**eTable 3**

**Adjusteda Linear Regression Model Indicating the Association of SED%b with the Change in Cognitive Z-scoresc in Follow-up**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Total** | | |  | **White** | | |  | **Black** | | |  |
|  |  | **Beta** | **SE** | **P** |  | **Beta** | **SE** | **P** |  | **Beta** | **SE** | **P** |  |
| **Change of executive function z-scored**  **(N=4,740)** | Quartile 1f | Ref. |  |  |  | Ref. |  |  |  | Ref. |  |  |  |
| Quartile 2 | -0.05 | 0.03 | 0.14 |  | -0.05 | 0.04 | 0.20 |  | -0.03 | 0.06 | 0.62 |  |
| Quartile 3 | -0.03 | 0.03 | 0.40 |  | -0.02 | 0.04 | 0.62 |  | -0.04 | 0.06 | 0.49 |  |
| Quartile 4 | -0.03 | 0.04 | 0.43 |  | -0.03 | 0.04 | 0.49 |  | -0.04 | 0.06 | 0.53 |  |
| **Change of memory z-scoree**  **(N=5,160)** | Quartile 1f | Ref. |  |  |  | Ref. |  |  |  | Ref. |  |  |  |
| Quartile 2 | 0.02 | 0.04 | 0.57 |  | 0.02 | 0.05 | 0.71 |  | 0.04 | 0.09 | 0.67 |  |
| Quartile 3 | -0.01 | 0.04 | 0.84 |  | 0.05 | 0.05 | 0.34 |  | -0.16 | 0.09 | 0.06 |  |
| Quartile 4 | -0.10 | 0.05 | 0.05 |  | -0.09 | 0.06 | 0.14 |  | -0.14 | 0.09 | 0.11 |  |

a Adjusted by age, sex, race, region of residence, education, body mass index, hypertension, smoking, diabetes, scores at baseline, and periods of follow-up.

b Denotes the proportion of total accelerometer wear time spent in sedentary behavior.

c Change of Cognitive Scores refers to the differences of cognitive scores between baseline and follow-up. The negative values mean the cognitive scores decrease over time during follow-up.

d Executive z-score refers to the average of standardized scores of letter fluency and animal fluency tests. For participants one missing test, the score would be the result of the other test in the same domain.

e Memory z-score refers to the average of standardized scores of word list learning and MoCA recall and orientation tests. For participants one missing test, the score would be the result of the other test in the same domain. MoCA refers to Montreal Cognitive Assessment, including a 5-word delayed memory recall test, and a 6-item orientation test.

f Denotes the quartiles of the proportion of total accelerometer wear time spent in sedentary behavior. Quartile 1: 0<=SED%<71.11% , Quartile 2: 71.11<=SED%<77.65%, Quartile 3: 77.65<=SED%<83.68%, Quartile 4: SED%>=83.68%