Supplementary Material

# Appendix A: Neuropsychological test battery

**Reading and decoding**

Reading and decoding ability was assessed with (1) subtests from LäSt (reading and decoding test for grade 1 to 6) and with (2) subtests from Börje (reading and decoding test developed for the main screening project involving approximately 3000 school children in grade 1-3). The Börje word decoding tests are similar to LäSt but differ in that words are read row-wise (instead of column-wise) to reflect the normal reading direction, and in that the difficulty of words (in terms of their length and corpus frequency) increases systematically such that more difficult words always follow simpler ones. The following measures were obtained:

* **NWD**: Non-word Decoding (LäSt/grade 3)
* **WD**: Word decoding (LäSt/grade3)
* **WR:** Word reading (Börje/Grade 2)
* **NW**: Non-word Reading (Börje/Grade 2)
* **TR**: Text reading (Börje/Grade 2)

Calculation and analyses of results are based on: NWD, WD, WR, NW, and TR.

**General intelligence**

General Intelligence was assessed with the Wechsler Intelligence Scale for Children(WISC-IV). The following measures were obtained:

* **IQ:** General intelligence
* **GAI:** General ability index (Based on the following: VFI+PFI)
* **VFI:** Verbal comprehension
* **PFI:** Perceptual reasoning index
* **WMI**: Working memory index
* **SI**: Processing speed index

Calculation and analyses of results for IQ are based on: VFI, PRI, WMI, and PSI. Calculation and analyses of results for GAI are based on: VFI and PRI.

**Verbal working memory**

Verbal Working Memory was assessed with subtests from WISC-IV. The following measures were obtained:

* **WMI:** Working memory index (Digit span and Letter-number sequencing)
* **DsF:** Digit span forward
* **DsB:** Digit span backward
* **LnS**: Letter-number sequencing

Calculation and analyses of results are based on: DsF, DsB, and LnS.

**Visual working memory**

Visual Working Memory was assessed with subtests from WISC-IV Integrated. The following measures were obtained:

* **ViDS:** Visual Digit Span
* **SSF:** Spatial Span Forward
* **SSB:** Spatial Span Backward

Calculation and analyses of results are based on ViDS, SSF and SSB.

**Verbal executive functions/verbal fluency**

Verbal Executive Functions/Verbal Fluency were assessed with subtests from Delis Kaplan Executive Function System (D-KEFS). The following measures were obtained:

* **LF:** Letter fluency
* **CF:** Category fluency
* **CSwCr:** Category switching correct responses
* **CswSA:** Category switching accuracy
* **SwA:** Percent switching accuracy
* **SLE:** Set-loss errors
* **RE:** Repetition errors
* **%SLE:** Percent set-loss
* **%RE:** Percent repetition errors

Calculation and analyses of results are based on: LF, CF, CSwCr, CswSA, and SwA.

**Non-verbal executive functions/Non-verbal problem-solving**

Non-Verbal Executive Functions/Non-Verbal Problem-solving were assessed with the Tower test from D-Kefs and Wisconsin Card Sorting Test, Computer Edition Version 4 (WCST). The following measures were obtained:

* **TAS:** Total achievement score, Tower test
* **MAR:** Move accuracy ratio, Tower test
* **MFTM:** Mean first-move time, Tower test.
* **TPMR:** Time-per-move-ratio, Tower test.
* **RVPR:** Rule-violation-per-ratio, Tower Test.
* **CLR:** Conceptual level of response, WCST

Calculation and analyses of results are based on: TAS, MAR and CLR.

**Attention**

Attention was assessed with subtests from D-Kefs. The following measures were obtained:

* **LNS:** TMT 4 Number-letter switching
* **I:** Inhibition
* **IS:** Inhibition switching
* **EI:** Errors Inhibition
* **EIS:** Errors Inhibition switching

Calculation and analyses of results are based on: LNS, I, and IS.

**Psychomotor speed**

Psychomotor Speed was assessed with subtests from WISC-IV, D-Kefs and Läskedjor 2. The following measures were obtained:

* **Co:** Coding B, WISC-IV
* **SS:** Symbol search B, WISC-IV.
* **VS:** TMT 1 Visual scanning, D-Kefs
* **NS:** TMT 2 Number sequencing, D-Kefs.
* **LS:** TMT 3 Letter sequencing TMT 3, D-Kefs.
* **LNS:** TMT 4 Number letter switching, D-Kefs.
* **MS:** TMT 5 Motor speed, D-Kefs.
* **LC:** Letter chains, Läskedjor 2

Calculation and analyses of results are based on: Co, SS, VS, NS, LNS, MS, and LC.

**Rapid Automatized Naming**

Rapid Automatized Naming was assessed with subtests from D-Kefs and CTOPP-2.

* **CN:** Color-Word: Color naming, D-KEFS
* **WR:** Color-Word: Word reading, D-KEFS
* **RLN:** Rapid Letter naming, CTOPP-2

Calculation and analyses of results are based on: CN, WR, and RLN.