Evidence-Based Strategies & Techniques for Children with ASD

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Purpose
To identify and research evidence-based Autism Spectrum Disorder strategies and techniques for working with children, particularly children aged 6-10 years old, who receive In-Home Skills Services. Most therapeutic services are received through the school systems (Shapiro & Accardo, 2008), but Counseling Services of Southern Minnesota (CSSM) provides In-Home Skills Services that requires the Children’s Therapeutic Services and Supports (CTSS) staff to be knowledgeable and competent in the services they provide to clients.

The purpose of this project was to provide CSSM with specific strategies and techniques through a manual to be used by the CTSS workers. The information will be presented through a power point training to CTSS staff, along with a manual providing resources, evidence-based strategies and techniques for their use.

Methodology
- A systemic review of literature regarding evidence-based strategies and techniques was completed. The literature review consisted of professional journals and design studies regarding evidence-based ASD strategies for children.
- Three organizations evidence-based findings were reviewed:
  - Center for Medicare & Medicaid (CMS)
  - National Autism Center (NAC)
  - National Professional Development Center on Autism Spectrum Disorder (NPDC)

Literature Review
- The journal articles identified evidence-based strategies consisting of ABA, DIR, LEAP, PECS, Self Management, Video Modeling, PRT, Social Stories, TEACCH.
- Design-studies addressing Video-modeling and self-management were reviewed for evidence-based strategies and ease of implementation. Video-modeling and self-management appear to be strategies that CSSM In-Home skills workers could implement with their clientele.
- The CMS, NAC, and NPDC organizations identify evidence-based strategies:
  - Antecedent-Based Interventions (ABI)
  - Computer-Assisted Instruction
  - Differential Reinforcement
  - Discrete Trial Training
  - Extinction
  - Functional Behavior Assessment
  - Functional Communication Training
  - Naturalistic Intervention
  - Parent-Implemented Interventions
  - Peer-Mediated Instruction and Intervention
  - Picture Exchange Communication System (PECS)
  - Pragmatic Response Training
  - Prompting
  - Reinforcement
  - Response Interruption/Redirection
  - Self Management
  - Social Narratives
  - Social Skills Group
  - Speech Generating Devices/Voca
  - Structured Work Systems
  - Task Analysis
  - Time Delay
  - Video Modeling
  - Visual Supports
- In CSSM Manual providing step by step guide for implementation.

References
References are available from the author upon request.

Problem to be addressed
- Once thought to be rare, Autism Spectrum Disorders (ASD) now affect approximately 1 in 150 children (CDC). Some have interpreted this increase as an “autistic epidemic.” Others have related the increasing prevalence to changing diagnostic criteria, different data collections, and diagnostic substitution (Shapiro & Accardo, 2008).
- Autism is increasingly recognized in school, communities, and clinics as a developmental disability in children, and the demand for services for these children continues to rise (Shapiro & Accardo, 2008).
- Young children with limited communication skills and poor social development are particularly at risk for the development of problem behaviors (Horner, et al., 2002).
- The Counseling Services of Southern Minnesota is working with an increasing number of children who are diagnosed with an ASD and other developmental disabilities.
- To date, the instructional approach with the best track record with children with autism is intensive application of Applied Behavior Analysis (ABA) (Lovaas, 1987, Shapiro & Accardo, 2008). Currently, little is known about the effectiveness of many interventions.

Research Question
What are evidence-based strategies and techniques for working with children, 6-10 years old, diagnosed with Autism Spectrum disorder?

Data/Results
There were two evidence-based strategies that have been receiving considerable attention over the past several years. The strategies researched were video modeling and self-management. The KEY FINDINGS are listed below:

### Evidence-Based Strategies & Techniques

<table>
<thead>
<tr>
<th>Video Modeling</th>
<th>Self-Management</th>
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<tbody>
<tr>
<td>Definition</td>
<td>Helps learners with ASDs learn to independently regulate their own behaviors and act appropriately in a variety of home, school, and community based situations.</td>
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<tr>
<td>Ages</td>
<td>Can be used across the age range starting in early childhood through high school.</td>
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<tr>
<td>Strategies/Techniques</td>
<td>Self-modeling, Peer-Modeling, Feed-forward, and positive self-review.</td>
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<tr>
<td>Skills/Interventions</td>
<td>Communication, social, academic/cognitive, and play.</td>
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<tr>
<td>Steps for Implementation</td>
<td>Target the behavior for teaching Correct Equipment Planning for the video Make the video Show the video Monitor progress Fading the video/prompting</td>
</tr>
<tr>
<td>Setting</td>
<td>Clinical, school based and home</td>
</tr>
</tbody>
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Implications for Practice
- Evidence-Based Practices for individuals with ASD, must be established through a certain set of research criteria, depending on the organizations definition of evidence-based practice.

Video Modeling and Self – Management are considered evidence-based practices.
- ASDs, similar to other neurodevelopmental disabilities, are generally not “curable,” and chronic management is required. Although outcomes are variable and specific behavioral characteristics change over time, most children with ASDs remain within the spectrum as adults and, regardless of their intellectual functioning, continue to experience problems with independent living, employment, social relationships, and mental health (Myers & Johnson, 2007).
- Children with autism make or accept fewer social initiations and spend more time playing alone compared to their peers. Video modeling is a promising method for promoting social skills in these children (Nicoopoulos & Keenan, 2004).
- Video Modeling Interventions are effective in teaching a variety of skills to children with autism (Delano, 2007).
- Video Modeling tapes are relatively easy to create, implementing the intervention may take only minutes each day, often facilitates rapid skill acquisition, maintenance, and generalization across settings, people, and materials.
- Self-Management – The marked improvement in the children’s behaviors (both increases in social communication and decreases in disruptive behavior) has major implications for social integration of these children in community and educational settings (Koegel ,et al., 1992).
- Self-management permits much less direct contact with the treatment provider, making this ideal for the classroom, home and community environments (Koegel, et al., 1992).

Limitations
Video Modeling:
- Age: There must be a lower limit with child characteristics being a determining factor (cognitive skills, interest in video, self-recognition and excitement, others).
- Cognitive development: Problematic with children with concurrent mental retardation.
- Interest/Attention: If children show little interest in the video or cannot sustain interest while watching, it probably won’t work.

Self-Management:
- May take a great deal of time and energy to implement, it child cannot self-monitor.
- Maintenance programs need to be developed, otherwise the child’s skills may deteriorate over time.

Conclusions & Recommendation
- Evidence-based practices for children with ASD do exist. Many resources are available to service providers. Since CSSM is located in a rural community, treatment interventions focused on easy accessible strategies for CTSS staff to implement. CSSM should also continue to implement other evidence-based strategies that are identified by NPDC, NAC, and CMS.
- Self-Video Modeling may be superior to peer video modeling (Marcus & Wilder, 2009).
- Video Modeling may be an effective intervention for children with autism because it reduces attentional and language demands, does not require social interaction with a teacher/practitioner, and presents information in a visual format (e.g., watching a video), which may already be reinforcing to many children.
- There is a need to study the effectiveness of video instruction strategies with older children and adults as well as students with ASD who are culturally and linguistically diverse (Shukla-Mohta, Miller, & Callahan, 2010).
- Further investigation in how to fade self-management materials, as well as fading the reinforcement role of the adult (Koegel, et al., 1992).