cingulate\_Post\_L\_1 | 7 |
| 92 | 28.7 | -36.9 | -0.1 | Hippocampus\_R\_1 | 8 | 199 | -26.7 | 2.3 | -18.6 | Amygdala\_L\_1 | 8 |
| 93 | 35.6 | -14.7 | -18.4 | Hippocampus\_R\_2 | 8 | 200 | -21.5 | -37.0 | 5.8 | Hippocampus\_L\_1 | 8 |
| 94 | 28.0 | -28.5 | -13.7 | ParaHippocampal\_R\_1 | 7 | 201 | -32.1 | -40.1 | -4.0 | Hippocampus\_L\_2 | 7 |
| 95 | 29.3 | -19.7 | -26.4 | ParaHippocampal\_R\_2 | 5 | 202 | -22.8 | -12.7 | -17.3 | Hippocampus\_L\_3 | 8 |
| 96 | 24.6 | -2.6 | -30.7 | ParaHippocampal\_R\_3 | 5 | 203 | -35.7 | -24.8 | -15.0 | Hippocampus\_L\_4 | 8 |
| 97 | 14.6 | -46.1 | 2.8 | Lingual\_R\_4 | 1 | 204 | -20.7 | -30.8 | -11.2 | ParaHippocampal\_L\_1 | 7 |
| 98 | 19.2 | -7.7 | -14.8 | Hippocampus\_R\_3 | 8 | 205 | -30.6 | -23.9 | -26.7 | Fusiform\_L\_5 | 7 |
| 99 | 12.8 | 13.0 | 11.3 | Caudate\_R\_2 | 8 | 206 | -21.5 | -4.1 | -29.3 | ParaHippocampal\_L\_2 | 4 |
| 100 | 14.1 | -4.3 | 20.9 | Caudate\_R\_3 | 8 | 207 | -12.4 | 11.5 | 8.5 | Caudate\_L\_2 | 8 |
| 101 | 12.6 | 20.1 | -0.8 | Caudate\_R\_4 | 8 | 208 | -10.4 | 10.9 | -8.1 | Caudate\_L\_3 | 8 |
| 102 | 26.7 | 6.4 | 0.0 | Putamen\_R\_1 | 8 | 209 | -14.5 | -3.6 | 20.9 | Caudate\_L\_4 | 8 |
| 103 | 14.3 | 8.5 | -9.6 | Putamen\_R\_2 | 8 | 210 | -24.8 | 5.5 | -0.1 | Putamen\_L\_1 | 8 |
| 104 | 10.7 | -26.8 | -2.0 | Thalamus\_R\_1 | 8 | 211 | -9.5 | -25.5 | -1.4 | Thalamus\_L\_1 | 8 |
| 105 | 12.4 | -27.8 | 13.4 | Thalamus\_R\_2 | 8 | 212 | -4.7 | -10.2 | 5.9 | Thalamus\_L\_2 | 8 |
| 106 | 5.7 | -9.8 | 4.9 | Thalamus\_R\_3 | 8 | 213 | -11.4 | -25.6 | 14.9 | Thalamus\_L\_3 | 8 |
| 107 | -5.2 | 29.2 | -9.9 | Cingulate\_Ant\_L\_1 | 7 |  |  |  |  |  |  |

Network assignments: 1=visual; 2=sensorisomatomotor; 3=dorsal attention; 4=salience/ventral attention; 5=affective; 6=frontoparietal; 7=default-mode; 8=miscellaneous (subcortical).

**Supplementary Table 7.** Effect of hub definition on results

|  |  |  |  |
| --- | --- | --- | --- |
|  | 12.5% | 15% | 17.5% |
| Degree (p) | .235 | .24 | .235 |
| Weighted degree (p) | .895 | .90 | .895 |
| SC Hubs (p) | .854 | .86 | .354 |
| SC Feeder (p) | .88 | .62 | .304 |
| SC Local (p) | .199 | .23 | .284 |
| SC-FC (p) | .012 | .01 | .012 |
| SC-FC Hubs (p) | .433 | .58 | .648 |
| SC-FC Feeders (p) | .006 | <.001 | .001 |
| SC-FC Local (p) | .048 | .11 | .195 |
| Feeder-behaviour correlation (r) | -.23\* | -.25\* | -.29 |

Note: *p*-values differ from main text as they have not been corrected for multiple comparisons in the follow-up structural-functional connectivity (SC-FC) contrasts. The main findings, whole brain SC-FC coupling differences, feeder SF-FC coupling differences and brain-behaviour correlations replicate across all three hub definitions. Grey shading indicates significant results.

**Supplementary Table 8.** Independent behavior correlations

|  |  |  |
| --- | --- | --- |
|  | Correlation | p |
| Inattention SNAP-IV (parent-rated) | -.24 | < .001 |
| Hyperactivity/Impulsivity SNAP-IV (parent-rated) | -.22 | .002 |
| Inattention ASRS (self-rated) | -.16 | .021 |
| Hyperactivity/Impulsivity ASRS (self-rated) | -.22 | .002 |

Abbreviation: SNAP-IV=Swanson, Nolan, and Pelham, Version IV; ASRS=Adult ADHD Self-Report Scale.