Comparing augmentative and alternative communication vs behavioral therapy for treatment of selective mutism

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Introduction

Selective Mutism (SM) affects less than 1% of the population (ASHA, 2016). Although it is considered an anxiety disorder, treating individuals with SM is within the scope of practice for speech-language pathologists (SLPs) (ASHA, 2016). SLPs often work with these individuals to improve their expressive communication.

Behavioral therapy has been proven to be effective in increasing the production of speech in social situations for clients with SM (Stone, Kratochwill, Sladezke, & Serlin, 2002). Augmentative and alternative communication (AAC) has no existing literature linking its use with SM or reducing anxiety but has been used widely among SLPs to improve expressive language skills.

It is unclear if behavioral therapy will improve expressive language skills more than using AAC in therapy for individuals with SM.

Purpose

Using the PICO format (Purpose, Intervention, Comparison, Outcome) by Gillam & Gillam, 2008, the following question was developed: Do preschoolers with Selective Mutism use more total number of words with the aid of AAC compared to behavioral therapy?

Case Scenario

Marnie is a graduate student clinician in speech-language pathology. She sees James, a preschool client who has been diagnosed with SM at her university clinic.

James is seen twice a week for 60 minutes per session. His parents are worried about him starting kindergarten and how SM might affect his success. They would like him to feel more comfortable with adults before he enters kindergarten.

Marnie is currently integrating AAC to improve James’ expressive language and working through his anxiety with behavioral therapy. Any treatment Marnie uses for James should address his anxiety around speaking with unfamiliar adults. Marnie is wondering if she should put more emphasis on AAC or behavioral therapy.

Methods

Search Terms: selective mutism, behavioral therapy, anxiety, augmentative and alternative communication, speech production

Outcomes: ProQuest Social Sciences Premium Collection, Taylor & Francis Online, Web of Science, and PubMed

Validity: Ten articles were appraised using the Critical Appraisal of Treatment Evidence (CATE) and Critical Appraisal of Systematic Review and Meta-analysis (CASM) for validity and clinical significance. An article was “compelling” if it earned 7-8 points, “suggestive” if it earned 6-4 points, and “equivocal” if it earned 0-3 points on the CATE form. An article was “compelling” if it earned 7-8 points, “suggestive” if it earned 6-4 points, and “equivocal” if it earned 0-3 points on the CASM form.

Reliability: Interrater reliability of 85% was achieved for all 10 articles. Four articles were selected to make an evidence-based practice (EBP) decision.

Discussion

External Evidence: SM is associated with social anxiety (Muri, Hendriks & Bot, 2015). AAC is effective for increased speech production in young children with a range of disabilities (Miller, Light & Schlosser, 2006). Behavioral therapy is effective for reducing anxiety in children with anxiety disorders and children with SM (Wulpek et al., 2008; Oerbeck, Stein, Wenthzel-Larsen, Langrud & Kristensen, 2014).

Evidence Internal to Client: The client is responsive to both behavioral therapy and AAC. His parents are happy with his progress and open to either treatment.

EBP Decision: Based on external evidence and knowledge of the client, Marnie chose to use a combination of behavioral therapy and AAC with her client. He will continue to be seen twice a week for 60-minute sessions. Progress will be re-evaluated in 3 months.

Results

<table>
<thead>
<tr>
<th>Author(s), Year, &amp; Designs</th>
<th>Participants (N, age, diagnosis)</th>
<th>Appraisal Rating &amp; Interrater Reliability</th>
<th>Outcome Measures</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>Miller, Light &amp; Schlosser (2006) Non-Experimental Systematic Review</td>
<td>N = 23 studies Age: 2-60 years Diagnosis: intellectual disability or autism</td>
<td>Rating: 8/8 Compelling (100%) Reliability: 88%</td>
<td>Speech production with use of AAC</td>
<td>Speech production • Of the 23 studies, 6 were methodologically sound • Of the 6 studies, 89% of the participants demonstrated an increase in speech production, 11% had no change, and 0% had a decrease in speech production • PND was 90% or higher for 37% of the participants • PND ranged from 0-100%</td>
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<tr>
<td>Muri, Hendriks &amp; Bot (2015) Non-Experimental</td>
<td>N = 57 Age: 3-6 years Diagnosis: SM or social anxiety</td>
<td>Rating: 5/8 Suggestive (63%) Reliability: 88%</td>
<td>SM measured by • Selective Mutism Questionnaire (SMQ) Social anxiety measured by • Preschool Anxiety Scale Revisited (PAS-R)</td>
<td>Relationship between Selective Mutism and social anxiety • Low SMQ scores (indicative of high symptoms of SM) were associated with high levels of social anxiety symptoms $R = -.68$, $p &lt; .001$</td>
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<tr>
<td>Oerbeck, Stein, Wenthzel-Larson, Langrud &amp; Kristensen (2014) Experimental</td>
<td>N = 24 Age: 3-9 years Diagnosis: Selective Mutism</td>
<td>Rating: 7/8 Compelling (88%) Reliability: 100%</td>
<td>Symptoms of SM after 3 months of behavioral therapy as measured by • School Speech Questionnaire (SSQ)</td>
<td>Symptoms of SM • Significant change in the treatment group, $p = .004$ • No significant change in the control group, $p = .936$</td>
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<tr>
<td>Wulpek et al., (2008) Experimental</td>
<td>N = 488 Age: 7-17 years Diagnosis: anxiety disorder</td>
<td>Rating: 7/8 Compelling (88%) Reliability: 100%</td>
<td>Anxiety levels measured by • Clinician Global Improvement Improvement Scale 3 therapy groups: • Cognitive Behavioral (CB) • Sertraline (S) • combination of CB and S</td>
<td>Anxiety levels • Anxiety was significantly reduced in all three groups, $p &lt; .01$ and combination of CB and S was most effective in reducing anxiety • 59.7%: Cognitive Behavioral • 54.9%: Sertraline • 80.7%: combination of CB and S</td>
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References