**Project Numtest**

Assessing basic number competence without language

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**Introduction**

Some estimated 5-7% of children (Butterworth et al., 2011) suffer from developmental dyscalculia (DD). Universally valid diagnostic instruments are still lacking, as all current DD test batteries are based on language instructions. Consequently, their measurements are tightly linked to the specific language context of test administration.

This poses two major issues:

- Test results are partially dependent on language skills
- Test results cannot be easily compared across countries

The results of the following pilot study are part of a research project that aims to develop a screener for basic number competence that minimizes language use by using hands-on video instructions.

**Methods**

**Population**

- 81 children
- 54% female
- Mean age: 6 y 7 m
- 65% germanophonic
- 35% francophonic

**Design**

Two groups: **Text instruction** vs **Video instruction**

**Three Tasks:**

- Text instruction
- Video instruction
- One repetition of all practice items in case of mistake

**Procedure**

Instruction:

- Practice Test

Comparison:

- Seriation
- Counting
- Correspondence

We administered pen & paper control tasks among which the addition scale of the TTR (De Vos, 1992) and a self-developed counting task with oral and written answer possibilities. Globally, they correlate well with NUMTEST:

<table>
<thead>
<tr>
<th>Task Performance</th>
<th>Counting &amp; Correspondence</th>
<th>Comparison</th>
<th>Seriation</th>
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</thead>
<tbody>
<tr>
<td><strong>Number of children</strong></td>
<td><strong>6</strong></td>
<td><strong>10</strong></td>
<td><strong>4</strong></td>
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**Control measures**

We administered pen & paper control tasks among which the addition scale of the TTR (De Vos, 1992) and a self-developed counting task with oral and written answer possibilities. Globally, they correlate well with NUMTEST:

**Results**

We observed group differences in the number of children that needed to repeat the practice session. Less participants repeating the practice items could be translated into faster understanding of the task.

On the other hand, significantly less participants repeated the practice session when faced with video instructions.

**Acknowledgements**

Visit our team!

**References**


