

A pilot standardisation of a novel picture-based short-term memory test in German (MERK-14)

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Abstract

To date, the assessment of short-term memory in an aphasic population can be rather challenging as existing assessments are likely to require verbal responses or are not standardised. Human error in stimuli presentation forms an additional issue. These factors can lead to a distortion of the assessment results. The evidence for short-term memory assessment including pointing span is scarce.

This pilot study aims to address this difficulty and deals with the standardisation of a novel, computerised short-term memory assessment in 49 adults with a healthy state of cognition and German as a first language. The novel assessment contains auditory and visual pointing span tasks and is picture-based. It was conducted within two healthy age groups (Group 1: 23-35 and Group 2: 55+ years old). For the preliminary normative data, 24 adults for group 1 and 25 adults for group 2 were tested with the novel and a standardised control assessment. Two scoring systems were used in order to establish construct validity (A and B). The questions of whether age or education would affect short-term memory performance and whether the two scoring systems evoke different performances in the individuals were investigated. In order to evaluate the test and re-test reliability, a subgroup of 8 subjects for group 1 and 12 subjects for group 2 was tested again a few weeks later and the scores were compared. A comparison between the participants' scores from the novel and the control assessment was made in order to investigate the concurrent validity.

In contrast to educational level, age group differences were significant. Scoring in the auditory span task was not significant, but it was significant for the visual pointing span task. Strong and highly significant correlations between scoring A and B were found. The novel assessment was found to be a valid and reliable short-term memory assessment.

Keywords: Aphasia, short-term memory assessment, pointing span, picture-based

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