**Table S1** Hierarchical Linear Regression Models for Association of Mean Level of Cognitive Performance and Regional CBF Adjusting for Demographics and Cognitive Dispersion

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Block 1** | Hippocampal CBF  R2=.030  F (4,143) =1.117, p=.351 | | | | IPL CBF  R2=.115  F (4,143) =4.642, **p=.001** | | | | ITG CBF  R2=.090  F (4,143) =3.541 p=.122 | | | | mOFC CBF  R2=.022  F (4,143) =.800, p=.527 | | | | rMFG CBF  R2=.094  F (4,143) =3.693, **p=.007** | | | | |
|  | B | S.E. | p | sr | B | S.E. | p | sr | B | S.E. | p | sr | B | S.E. | p | sr | B | S.E. | p | sr |
| Age | 0.056 | 0.067 | 0.404 | .069 | 0.159 | 0.068 | **0.020** | .185 | -0.136 | 0.073 | 0.065 | -.148 | -0.005 | 0.063 | 0.931 | -.007 | -0.057 | 0.053 | 0.283 | -.086 |
| Gender | 0.232 | 0.909 | 0.799 | .021 | 2.389 | 0.913 | **0.010** | .206 | 0.292 | 0.990 | 0.768 | .024 | -1.292 | 0.851 | 0.131 | -.126 | 2.515 | 0.711 | 0.001 | .282 |
| Education | 0.35 | 0.182 | 0.056 | .158 | 0.271 | 0.183 | 0.141 | .116 | 0.143 | 0.199 | 0.473 | .057 | 0.096 | 0.171 | 0.575 | .046 | 0.16 | 0.143 | 0.264 | .089 |
| Cognitive Dispersion | -0.195 | 0.844 | 0.818 | -.019 | -1.849 | 0.848 | **0.031** | -.172 | -2.486 | 0.920 | **0.008** | -.216 | 0.519 | 0.790 | 0.512 | .054 | 0.434 | 0.661 | 0.513 | .052 |
| **Block 2** | R2=.086, R2 change=.056  F (5,142) =2.671, **p=.024** | | | | R2=0.117, R2 change=0.002  F (5,142) =3.748, **p=.003** | | | | R2=.091, R2 change=.001  F (5,142) =2.858, **p=.017** | | | | R2=.022, R2 change=.000  F (5,142) =.647, p=.664 | | | | R2=.094, R2 change=.000  F (5,142) =2.934, **p=.015** | | | | |
| Age | 0.031 | 0.066 | 0.641 | .037 | 0.154 | 0.068 | 0.026 | .178 | -0.132 | 0.074 | 0.078 | -.142 | -0.007 | 0.064 | 0.908 | -.010 | -0.056 | 0.053 | 0.293 | -.084 |
| Gender | 0.326 | 0.886 | 0.713 | .030 | 2.406 | 0.916 | **0.010** | .207 | 0.276 | 0.994 | 0.782 | .022 | -1.284 | 0.854 | 0.135 | -.125 | 2.514 | 0.714 | 0.001 | .281 |
| Education | 0.398 | 0.178 | 0.027 | .179 | 0.28 | 0.184 | 0.131 | .120 | 0.135 | 0.200 | 0.501 | .054 | 0.099 | 0.172 | 0.564 | .048 | 0.159 | 0.144 | 0.27 | .088 |
| Cognitive Dispersion | -0.642 | 0.836 | 0.444 | -.062 | -1.929 | 0.864 | **0.027** | -.176 | -2.409 | 0.938 | **0.011** | -.205 | 0.484 | 0.806 | 0.549 | .050 | 0.441 | 0.674 | 0.514 | .052 |
| Mean Cognitive Performance | -24.103 | 8.194 | **0.004** | -.236 | -4.352 | 8.471 | 0.608 | -.041 | 4.189 | 9.192 | 0.649 | .036 | -1.854 | 7.900 | 0.815 | -.019 | 0.389 | 6.608 | 0.953 | .005 |

S.E.= standard error; CBF=cerebral blood flow; IPL= inferior parietal lobe; ITG=inferior temporal gyrus; mOFC= medial orbitofrontal cortex; rMFG= rostral middle frontal gyrus; sr = semi partial correlation coefficient. For gender, women are the reference group. Bold values are statistically significant (p<.05). Cognitive dispersion was calculated by using the intraindividual standard deviation across 6 baseline z-scores.