

Cognitive test performance documentation

MoBa Brain Health

Memoro Digit Span Backward test

First and second-generation participants aged 16 years and older were invited to participate in the MoBa Brain Health Study November 2022 through February 2023.

The Norwegian Mother, Father and Child Cohort Study
(MoBa)

Version	Date	Performed by	Description
1.0	09.04.2026	Asta Håberg Tor Ivar Hansen	Original version

Instrument

1. Name of original instrument:

Memoro Digit Span Backward test

2. Description

Working memory task. Participants see numbers presented one at a time on the screen and immediately typed them in reverse order when asked to do so. The test starts with three digits. Difficulty level increases progressively when participants correctly recall all digits of a trial. The task automatically ends if participant makes 3 consecutive mistakes or reach a span of 19 digits. Scoring is based on the maximal number of successfully recalled backward digits.

Variables:

*dsb_span: Number of items (digits) achieved

dsb_correctTrials: Number of correct trials

dsb_wrongTrials: Number of erroneous trials

*Primary variable

Metadata for this test is the automatically generated response object that contains all individual responses and their respective time stamps and data.

Sample metadata for a single response:

```
{"type": "result", "trial": 2, "result": "correct", "correct": "32640", "response": "32640", "timestamp": 1511121036353, "difficulty": 5}
```

3. Rationale for choosing the instrument:

Well-known working memory measure that includes manipulation of information, used in neuropsychological practice.

4. Modifications:

NA