**Supplemental materials**

**Table 1. The cognitive domains and relevant test from the HRS HCAP protocol**

|  |  |
| --- | --- |
| **Cognitive domain** | **Tests** |
| Overall cognition | Mini-Mental State Exam (MMSE)  10/66 dementia community screening instrument (CSI)  Telephone interview cognitive status (TICS) |
| Episodic memory | immediate and delayed word recall  Word list recognition  immediate and delayed logical memory |
| Working memory | Symbol digit modalities test  Symbol cancellation test |
| Executive function | Digit span backward test  Trail making test – part B  Number series test |
| Language (verbal fluency) | Animal naming |
| Visuospatial function | Constructional praxis |
| Information processing speed | Trail making test – part A |

**Table 2. The distribution of the change of CDR global scores when re-evaluated**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Initial rating of CDR global scores | | | | |
|  | 0 | 0.5 | 1 | 2 | 3 |
| no change | 20 | 25 | 9 | 5 | 2 |
| change to one level upper | 3 | 2 | 1 | 1 | -- |
| change to one level lower | -- | 4 | 2 | -- | 1 |
| Total | 23 | 31 | 12 | 6 | 3 |

Table S3. Time taken for each test (minutes)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Testing  Sequence | Test | N | mean | SD | median | min | max | p10 | p90 |
| **RESPONDENT** | |  |  |  |  |  |  |  |  |
| 1 | MMSE | 1477 | 8.5 | 3.1 | 7.8 | 1 | 23.6 | 5.3 | 12.5 |
| 2 | HRS TICS | 1429 | 0.9 | 0.6 | 0.8 | 0.1 | 7.3 | 0.5 | 1.6 |
| 3 | Word recall | 1412 | 3.9 | 1.3 | 3.7 | 0.5 | 11.3 | 2.6 | 5.4 |
| 4 | Animal naming | 1333 | 3.3 | 1.7 | 3.2 | 0.2 | 8.8 | 0.4 | 5.3 |
| 5 | Symbol cancellation | 1139 | 2.3 | 0.7 | 2.2 | 0.1 | 7.8 | 1.7 | 3.1 |
| 6 | Backward count | 1269 | 1.5 | 0.7 | 1.3 | 0.2 | 5.3 | 0.9 | 2.3 |
| 7 | CSI-D | 1468 | 1.4 | 0.6 | 1.2 | 0.2 | 5.1 | 0.8 | 2.1 |
| 8 | Delayed word recall | 1369 | 0.8 | 0.5 | 0.7 | 0 | 4.8 | 0.3 | 1.4 |
| 9 | Logical memory | 1351 | 3.0 | 0.9 | 2.9 | 0.2 | 8.6 | 2.1 | 4.2 |
| 10 | Word recognition | 1357 | 2.9 | 1.1 | 2.7 | 0.7 | 10.9 | 1.8 | 4.2 |
| 11 | Constructional praxis | 1363 | 3.2 | 1.4 | 2.9 | 0.3 | 11.2 | 1.7 | 5 |
| 12 | Symbol digit matching test (SDMT) | 1064 | 4.4 | 1.2 | 4.3 | 0.1 | 9.3 | 3.3 | 5.9 |
| 13 | Delayed logical memory | 852 | 1.2 | 0.6 | 1.1 | 0.2 | 5.6 | 0.6 | 2.0 |
| 14 | Number series | 1170 | 4.3 | 1.7 | 4 | 0.5 | 14.3 | 2.6 | 6.3 |
| 15 | Trail making test | 1149 | 6.9 | 2.6 | 6.8 | 0.4 | 17.1 | 3.6 | 10.3 |
|  | Total | 1477 | 48.5 | 11.7 | 48.1 | 4.5 | 101.6 | 35.6 | 62.6 |
| **INFORMANT** | |  |  |  |  |  |  |  |  |
| 1 | IQCODE | 1472 | 7.8 | 2.1 | 6.9 | 0.5 | 32.1 | 4.4 | 12.2 |
| 2 | Blessed scale (Part 2) | 1473 | 0.7 | 3.5 | 0.6 | 0.1 | 5.1 | 0.3 | 1.2 |
| 3 | CSI-D | 1473 | 1.2 | 0.5 | 1 | 0.2 | 6.1 | 0.7 | 1.7 |
|  | Total | 1473 | 9.7 | 4.1 | 8.8 | 0.8 | 36.6 | 5.7 | 14.6 |
| **Total** | | 1477 | 58.1 | 13.5 | 57.2 | 6.1 | 125.6 | 42.8 | 74.2 |

