Outcomes of School-Based Physical Therapy for Children with Disabilities in the United States

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Purpose and Background

- In the United States, school-based physical therapy (PT) supports the educational programs of children with disabilities; however minimal evidence exists on effectiveness of school-based PT.
- Evidence-based practice research methodology2 used in a prospective, multi-site observational study, PT related Child Outcomes in the Schools (PT COUNTS).
- We undertook to describe changes in students’ participation in school activity, self-care, posture/mobility, and recreation/fitness outcomes as measured by the School Function Assessment (SFA)3 & individualized goal attainment scaling (GAS)4.

Participants

109 PTs from 4 regions across the US; 105 (95.5%) females; mean age 46 years (SD 4.2); average 13 years (SD 9.1) working in schools

296 students with disabilities served by those PTs; mean age 7.3 years (SD 2.2), range 5 to 12 years; 35% had cerebral palsy, 30% genetic disorders, 35% other (autism, learning disability, attention deficit hyperactivity disorder, speech language disorder, developmental coordination disorder, myelomeningocele, medical issues, sensory impairment, traumatic brain injury & limb deficiency)

Gross Motor Function Classification System levels (GMFCS):
- Level I 113 (38.2%)
- Level II/III 117 (39.5%)
- Level IV/V 66 (22.3%)

Classroom placement of students:
- 31% general education
- 39% special education
- 30% combination general & special education

Methods

At the beginning of school year each PT:
- Completed GAS, SFA, School Physical Therapy Intervention for Pediatrics (S-PTIP)4 & ethics training
- Measured GAS goals & SFA on 1-6 students
- Completed SPTIP weekly for 6 months

After 6 months S-PTIP data collection:
- PTs rescored GAS goals & SFA on same students
- Descriptive statistics calculated for all variables. Group comparison statistics used to examine outcomes

Results: SFA

<table>
<thead>
<tr>
<th>Physical Tasks &amp; Participation</th>
<th>SFA Criterion Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NG</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>No change</td>
<td>11 (4%)</td>
</tr>
<tr>
<td>Regressed</td>
<td>9 (3%)</td>
</tr>
<tr>
<td><strong>10</strong></td>
<td><strong>2</strong></td>
</tr>
<tr>
<td>Maintaining &amp; Changing Positions</td>
<td>14 (5%)</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>Recreational Movement</td>
<td>18 (6%)</td>
</tr>
<tr>
<td><strong>9</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>Manipulation with Movement</td>
<td>23 (8%)</td>
</tr>
<tr>
<td><strong>12</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>Clothing Management</td>
<td>11 (4%)</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>Participation</td>
<td>9 (3%)</td>
</tr>
<tr>
<td>Task Supports: Assistance</td>
<td>24 (8%)</td>
</tr>
<tr>
<td>Task Supports: Adaptation</td>
<td>5 (2%)</td>
</tr>
</tbody>
</table>

Conclusions

- GAS: Students achieved & slightly exceeded expected goal attainment for primary goal (95%) & additional posture/mobility, recreation/fitness, & self-care goals. Goal attainment did not significantly differ for students among GMFCS levels, diagnostic groups, or between those receiving or not receiving outpatient physical therapy based on two-way ANOVAs.
- SFA: Students generally improved on SFA subsections, but not beyond the standard error of measurement. Students improved the most in Participation, followed by Maintaining and Changing Positions. Students who were less than 8 years of age with higher gross motor function (GMFCS levels I to III) improved more than students who were older with lower gross motor function. There were statistically significant differences among GMFCS levels with those having Levels IV/V (lowest functional ability) showing the least improvement in all subscales except Travel.

References


Acknowledgements

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