**Supplemental material**

*Part 2. Reliability of the time-varying variables*

Reliability for MoCA, GDS, and LoC was investigated to ensure that change observed in these variables was not confounded by unstable reliability. LSA has a complex scoring algorithm. The reliability study [[1](#_ENREF_1)] for LSA uses a test-retest design, which was unavailable here. However, the Baker et al. [[1](#_ENREF_1)] set of validating measures was used to examine stability over time of the association of LSA with physical performance (SPPB [[2](#_ENREF_2)]), SF36 physical and mental components, [[3](#_ENREF_3)] GDS, [[4](#_ENREF_4)] comorbid conditions, [[5](#_ENREF_5)] self-reported health disability, and a questionnaire based on activities of daily living (ADL [[6](#_ENREF_6)]) and instrumental activities of daily living (IADL [[7](#_ENREF_7)]). Stability of reliability coefficients for gait speed and grip strength was not assessed; both were measured using standardized performance tests.

Reliability coefficients varied throughout the panels within a range of 0.02 for MoCA (T0: 0.78; T1: 0.80; T2: 0.80), 0.03 for GDS (T0: 0.75; T1: 0.78; T2: 0.78), and 0.04 for LoC (T0: 0.70; T1: 0.73; T2: 0.74). Ranges of variation in correlation of LSA with the Baker et al. [[1](#_ENREF_1)] validating measurements set between panels, were at a low of 0.02 and a high of 0.04 for correlation varying in absolute value from ±0.30 to ±0.60. Estimated correlation in FRéLE was in the same range as correlation obtained by Baker et al.1 except for BADL (FRéLE: -0.60; Baker et al. [[1](#_ENREF_1)]: -0.39) and for comorbid conditions (FRéLE: -0.30; Baker et al. [[1](#_ENREF_1)]: -0.19). Our exploration into the variability of reliability and of validating measures concludes that changes in MoCA, GDS, LoC, and LSA were likely not attributable to measurement errors. Evidence of the stability of reliability was not available for grip strength or gait speed, however interviewers were systematically trained and retrained before and during data collection periods to ensure consistent procedure was followed.

**References**

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