Brief Executive Language Screen – Sentence Completion (BELS-SC)

Administration and Scoring

The purpose of this manual is to provide guidance for the administration of BELS-SC subtests and scoring information.

Sentence Completion

Initiation

Administration: "*I am going to tell you a sentence that has the last word omitted. I would like you to say 1 word that completes the sentence meaningfully*". Record response and note time from when you finish presenting the sentence until they start to respond (in seconds). Errors include no response at 20 seconds, a response containing three or more words (e.g., "the kind old man asked us to... see him home") even if it meaningfully completes the sentence (remind person to try and give one-word responses, remind this only once), or agrammatical or non-meaningful responses (e.g., "the sun went down before we could... amazing).

Scoring: 1 point per correct response. Total raw score /10.

Weighted Score /10: Response score 0-2 (total raw score divided by 5). High Constraint Reaction Time score 0-4. Low Constraint Reaction Time score 0-4.

Table 2. BELS Sentence Completion Initiation Reaction Time (seconds) Norms and Cut-Offs

Score	HC	LC
4/4	<4.09	<14.50
2/4	4.09-5.30	14.51-19.70
0/4	≥5.31	≥19.71
Normative Data		
N	109	109
M	2.87	9.29
SD	1.22	5.21

Note. Cut-off scores calculated based on healthy normative data.

4/4 = within or greater than 1SD below healthy mean (i.e., z score <0.99).
2/4 = if between 1 and 2SD above healthy mean (i.e., z score 1.00 to 1.99).
0/4 = if 2SD above healthy mean (i.e., z ≥ 2.00).

Inhibition

Administration: "*I am going to tell you a sentence that has the last word omitted. This time finish my sentence with 1 word completely unconnected to the sentence - that is a nonsense word.*" Record response and note time from when you finish presenting the sentence until they start to respond (in seconds). If no response at 20 seconds mark as error. Repeat instruction on 1st 2 items if they complete it meaningfully. Note use of a strategy (e.g., objects in the room, colours, animals) but <u>do not</u> suggest the use of a strategy.

Scoring: 1 point per correct response. Total score /10.

> **Errors (see Robinson et al., 2015 for further detail):**
> ➢ Blatant 'A' errors (i.e., completely connected word, e.g., 'she went to the salon to colour her... "hair", "toenails", "nails", "eyebrows") or responses consisting of 3 or more words.
> ➢ Somewhat connected 'B' errors
> > o B2: Semantically connected or opposite to correct response (e.g., 'she went to the salon to colour her'... "foot")
> > o B3: Semantically connected to sentence (e.g., 'she went to the salon to colour her' ... "red")
> > o B4: Semantically connected, bizarre response (e.g., 'she went to the salon to colour her' ... "dog")
> ➢ No response provided in 20 seconds.

Strategy: Score 2 = for three or more instances of strategy use. Examples of a strategy include: naming items around the room, things outside the window, furniture, colours, animals. Score 1 = for one or two instances of strategy use. Score 0 = for no use of a strategy.

Note. Use of a strategy does not have to be across consecutive trials or the same strategy each time (e.g., they name furniture on two items and colours on two items).

Total /22: initiation (weighted score /10) + inhibition (/10) + strategy score (/2).

References:

Robinson, G. A., Cipolotti, L., Walker, D. G., Biggs, V., Bozzali, M., and Shallice, T. (2015). Verbal suppression and strategy use: A role for the right lateral prefrontal cortex. *Brain, 138*, 1084-1096.