Table S4. Number (Percentage) of Respondent Refusing Each Test

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Domain | Test | Number of completed interviews | Refused/DK/Cannot Do | |
|  |  |  | n | % |
| Overall cognition | MMSE | 1478 | 0 | 0.0 |
|  | HRS TICS | 1478 | 48 | 3.3 |
|  | CSI-D (respondent) | 1478 | 9 | 0.6 |
| Episodic memory | Word recall | 1478 | 65 | 4.4 |
|  | Delayed word recall | 1397 | 24 | 1.7 |
|  | Word recognition | 1398 | 40 | 2.9 |
|  | Logical memory | 1478 | 126 | 8.5 |
|  | Delayed logical memory | 1353 | 500 | 36.9 |
| Working memory | SDMT | 1478 | 413 | 27.9 |
|  | Symbol cancellation | 1478 | 325 | 22.0 |
| Executive function | Backward count | 1478 | 208 | 14.1 |
|  | Number series | 1478 | 307 | 20.8 |
| Language | Animal naming | 1478 | 144 | 9.7 |
| Visuospatial function | Constructional praxis | 1478 | 114 | 7.7 |
| Information processing speed | Trail making tests | 1478 | 328 | 22.2 |

DK: don’t know

Table S5. The scores of each test grouped by CDR global score\*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | All Group | |  | CDR=0 | |  | CDR=0.5 | |  | CDR≥1 | |
|  | N | Median |  | N | Median |  | N | Median |  | N | Median |
| **Respondent** |  |  |  |  |  |  |  |  |  |  |  |
| MMSE | 1478 | 22.0 |  | 432 | 26.0 |  | 730 | 22.0 |  | 316 | 13.0 |
| TICS | 1478 | 2.0 |  | 432 | 2.0 |  | 730 | 2.0 |  | 316 | 1.0 |
| Word immediate recall | 1413 | 4.0 |  | 429 | 5.0 |  | 701 | 4.0 |  | 283 | 1.7 |
| Word delayed recall | 1397 | 2.0 |  | 429 | 4.0 |  | 692 | 2.0 |  | 276 | 0.0 |
| Animal naming | 1333 | 11.0 |  | 423 | 13.0 |  | 679 | 11.0 |  | 231 | 7.0 |
| Symbol cancellation | 1152 | 23.0 |  | 380 | 29.0 |  | 593 | 22.0 |  | 179 | 8.0 |
| Backward digit span | 1268 | 19.0 |  | 416 | 24.0 |  | 633 | 18.0 |  | 219 | 9.0 |
| CSI-D | 1478 | 3.0 |  | 432 | 4.0 |  | 730 | 3.0 |  | 316 | 3.0 |
| Word recognition | 1396 | 18.0 |  | 428 | 19.0 |  | 692 | 18.0 |  | 276 | 12.0 |
| Constructional praxis-1 | 1477 | 8.0 |  | 432 | 10.0 |  | 729 | 8.0 |  | 316 | 6.0 |
| Constructional praxis-2 | 1478 | 3.0 |  | 432 | 3.0 |  | 730 | 3.0 |  | 316 | 2.0 |
| SDMT | 1064 | 24.0 |  | 380 | 28.0 |  | 552 | 23.0 |  | 132 | 13.0 |
| Logical memory | 1351 | 4.0 |  | 421 | 6.0 |  | 680 | 4.0 |  | 250 | 2.0 |
| Delayed logical memory | 1352 | 1.0 |  | 421 | 4.0 |  | 681 | 1.0 |  | 250 | 0.0 |
| Number series | 1012 | 516.0 |  | 338 | 516.0 |  | 525 | 516.0 |  | 149 | 467.0 |
| Trail making test-A | 1029 | 92.0 |  | 379 | 76.0 |  | 539 | 100.0 |  | 111 | 126.0 |
| Trail making test-B | 693 | 146.0 |  | 306 | 128.0 |  | 344 | 158.0 |  | 43 | 180.0 |
| **Informant** |  |  |  |  |  |  |  |  |  |  |  |
| IQCODE | 1472 | 79.0 |  | 431 | 78.0 |  | 727 | 79.0 |  | 314 | 87.5 |
| BLESSED | 1473 | 3.0 |  | 431 | 3.0 |  | 728 | 3.0 |  | 314 | 4.0 |
| CSI-D | 1329 | 2.0 |  | 399 | 1.0 |  | 660 | 2.0 |  | 270 | 4.0 |

