



Novel Network-Based Approaches for Studying Cognitive Dysfunction in Behavioural Neurology

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D4.2 Standardized protocol for cognitive assessment and composite domain z-score calculation

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Standardized protocol for cognitive assessment and composite domain z-score calculation:
We will design a cognitive assessment battery that could be used in all 3 languages (English, Czech, Hungarian). Only tests validated in all 3 countries will be used to enable to calculate composite domain z-scores in the following domains: attention, executive function, memory, visuo-spatial functions, language. The battery should not exceed 60 min of testing. We will test feasibility of this battery in older healthy subjects.

Standardized protocol for cognitive assessment was designed with respect to include tests validated in all 3 countries (USA, HU, CZ). The battery assesses five cognitive domains (attention, executive function, memory, visuo-spatial functions, and language), overall cognitive level (MMSE [1]), independence of activities of daily living (FAQ – Functional Activities Questionnaire [2]) and affective state (GDS - Geriatric Depression Scale [3]). Attention domain was assessed by TMT A (Trail Making Test part A [4]), Stroop test (part 1 – words and part 2 – colors [5]), Symbol Search subtest-WAIS III [6], Digit Span subtest - WAIS III [6]. Executive function was evaluated by the third part of the Stroop test [5] (color-word) and interference score (calculated according to the manual), TMT B [4] and Clock Drawing Test [7]. Rey-Osterrieth Complex Figure Test [8] (reproduction after 3 and 30 minutes) and Word List subtest from WMS III [9] (Immediate and delayed recall and recognition) were used for the memory domain assessment. Visuospatial functions were evaluated by the copy of Rey-Osterrieth Complex Figure [8] and Judgment of Line Orientation Test [10]. Language domain was also included in the cognitive battery by assessment of the Word Fluency tests [11] (semantic and lexical), however more detailed evaluation of the language skill was assessed separately in Language assessment part of the protocol.

We have already administered this battery to 38 healthy control subjects (MU: 30 subjects, UofSz: 5 subjects ; UofA: 3 subjects). The battery is feasible also due to the administration time around 55-65 minutes in Healthy controls. Although in patient's groups the administration time might be a bit longer (around 75 minutes), we gain detailed profile of the cognitive status of the subject. We have designed feasible battery for the next purposes of our study (patient's group assessment).

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