Cognitive Therapy Outcome Measures: do they capture clinical change for children and young people (CYP) with Acquired Brain Injury?

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Background
- There are estimated to be 800-900 major paediatric acquired brain injuries (ABI’s) annually in the UK (Dunford, Bannigan & Wales, 2012)
- One sequela that impacts on CYP’s rehabilitation is their cognitive skills
- The Therapy Outcome Measures (TOMs) (Enderby & John, 2015) are 6 point ordinal scales used to describe the relative abilities and difficulties of patients in the ICF (WHO, 2001) domains of impairment, activity, participation and well-being in order to monitor changes over time
- The cognition scale measures therapists’ report of a CYP’s arousal, attention, memory and executive abilities

Method
- The speech and language therapists completed systematic data collection of TOMs for CYP on admission and discharge between August 2013 and January 2016 for all CYP identified with cognitive difficulties (39/61)
- Data collection was completed during the weekly 1 hour case discussion meeting
- Age = 2-18 years
- Length of stay 4 - 88 weeks
- Wilcoxon test was used to determine statistically significant changes

Aim: Does the TOMs cognition scale capture clinical change in CYP with moderate-severe ABI in a residential rehabilitation setting?

Results
- For the 39 CYP with identified cognition needs on the rehabilitation programme, all children either stayed the same or made positive changes (see fig.’s 1 and 2)
- TOM cognition scores in all four domains were significantly higher on discharge than admission (See Table 1)
- Therapists found the TOMs quick and easy to score

Table 1: Cognition TOM change analysis

<table>
<thead>
<tr>
<th>Domain</th>
<th>Z score</th>
<th>P value*</th>
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<tbody>
<tr>
<td>Impairment</td>
<td>-5.23</td>
<td>p&lt;0.000</td>
</tr>
<tr>
<td>Activity</td>
<td>-4.49</td>
<td>p&lt;0.000</td>
</tr>
<tr>
<td>Wellbeing</td>
<td>-4.92</td>
<td>p&lt;0.000</td>
</tr>
<tr>
<td>Participation</td>
<td>-3.16</td>
<td>p&lt;0.002</td>
</tr>
</tbody>
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* P value less than 0.05 = statistically significant

Conclusion
- The cognition TOM captured statistically significant change in all 4 domains for CYP with a moderate-severe ABI in a rehabilitation setting
- The TOMs were quick and easy to administer and could be used in other settings to capture change in groups of CYP with an ABI
- Further study is indicated to examine subgroups, and to compare with other commonly used measures

References