\* p<0.001 for all group comparisons

Table S6. Correlation of neuropsychological performance with informant-based CSI-D assessment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test | R2 | Correlation coefficients | 95% CI: lower limit | 95% CI: upper limit | *p* |
| **Respondent** |  |  |  |  |  |
| MMSE | 0.208 | -0.430 | -0.484 | -0.376 | <0.001 |
| TICS | 0.123 | -0.321 | -0.362 | -0.281 | <0.001 |
| Word immediate recall | 0.140 | -0.363 | -0.409 | -0.318 | <0.001 |
| Word delayed recall | 0.115 | -0.329 | -0.376 | -0.282 | <0.001 |
| Animal naming | 0.081 | -0.275 | -0.333 | -0.217 | <0.001 |
| Symbol cancellation | 0.071 | -0.257 | -0.316 | -0.197 | <0.001 |
| Backward digit span | 0.048 | -0.196 | -0.253 | -0.139 | <0.001 |
| CSID | 0.093 | -0.258 | -0.312 | -0.203 | <0.001 |
| Word recognition | 0.113 | -0.317 | -0.371 | -0.263 | <0.001 |
| Constructional praxis-1 | 0.084 | -0.236 | -0.298 | -0.174 | <0.001 |
| Constructional praxis-2 | 0.080 | -0.235 | -0.286 | -0.183 | <0.001 |
| SDMT | 0.045 | -0.180 | -0.240 | -0.121 | <0.001 |
| Logical memory | 0.064 | -0.241 | -0.289 | -0.193 | <0.001 |
| Delayed logical memory | 0.077 | -0.267 | -0.309 | -0.225 | <0.001 |
| W Ability | 0.014 | -0.107 | -0.187 | -0.027 | 0.001 |
| Trail making test-A | 0.052 | 0.191 | 0.127 | 0.256 | <0.001 |
| Trail making test-B | 0.028 | 0.098 | 0.020 | 0.176 | 0.014 |
| **Informant** |  |  |  |  |  |
| IQCODE | 0.321 | 0.556 | 0.505 | 0.606 | <0.001 |
| BLESSED | 0.152 | 0.287 | 0.242 | 0.332 | <0.001 |

**Table S7. Neurocognitive function stratified by age in the CHARLS subsample**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 65-74 years | |  | 75-100 years | |  | P-value |
|  | N | Median |  | N | Median |  |
| **Respondent** |  |  |  |  |  |  |  |
| MMSE | 479 | 23.0 |  | 243 | 19.0 |  | <0.001 |
| TICS | 479 | 2.0 |  | 243 | 2.0 |  | <0.001 |
| Word immediate recall | 470 | 4.3 |  | 218 | 3.0 |  | <0.001 |
| Word delayed recall | 464 | 3.0 |  | 216 | 0.0 |  | <0.001 |
| Animal naming | 454 | 12.0 |  | 201 | 9.0 |  | <0.001 |
| Symbol cancellation | 417 | 24.0 |  | 169 | 19.0 |  | <0.001 |
| Backward digit span | 427 | 19.0 |  | 176 | 10.5 |  | <0.001 |
| CSI-D | 479 | 4.0 |  | 243 | 3.0 |  | <0.001 |
| Word recognition | 463 | 18.0 |  | 216 | 17.0 |  | <0.001 |
| Constructional praxis-1 | 479 | 8.0 |  | 243 | 7.0 |  | <0.001 |
| Constructional praxis-2 | 479 | 3.0 |  | 243 | 2.0 |  | <0.001 |
| SDMT | 400 | 24.0 |  | 148 | 17.0 |  | <0.001 |
| Logical memory | 456 | 4.0 |  | 205 | 3.0 |  | <0.001 |
| Delayed logical memory | 456 | 1.0 |  | 205 | 0.0 |  | 0.005 |
| Number series | 361 | 516.0 |  | 126 | 494.0 |  | <0.001 |
| Trail making test-A | 394 | 93.5 |  | 138 | 114.0 |  | <0.001 |
| Trail making test-B | 276 | 151.5 |  | 71 | 169.0 |  | 0.413 |
| **Informant** |  |  |  |  |  |  |  |
| IQCODE | 478 | 78.0 |  | 243 | 79.0 |  | 0.461 |
| BLESSED | 478 | 3.0 |  | 243 | 3.0 |  | <0.001 |
| CSI-D | 442 | 2.0 |  | 215 | 2.0 |  | <0.001 |

