Evidence-Based Practices for Children with Autism: Another Look at Research Examining “for Whom” under “What Conditions”

Veronica Fleury, Ph.D.; LeAnne Johnson, Ph.D.; Andrea Boh, M.S.; Brenna Rudolph, M.A.; Kelsey Young, M.A.

Background
Our knowledge regarding effective practices for individuals with Autism Spectrum Disorder (ASD) has grown tremendously. The National Professional Development Center (NPDC) on ASD evidence-based practice technical report (Wong, et al, 2014) provides important information about specific instructional practices that are backed by strong evidentiary support. The majority of studies included in the NPDC technical report relied upon single-case design methodology—a flexible alternative to traditional group designs. Most of the practices identified by the NPDC technical report would not exist without the inclusion of studies using SCD methodology.

The purpose of this study is to: (1) leverage the work of Wong et al. (2014) to identify evidence-based practices for young children (birth through age 5) with ASD and (2) explore the role of studies relying on single case designs in providing empirically based information that supports for whom specific practices may be most beneficial and under what conditions those practices should be implemented.

Method
We limited our review to NPDC studies that used SCD to evaluate the effectiveness of a practice. A number of these practices included a sufficient number of studies that included young children under age 6 to be considered a “stand alone” EBP for early childhood. The SCD studies included in our review contributed to the creation of the evidence base for early childhood in the following ways:

• At least 5 high quality single-case design articles (a) conducted by at least 3 research groups and (b) contain at least 20 participants across studies OR

• A combination of at least 1 high quality group/quasi-experimental design and at least 3 high quality single case design studies conducted by at least 2 different research groups.

Of the 408 SCD studies that were included in the NPDC review, 152 were maintained because they included at least one participant with ASD who was below the age of six. We coded these studies for a number of variables related to participant characteristics and study procedures.

Evidence-Based Practices in Early Childhood

Antecedent-Based Interventions
- Cognitive Behavior Interventions
- Differential Reinforcement
- Discrete Trial Teaching
- Exercise
- Extinction
- Functional Behavioral Assessment
- Functional Communication Training
- Modeling
- Naturalistic Interventions
- Parent-Implemented Interventions
- Picture Exchange Communication System©
- Peer-Mediated Instruction/Intervention
- Pivotal Response Training

Prompting
- Reinforcement
- Response Interruption/Redirection
- Scripting
- Self-Management
- Social Narrative
- Social Skills Training
- Structured Play Groups
- Task Analysis
- Technology-Aided Instruction/Intervention
- Time Delay
- Video Modeling
- Visual Supports

"For Whom"

Demographic Variables
Family involvement is an essential feature of early intervention for young children with autism. Researchers, however, rarely report on participant demographic information and family variables, which may have implications for feasibility and generalization of a given intervention.

Child Development Characteristics
Autism is a spectrum disorder marked by great heterogeneity. Researchers are not consistent in their description of their research population, which makes it difficult to answer the question “for whom is the strategy effective?”

"Under what Conditions"

Setting
Researchers conducted their studies in a variety of applied settings.

Individuals Providing Instruction
Although research is being conducted in natural settings, the research team commonly serve as the primary interventionists.

Delivery of Instruction
The procedures being tested in the majority of studies relied upon individualized instruction.

Treatment Intensity (dosage)
Research studies should be written with sufficient technicality to allow others to replicate study procedures. While most researchers report the total number of sessions, other important information related to the intensity is often not included.

Moving Forward
Broad evidence presented in the NPDC technical report is a helpful start point for practitioners to select appropriate and effective interventions. Our review of the early childhood SCD studies included in the report indicate a need for researchers to provide additional information about their studies, specifically the participant population, people serving as interventionists, and details about treatment intensity. This information will allow us to evaluate the extent to which these interventions can feasibly be used across the broad array of settings in which young children receive services.