Equivalence of the AIMS using a home video made by parents and live observation by a pediatric physical therapist, a validation study

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Alberta Infant Motor Scale
0-19 months

Motor development longitudinally observed

Application of home video recordings

**Purpose:** Concurrent validity of the AIMS using a home video made by parents and simultaneous observation on site by a PPT
Methods

Tutorial video and checklist for parents

12 trained testers

Simultaneous live observation and video recording

Questionnaire on experiences of parents (100%)
10 semi-structured interviews

Results (1)

<table>
<thead>
<tr>
<th>Infants</th>
<th>5-78 wks</th>
<th>0-22 wks</th>
<th>23-37 wks</th>
<th>&gt;37 wks</th>
</tr>
</thead>
<tbody>
<tr>
<td>N included</td>
<td>52</td>
<td>17</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>N excluded</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Analysed</td>
<td>48</td>
<td>16</td>
<td>12</td>
<td>20</td>
</tr>
</tbody>
</table>

Mean difference AIMS video-live: 0.46 item (±1,978)

Intraclass Correlation Coefficient agreement: .99

Standard Error of Measurement (SEM): 1.41 item
Smallest Detectable Change (SDC): 3.88 item
Results (2)

Parents: 75% higher education

- 94% recording their infants movement repertoire was easy.
- 92% enjoyed and felt safe about it

All: being able to choose their own time and staying at home for the assessment was reported as being comfortable

Providing feedback on development was the main reason to participate

Results (3)
Conclusion & Discussion

Key Message

**AIMS\textsubscript{video}** was fairly comparable to AIMS-live.

- Heterogeneous group $\rightarrow$ generalizability $\uparrow$
- Differences between the two methods could also be allocated to moderate reliability caused by the involvement of a large number of testers
- Is AIMS-live gold standard?

**AIMS\textsubscript{video}** is a promising application to be used in longitudinal research, follow-up clinics and teleconsultation.

**Pro's**
- Independent of time and distance.
- Objective evidence, which could be retested.

**Con's**
- Depending on the understanding of parents about what to film (Tutorial)
- Need of technical support with a user-friendly interface for parents (IT)

Thanks to

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Consortium GODIVA: Gross mOtor Development of Infants using home-Video registration with the AIMS

Testers

Parents and infants

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