Table S8. The neurocognitive test score stratified by residence and age in CHARLS subsample

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | City/Town | | | | | | |  | Village | | | | | | |
| Tests | 65-74 years | |  | 75+ years | |  | P-value |  | 65-74 years | |  | 75+ years | |  | P-value |
|  | N | Median |  | N | Median |  |  | N | Median |  | N | Median |  |
| **Respondent** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MMSE | 114 | 26.0 |  | 81 | 23.0 |  | <0.001 |  | 364 | 23.0 |  | 162 | 16.0 |  | <0.001 |
| TICS | 114 | 2.0 |  | 81 | 2.0 |  | 0.008 |  | 364 | 2.0 |  | 162 | 2.0 |  | <0.001 |
| Word immediate recall | 113 | 5.0 |  | 77 | 4.0 |  | <0.001 |  | 356 | 4.0 |  | 141 | 2.7 |  | <0.001 |
| Word delayed recall | 113 | 4.0 |  | 77 | 2.0 |  | <0.001 |  | 350 | 3.0 |  | 139 | 0.0 |  | <0.001 |
| Animal naming | 113 | 14.0 |  | 76 | 12.0 |  | 0.002 |  | 340 | 11.0 |  | 125 | 9.0 |  | <0.001 |
| Symbol cancellation | 110 | 30.0 |  | 66 | 22.0 |  | 0.001 |  | 306 | 23.0 |  | 103 | 15.0 |  | <0.001 |
| Backward digit span | 108 | 24.0 |  | 68 | 15.0 |  | <0.001 |  | 318 | 19.0 |  | 108 | 9.0 |  | <0.001 |
| CSID | 114 | 4.0 |  | 81 | 3.0 |  | 0.113 |  | 364 | 4.0 |  | 162 | 3.0 |  | <0.001 |
| Word recognition | 113 | 19.0 |  | 77 | 18.0 |  | 0.002 |  | 349 | 18.0 |  | 139 | 16.0 |  | <0.001 |
| Constructional praxis-1 | 114 | 10.0 |  | 81 | 9.0 |  | 0.003 |  | 364 | 8.0 |  | 162 | 6.0 |  | <0.001 |
| Constructional praxis-2 | 114 | 3.0 |  | 81 | 3.0 |  | 0.004 |  | 364 | 3.0 |  | 162 | 2.0 |  | <0.001 |
| SDMT | 105 | 29.0 |  | 62 | 22.0 |  | <0.001 |  | 294 | 23.0 |  | 86 | 14.0 |  | <0.001 |
| Logical memory | 113 | 7.0 |  | 72 | 5.0 |  | 0.018 |  | 342 | 4.0 |  | 133 | 2.0 |  | <0.001 |
| Delayed logical memory | 113 | 5.0 |  | 72 | 2.5 |  | 0.033 |  | 342 | 0.0 |  | 133 | 0.0 |  | 0.003 |
| W Ability | 86 | 516.0 |  | 53 | 516.0 |  | 0.005 |  | 274 | 516.0 |  | 73 | 467.0 |  | <0.001 |
| Trail making test-A | 101 | 77.0 |  | 60 | 96.0 |  | 0.007 |  | 292 | 97.0 |  | 78 | 129.5 |  | <0.001 |
| Trail making test-B | 81 | 122.0 |  | 38 | 151.0 |  | 0.233 |  | 195 | 167.0 |  | 33 | 182.0 |  | 0.323 |
| **Informant** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IQCODE | 114 | 79.0 |  | 81 | 76.0 |  | 0.198 |  | 363 | 78.0 |  | 162 | 80.0 |  | 0.073 |
| BLESSED | 114 | 3.0 |  | 81 | 3.0 |  | 0.066 |  | 363 | 3.0 |  | 162 | 3.0 |  | <0.001 |
| CSI-D | 107 | 1.0 |  | 71 | 1.0 |  | 0.447 |  | 334 | 2.0 |  | 144 | 3.0 |  | <0.001 |

