Stereotypy in Children with Autism: A Systematic Review
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Background
- About 1 in 68 children have been identified with autism spectrum disorder (ASD) according to estimates from CDC’s Autism and Developmental Disabilities Monitoring network (CDDM) network (CDC, 2016).
- Stereotypic behavior (vocal stereotypy) is one of the diagnostic criteria for autism spectrum disorder (Ahearn, Clark, & MacDonald, 2007).
- Based on collective research, vocal stereotypy can be defined as repetitive vocal output that is not functional for daily communication.
- It is considered to be disruptive and fulfills no language function (Ahearn, Clark, & MacDonald, 2007).
- Since vocal stereotypy is considered disruptive and not functional, an important outcome for this population is a reduction of decontextualized vocal stereotypy.
- The purpose of this systematic review is to find the most effective intervention(s) to reduce vocal stereotypy.
- The research question explored: What is the most effective intervention to reduce vocal stereotypy in children with autism?

Results

<table>
<thead>
<tr>
<th>Intervention Type</th>
<th>Number of Studies</th>
<th>n</th>
<th>Duration</th>
<th>Mean PRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVC</td>
<td>1</td>
<td>1</td>
<td>25 sessions; 30 minutes</td>
<td>13.97%</td>
</tr>
<tr>
<td>DR</td>
<td>1</td>
<td>1</td>
<td>12 sessions; 20 minutes</td>
<td>29.89%</td>
</tr>
<tr>
<td>MS</td>
<td>1</td>
<td>1</td>
<td>120 sessions; 30 minutes</td>
<td>68.70%</td>
</tr>
<tr>
<td>NCR+RC</td>
<td>1</td>
<td>1</td>
<td>52 sessions; 15-45 minutes</td>
<td>100%</td>
</tr>
<tr>
<td>NCR+RC+D</td>
<td>1</td>
<td>1</td>
<td>52 sessions; 15-45 minutes</td>
<td>38.14%</td>
</tr>
<tr>
<td>OC</td>
<td>1</td>
<td>1</td>
<td>20 sessions; 20 minutes</td>
<td>98.89%</td>
</tr>
<tr>
<td>OC+DRI</td>
<td>1</td>
<td>1</td>
<td>21 sessions; 20 minutes</td>
<td>-2.95%</td>
</tr>
<tr>
<td>RC</td>
<td>2</td>
<td>3</td>
<td>40.3 (15-70) sessions; 13.3 (10-20) minutes</td>
<td>85.11%</td>
</tr>
<tr>
<td>RIRD</td>
<td>7</td>
<td>20</td>
<td>10-72 sessions; 11.9 (5-30) minutes</td>
<td>66.04%</td>
</tr>
<tr>
<td>RIRD w/ DRI</td>
<td>1</td>
<td>1</td>
<td>36 sessions; 12 minutes</td>
<td>79.34%</td>
</tr>
<tr>
<td>SI</td>
<td>1</td>
<td>3</td>
<td>4.6 (4-5) sessions; 30 minutes</td>
<td>5.81%</td>
</tr>
<tr>
<td>TR+RC</td>
<td>1</td>
<td>1</td>
<td>148 sessions; 15-45 minutes</td>
<td>98.83%</td>
</tr>
<tr>
<td>TR+RC+DRI</td>
<td>1</td>
<td>1</td>
<td>160 sessions; 15-45 minutes</td>
<td>100%</td>
</tr>
<tr>
<td>TP</td>
<td>1</td>
<td>1</td>
<td>145 session; 1-10 minutes</td>
<td>79.99%</td>
</tr>
<tr>
<td>VOT</td>
<td>2</td>
<td>7</td>
<td>31.6 (7-65) sessions; 7.86 (5-10) minutes</td>
<td>31.52%</td>
</tr>
</tbody>
</table>

Percent Reduction Data (effect size) per Intervention

Clinical Recommendations
- All participants included in this review had a primary diagnosis of ASD. Across studies, participants ranged in age from 3 years to 16 years. The mean age of participants was 7.9 years. The findings of this review were from single subject designs; total number of participants was 34. There were 7 females and 27 males.
- Inclusion Criteria: primary diagnosis of ASD, school age (16 or younger), decontextualized vocal stereotypy present (affecting academia, verbal output)
- Exclusion Criteria: ASD and comorbid diagnosis, non-verbal, use of AAC and/or gesture

Limitations/Future Research
- Utilizing more than one intervention approach is most effective for reducing vocal stereotypy
- Client’s preferences must be taken into account in order to successfully set up an effective reward system

References