The Use of Aquatic Programs to Improve Social Outcomes For Children With Developmental Disabilities
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Background

- Developmental disabilities are a group of conditions due to an impairment in physical, learning, language, or behavior areas.
- Most developmental disabilities begin before a baby is born, but some can happen after birth because of injury, infection, or other factors.
- These conditions begin during the developmental period, impact day-to-day functioning, and usually last throughout a person’s lifetime.
- 1 in 6 children are diagnosed with a Developmental Disability each year (CDC, 2015).
- Positive and appropriate social behaviors are an important outcome for individuals with developmental disabilities.
- Aquatic programs provide an alternative for a child with a developmental disability to work on improving and increasing social behaviors.

Purpose

- The purpose of this project is to present a systematic review about the use of aquatic programs to improve social outcomes in children with different developmental disabilities.
- The specific research question is: What are the effects of aquatic programs on improving social outcomes in children with different types of developmental disabilities?
- This systematic review included developmental disability populations of Autism, Cerebral Palsy, and Down Syndrome.

Results

<table>
<thead>
<tr>
<th>POPULATION</th>
<th>PARTICIPANTS</th>
<th>DOSAGE</th>
<th>OUTCOME MEASURE</th>
<th>AVERAGE EFFECT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism</td>
<td>n = 3 to 16</td>
<td>Boys = 3 to 16, Girls = 2 to 4</td>
<td>Age = 2.5 to 17.0</td>
<td>Total 16 Week Programs</td>
</tr>
<tr>
<td>Down Syndrome</td>
<td>n = 93</td>
<td>Boys = 54, Girls = 39</td>
<td>Age = 16.0 to 16.4</td>
<td>Program Participation = 8 yr. avg. Duration per Week = 4.9 hr. avg.</td>
</tr>
<tr>
<td>Cerebral Palsy</td>
<td>n = 24</td>
<td>Boys = 3, Girls = 4</td>
<td>Age = 4.9 to 13.0</td>
<td>Total 24 Week Programs</td>
</tr>
</tbody>
</table>

The following databases were used to retrieve articles: Academic Search Complete, ERIC, Google Scholar, PsycINFO, ScienceDirect, and SPORTDiscus.

- The search terms/key words used were: developmental disabilities, aquatic therapy, social outcomes, autism, cerebral palsy, down syndrome, hydrotherapy.
- Additional search criteria included:
  - Articles in English
  - Published 1993 or later
  - Articles included based on the following criteria:
    - Children and adolescents with developmental disabilities, pool based aquatic programs, social outcomes measured by questionnaires and scales
  - Articles were excluded based on the following criteria: Social outcomes measured by parent reports, articles not peer reviewed.

Clinical Recommendations

- Findings suggest that aquatic programs have a positive effect on physical/emotional well-being, self-esteem, family/social relationships in children with developmental disabilities.
- Aquatic programs promote social interactions between peers and teachers, a level of acceptance and increases the level of attention, interaction, and participation in children with different types of developmental disabilities.
- This is supported by a range of large effect sizes.
- Limitations include: Small sample sizes, study designs, cognitive differences not reported
- Clinical recommendations are to integrate aquatic programs into therapy for children with different types of developmental disabilities to improve social outcomes.
- Future directions are to conduct studies focusing primarily on social outcomes as a result of aquatic programs as compared to traditional social skills programs and to utilize study designs that would support higher levels of evidence.

Literature Search

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Article Analysis

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References