**Table S9. Neurocognitive function stratified by educational level in the CHARLS sample**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Less than Primary | |  | Primary School | |  | Middle School and above | |  | P-value |
|  | N | Median |  | N | Median |  | N | Median |  |  |
| **Respondent** |  |  |  |  |  |  |  |  |  |  |
| MMSE | 337 | 17.0 |  | 220 | 24.0 |  | 165 | 26.0 |  | <0.001 |
| TICS | 337 | 2.0 |  | 220 | 2.0 |  | 165 | 2.0 |  | <0.001 |
| Word immediate recall | 308 | 2.7 |  | 217 | 4.3 |  | 163 | 5.3 |  | <0.001 |
| Word delayed recall | 302 | 0.0 |  | 215 | 4.0 |  | 163 | 4.0 |  | <0.001 |
| Animal naming | 279 | 10.0 |  | 215 | 11.0 |  | 161 | 14.0 |  | <0.001 |
| Symbol cancellation | 233 | 14.0 |  | 199 | 25.0 |  | 154 | 36.0 |  | <0.001 |
| Backward digit span | 234 | 10.0 |  | 213 | 19.0 |  | 156 | 24.0 |  | <0.001 |
| CSI-D | 337 | 3.0 |  | 220 | 4.0 |  | 165 | 4.0 |  | <0.001 |
| Word recognition | 302 | 17.0 |  | 214 | 19.0 |  | 163 | 19.0 |  | <0.001 |
| Constructional praxis-1 | 337 | 6.0 |  | 220 | 9.0 |  | 165 | 10.0 |  | <0.001 |
| Constructional praxis-2 | 337 | 2.0 |  | 220 | 3.0 |  | 165 | 3.0 |  | <0.001 |
| SDMT | 194 | 15.0 |  | 204 | 23.0 |  | 150 | 33.0 |  | <0.001 |
| Logical memory | 292 | 2.0 |  | 211 | 4.0 |  | 158 | 8.0 |  | <0.001 |
| Delayed logical memory | 292 | 0.0 |  | 211 | 2.0 |  | 158 | 6.0 |  | <0.001 |
| Number series | 187 | 467.0 |  | 177 | 516.0 |  | 123 | 516.0 |  | <0.001 |
| Trail making test-A | 173 | 136.0 |  | 205 | 95.0 |  | 154 | 75.0 |  | <0.001 |
| Trail making test-B | 83 | 188.0 |  | 133 | 169.0 |  | 131 | 131.0 |  | <0.001 |
| **Informant** |  |  |  |  |  |  |  |  |  |  |
| IQCODE | 336 | 78.0 |  | 220 | 79.0 |  | 165 | 78.0 |  | 0.953 |
| BLESSED | 336 | 3.0 |  | 220 | 3.0 |  | 165 | 3.0 |  | 0.699 |
| CSI-D | 305 | 2.0 |  | 200 | 2.0 |  | 152 | 1.0 |  | <0.001 |

Table S10. The neurocognitive test score stratified by residence and educational level in CHARLS subsample

