Speech and language therapy needs of children and young people with severe acquired brain injury on admission and discharge to a neuro-rehabilitation unit

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Background

- Approximately 350 children per year have a new severe acquired brain injury (ABI) in the UK (Hayes, 2017).
- Children and young people (CYP) present with a range of difficulties following ABI that require speech and language therapy (SLT) input.
- Few studies have investigated the prevalence of these difficulties and how they change during neuro-rehabilitation.

Methodology

- All CYP with high rehabilitation needs following ABI, admitted to one residential rehabilitation unit between April 2014 and August 2018, were included.
- Therapy Outcome Measures (TOMs) (Enderby, 2015), were collected by SLT team on admission and discharge.
- TOMs scales address four dimensions in line with the ICF framework (WHO, 2013). Scales range from 0-5 (0 = worst case scenario; 5 = best possible presentation).
- Data was reviewed retrospectively.

Results

- The most prevalent SLT needs in this group are cognition and dysphagia.
- CYP made significant improvements in all TOMs scales during rehabilitation, including impairment, activity, participation and wellbeing scales (see figures 1, 2 & 3). However, mean discharge scores did not exceed 4 (from a maximum of 5) for any scale.

Discussion/Conclusions/implications for practice

- CYP attending the neuro-rehabilitation setting presented with a range of SLT needs, demonstrating that treating SLTs need a wide range of skills covering these areas.
- While significant improvements are seen during rehabilitation, CYP leave with ongoing SLT needs, requiring input from community services to address this range of ongoing difficulties.

Objective

To investigate the SLT profile of CYP in a residential neuro-rehabilitation service, to evaluate their change over rehabilitation and discuss their ongoing needs.

Demographics

- n=165, age range 1-17 years, 91 male, 74 female.
- 36% had traumatic brain injuries, 21% had stroke, 14% had inflammatory illnesses, 10% had hypoxic injuries, 10% had seizure related injuries, 8% had tumours and 1% other.
- Average age at injury: 9.8 years (1-17.6 years).
- Average length of stay: 19.7 weeks (2-149 weeks).

<table>
<thead>
<tr>
<th>TOMs Scale</th>
<th>Mean (SD)</th>
<th>Mean (SD)</th>
<th>Wilcoxon z</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>%age                  Impairment</td>
<td>1.40(0.83)</td>
<td>3.71(1.49)</td>
<td>-2.539</td>
<td>0.011</td>
</tr>
<tr>
<td>Child Speech Impairment (n=186)</td>
<td>2.11(1.35)</td>
<td>2.70(1.39)</td>
<td>-4.119</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Dysphagia (n=46, 28%)</td>
<td>2.00(1.00)</td>
<td>3.00(1.00)</td>
<td>-3.893</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Cognition (n=125, 76%)</td>
<td>2.00(1.00)</td>
<td>3.00(1.00)</td>
<td>-4.348</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>ACC (n=51, 31%)</td>
<td>0.00(1.00)</td>
<td>1.00(1.00)</td>
<td>-4.805</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Dysphagia (n=86, 52%)</td>
<td>1.56(1.18)</td>
<td>2.66(1.40)</td>
<td>-6.585</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Figure 1: Results – Participation

Figure 2: Results – Wellbeing/distress

Figure 3: Table – TOMs Scale

References


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www.thechildrenstrust.org.uk/presentations-and-publications