Comparing Intervention Approaches for School-Aged Children with ASD

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Purpose & Research Question
The purpose of this systematic review is to compare three intervention approaches for children ages 3 to 8 years old that are diagnosed with Autism Spectrum Disorder (ASD). The review will help to provide more clarity for which approach may be the most beneficial for which specific population, as well as provide an evidence-based intervention that can limit the life-long impact of communication and social interaction difficulties.

Abstract
• Autism Spectrum Disorder (ASD) refers to a range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication, as well as unique strengths and differences (Lai, Lombardo, & Baron-Cohen, 2014).

Social communication deficits- impairments in aspects of joint attention, social reciprocity, verbal and nonverbal communicative behaviors.
• Even though the core features of ASD include impairments in social communication, language, and related cognitive skills and behavioral and emotional regulation, the population of ASD can still present with varying degrees of deficits.
• No two children are alike in their social communication development (Lai, Lombardo, & Baron-Cohen, 2014).

Introduction
• Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder where an individual presents with deficits in social communication and social interaction (Lai, Lombardo, & Baron-Cohen, 2014).
• ASD has increased in prevalence in recent years, with the Centers for Disease Control and Prevention (CDC) reporting an estimate of 1 in 59 children in the US falling on the autism spectrum (Baio, 2018).
• Even with the recent increase in diagnosed cases of ASD, there is still a debate on which intervention strategy can bring about improvement in communication and social interactions in children with ASD.
• Three examples of effective approaches developed to work with children with ASD are the Hanen Program, Prompts for Reconstructing Oral Muscular Phonetic Targets (PROMPT), and Applied Behavior Analysis (ABA).

The Hanen Program
• The Hanen Program is considered to be a family-based intervention that can be used for a child with no behavioral concerns (McConachie et al., 2005).

PROMPT
• PROMPT is a combined intervention approach that includes both behavioral and developmental methods. It is the bridge between discrete trials and child centered approach (Rogers et al., 2006).

ABA
• ABA is a behavioral intervention that is the most clinician directed approach of the three (Peters-Scheffer et al., 2011).

The Hanen Program
Target Population
Developed for parents of children (birth to 6 years old) on the autism spectrum. The program is an intervention approach that targets children who have language delays, but are still able to communicate verbally (Lai et al., 2011).

PROMPT
Target Population
PROMPT can be used for children from 6 months of age and up with phonological delays, dysarthria, childhood apraxia of speech, motor speech disorders, ASD, and fluency disorders. Unlike the Hanen Program, it can be used for children who are non-verbal.

ABA
Target Population
ABA is used for individuals with ASD ages 2-21 and whose diagnosis results in functional limitations in at least three of the following core deficits: self-care, behavioral challenges, expressive communication, receptive communication, cognitive functioning, safety, and sensory processing (Tuor et al., 2017).

Results

The Hanen Program
• McConachie et al. conducted a short-term control study. They evaluated a training course for parents using the Hanen Program. The study found that a significant advantage was found for the intervention group in parents’ observed use of facilitative strategies, in children’s communication skills, improved language skills, and fewer behavior problems.

PROMPT
• Rogers et al. conducted a randomized control trial and they examined two models of speech intervention: the Denver Model and PROMPT. All of the children in the study who were receiving PROMPT presented with an increase in expressive language, and all but one made receptive language gains.

ABA
• A meta-analytic study conducted by Peters-Scheffer, Didden, Kozlowski, and Sturmey researched the effectiveness of comprehensive ABA-based early intervention programs for children with ASD. After reviewing the studies, researchers found that experimental groups who received ABA outperformed the control groups on IQ, non-verbal IQ, expressive and receptive language and adaptive behavior.

Conclusion
• ASD is heterogeneous so it is important to remember how critical it is that each child with ASD should be assessed as an individual, and given an intervention program specifically tailored and targeted for their needs.
• There is evidence from multiple randomized control trials that supports ABA as the most supported intervention.
• However, PROMPT and Hanen are non-intensive interventions with a focus on communication and social interactions, and can still have a significant and positive impact on children with ASD.

Methods
• Databases searched in order to identify literature relevant to the topic include:
  o Google Scholar
  o ASHA Journal
  o PubMed
  o Scopus

• All articles that had to have been published between 2000 and 2017, and had to directly relate to the topic.
• Articles that were focused on an older population were excluded from the search.

Direction for Further Research
• Further research should be conducted to test for the longitudinal benefits of these three intervention programs.
• Researchers should examine and compare the effects of the interventions to test for a strong evidence base.
• Single-subject or small group studies are not representative of different qualities to generalize to the whole population.

To improve efficacy increase size and quality