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | City/Town | | | | | | | | | | |  | Village | | | | | | | | |
|  | Less than Primary | |  | | | Primary School | |  | Middle School and above | | P-value |  | Less than Primary | |  | Primary School | |  | Middle School and above | | P-value |
|  | N | Median | |  | N | | Median |  | N | Median |  |  | N | Median |  | N | Median |  | N | Median |  |
| **Respondent** |  |  | |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MMSE | 59 | 20.0 | |  | 41 | | 25.0 |  | 95 | 27.0 | <0.001 |  | 278 | 16.5 |  | 179 | 24.0 |  | 69 | 26.0 | <0.001 |
| TICS | 59 | 2.0 | |  | 41 | | 2.0 |  | 95 | 2.0 | <0.001 |  | 278 | 2.0 |  | 179 | 2.0 |  | 69 | 2.0 | <0.001 |
| Word immediate recall | 58 | 3.2 | |  | 39 | | 4.7 |  | 93 | 5.3 | <0.001 |  | 250 | 2.7 |  | 178 | 4.3 |  | 69 | 5.0 | <0.001 |
| Word delayed recall | 58 | 0.0 | |  | 39 | | 4.0 |  | 93 | 4.0 | <0.001 |  | 244 | 0.0 |  | 176 | 3.0 |  | 69 | 4.0 | <0.001 |
| Animal naming | 57 | 10.0 | |  | 40 | | 12.5 |  | 92 | 14.0 | <0.001 |  | 222 | 10.0 |  | 175 | 11.0 |  | 68 | 14.0 | <0.001 |
| Symbol cancellation | 52 | 14.5 | |  | 38 | | 24.0 |  | 86 | 37.0 | <0.001 |  | 181 | 14.0 |  | 161 | 27.0 |  | 67 | 31.0 | <0.001 |
| Backward digit span | 49 | 12.0 | |  | 38 | | 17.5 |  | 89 | 24.0 | <0.001 |  | 185 | 10.0 |  | 175 | 19.0 |  | 66 | 22.0 | <0.001 |
| CSID | 59 | 3.0 | |  | 41 | | 3.0 |  | 95 | 4.0 | 0.480 |  | 278 | 3.0 |  | 179 | 4.0 |  | 69 | 4.0 | <0.001 |
| Word recognition | 58 | 17.0 | |  | 39 | | 19.0 |  | 93 | 19.0 | 0.001 |  | 244 | 16.0 |  | 175 | 19.0 |  | 69 | 19.0 | <0.001 |
| Constructional praxis-1 | 59 | 7.0 | |  | 41 | | 9.0 |  | 95 | 11.0 | <0.001 |  | 278 | 6.0 |  | 179 | 9.0 |  | 69 | 10.0 | <0.001 |
| Constructional praxis-2 | 59 | 2.0 | |  | 41 | | 3.0 |  | 95 | 4.0 | <0.001 |  | 278 | 2.0 |  | 179 | 3.0 |  | 69 | 3.0 | <0.001 |
| SDMT | 47 | 16.0 | |  | 37 | | 23.0 |  | 83 | 35.0 | <0.001 |  | 147 | 14.0 |  | 167 | 23.0 |  | 66 | 29.5 | <0.001 |
| Logical memory | 55 | 3.0 | |  | 40 | | 4.5 |  | 90 | 8.0 | <0.001 |  | 237 | 2.0 |  | 171 | 4.0 |  | 67 | 7.0 | <0.001 |
| Delayed logical memory | 55 | 0.0 | |  | 40 | | 2.5 |  | 90 | 6.0 | <0.001 |  | 237 | 0.0 |  | 171 | 2.0 |  | 67 | 5.0 | <0.001 |
| W Ability | 33 | 494.0 | |  | 35 | | 516.0 |  | 71 | 527.0 | <0.001 |  | 154 | 467.0 |  | 142 | 516.0 |  | 51 | 516.0 | <0.001 |
| Trail making test-A | 38 | 138.5 | |  | 37 | | 79.0 |  | 86 | 76.0 | <0.001 |  | 135 | 135.0 |  | 168 | 96.0 |  | 67 | 73.0 | <0.001 |
| Trail making test-B | 22 | 174.5 | |  | 25 | | 145.0 |  | 72 | 125.0 | 0.009 |  | 61 | 192.0 |  | 108 | 170.5 |  | 59 | 147.0 | <0.001 |
| **Informant** |  |  | |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IQCODE | 59 | 76.0 | |  | 41 | | 79.0 |  | 95 | 78.0 | 0.193 |  | 277 | 79.0 |  | 179 | 79.0 |  | 69 | 78.0 | 0.517 |
| BLESSED | 59 | 3.0 | |  | 41 | | 3.0 |  | 95 | 3.0 | 0.685 |  | 277 | 3.0 |  | 179 | 3.0 |  | 69 | 3.0 | 0.414 |
| CSI-D | 55 | 2.0 | |  | 39 | | 1.0 |  | 84 | 1.0 | 0.482 |  | 250 | 2.5 |  | 161 | 2.0 |  | 67 | 1.0 | <0.001 |



Figure S1. The correlation between HRS-TICS (A), CSI-D-respondent (B) and trail making test-A (C) with the CDR global score



**Figure S2.** The relationship between neuropsychological performance (A: MMSE; B: word immediate recall; C: word delayed recall; D: animal naming) with age in CHARLS subsample



**Figure S3.** The relationship between neuropsychological performance (A: MMSE; B: word immediate recall; C: word delayed recall; D: animal naming) with education in CHARLS subsample