

Supplemental Material S3. Item assignment process when an item’s subtest name did not clearly match one of the ten subdomains.

For two of the standardized assessments (i.e., WAB-R, SCCAN), subtest names for some of the items did not clearly match one of the ten subdomains used in the present study. Those items were assigned to a subdomain based on review of neuropsychological assessment reference materials (Lezak et al., 2012) and clinical judgment.

The WAB-R Constructional, Visuospatial, and Calculation subtest, includes the following tasks: Drawing (i.e., draw to dictation), Block Design (i.e., recreate patterns shown in a picture using colored blocks), Calculation (i.e., addition, subtraction, multiplication, division given four choices), and the Raven’s Coloured Progressive Matrices (RCPM; identify the missing piece from a geometric design given six choices). This WAB-R subtest name and the names of the included tasks do not clearly match the subdomains used in the present study. Based on the neuropsychological assessment literature, items from the drawing (i.e., measures constructional ability; Lezak et al., 2012) and the block design task (i.e., measures constructional and visuospatial function; Lezak et al., 2012) were assigned to the visuospatial/constructional domain. The calculation task (i.e., assesses concept formation and reasoning (executive functions); Lezak et al., 2012) and the RCPM (i.e., evaluates concept formation; Lezak et al., 2012) were assigned to the problem solving domain.

Based on the SCCAN’s construction, some items may contribute to more than one of the eight scale scores (i.e., oral expression, orientation, memory, speech comprehension, reading comprehension, writing, attention, problem solving). In most cases, the name of the assessment section clearly reflected the primary nature of the item, and it was used to assign the item to a subdomain. When that was not the case, the most appropriate scale option was used to assign it to a subdomain. More specifically, for SCCAN Part E. Connected Speech and Problem Solving, items 37 through 44 contributed to the oral expression scale score; however, items 38 through 43 also contributed to the problem solving scale score. For SCCAN Part G. Attention, items 48, 49, and 51 through 54 contributed to the attention scale score, but items 48 through 54 also contributed to the problem solving scale score. For SCCAN Part J. Reading, item 70 contributed to the reading, attention, and problem solving scale scores. The assignment process and associated rationale for each of these items is represented in the tables below.

Item assignment to subdomain for SCCAN Part E. Connected Speech and Problem Solving

Item #	Activity	Applicable scales based on SCCAN	Assigned subdomain in the present study	Rationale
37.	Try to sing “Happy Birthday”	OE	VE	None needed, SCCAN scale clearly matched subdomain
38.	Now count to 5	OE, PS	VE	Measures speech production at the word level (i.e., automatic utterance)
39.	What types of accidents that could happen in a kitchen?	OE, PS	PS	Assesses concrete problem solving
40.	Now I am going to ask you to describe some things. Try to use complete sentences. a) How are a lake and an ocean similar? b) How are a lake and an ocean different?	OE, PS	PS	Evaluates basic reasoning
41.	Tell me what a shoe is.	OE, PS	VE	Measures language production and semantic knowledge at the sentence level
42.	Tell me what’s happening in this picture.	OE, PS	VE	Assesses language production at the discourse level (i.e., picture description)
43.	Tell me everything you need to do to mail a letter. Start with I get a pen and paper I sit down and write	OE, PS	VE	Evaluates language production at the discourse level (i.e., procedural narrative)
44.	Syntax: If responses to items 40-43 are produced with grammatically correct sentences and normal syntactic structures (inclusion of verbs, inflections, and functors), score 1 point; otherwise, a score of 0 should be given.	OE	VE	None needed, SCCAN scale clearly matched subdomain

Note. OE = Oral Expression; PS = Problem Solving; VE = Verbal Expression (synonymous with Oral Expression using the SCCAN’s naming convention).

Item assignment to subdomain for SCCAN Part G. Attention

Item #	Activity	Applicable scales based on SCCAN	Assigned subdomain in the present study	Rationale
48.	Here's a map of the United States. Where is Florida?	AT, PS	AT	Measures simple visual scanning/attention
49.	Here's a map of the United States. Where is Oregon?	AT, PS	AT	Measures simple visual scanning/attention
50.	What time does the clock say?	PS	PS	None needed, SCCAN scale clearly matched subdomain
51.	Here's a phone. Imagine you were alone at home and there was an emergency. Who would you call? Show me.	AT, PS	PS	Assesses basic problem solving
52.	Look at these pictures. Circle all the roosters and underline all the dogs. Make sure you look at each line.	AT, PS	AT	Requires visual scanning/attention
53.	Draw a picture of a clock that shows the time 10 after 11. Include all the numbers in your drawing.	AT, PS	PS	Requires organization, planning – core executive function skills
54.	Imagine that you have won a trip to Paris. Here is a map of Paris that shows the museums and the landmarks. Where is the Eiffel Tower? Find the Eiffel Tower on the map. Trace out a route from the museum to the Eiffel Tower.	AT, PS	PS	Taxes inhibition control (i.e., suppress distractor items) Requires planning a direct route, which also involves suppressing irrelevant information (i.e., many roads to get to Eiffel Tower)

Note. AT = Attention; PS = Problem Solving.

Item assignment to subdomain for SCCAN Part J. Reading

Item #	Activity	Applicable scales based on SCCAN	Assigned Subdomain in the present study	Rationale
70.	Here are your day's activities: You are meeting a friend for a late lunch at 2:00 to celebrate her birthday. You need to go to the bank to cash a check so you will have some spending money for the day. You have an appointment scheduled from 12:30-1:30. You already have a card, but you still need at least an hour to buy a present. Order the activities so that everything gets done by 2:00.	RD, AT, PS	PS	Requires making decisions based on constraints to order the activities accurately Measures planning, organization, time management, which are core executive function (problem solving) skills

Note. RD = Reading, AT = Attention, PS = Problem Solving