

Title: Comparing approaches in parent-implemented intervention: An examination of parent sensitivity and responsivity

Authors: Sarah F. Vejnaska, Aubyn C. Stahmer, Paul Yoder, Annette Estes, Sally Rogers

Introduction: Multiple intervention approaches that include parent participation, informed by developmental and behavioral psychology, have emerged as leading evidence-based practices in autism spectrum disorder (ASD).¹ Structured behavioral interventions, such as Discrete Trial Training (DTT)², are based on the learning principals of applied behavioral analysis (ABA).³ DTT emphasizes the provision of learning opportunities by utilizing antecedent and consequence strategies (e.g., providing clear cues and reinforcing attempts) to enhance child learning with limited attention to the caregiver/child relationship. More recently, naturalistic developmental behavioral interventions (NDBI), such as the Early Start Denver Model (ESDM)⁴, blend the learning principles of ABA with relational strategies based on developmental science (e.g., developing sensitive and responsive interactions).³ Developmental studies examining the effect of helping parents develop sensitive and responsive parenting behaviors that fit their child's learning needs have linked increases in these parenting behaviors to more positive outcomes for children with ASD⁵⁻⁷, but little attention has been paid to how these behaviors might vary as a function of coaching approach.

Methods: This project utilizes home videos of parent-child interaction obtained as part of a larger treatment study comparing the DTT and ESDM intervention approaches (PI: Rogers). Participants in the parent study included children between the ages of 12 and 30 months at study entry with a medical diagnosis of ASD and their primary caregivers. Over the year-long intervention, parents received coaching in parent ESDM (P-ESDM)⁸ or behavior management. The DTT/behavior management condition most closely mirrored usual care parent coaching found in community programs.⁹ A total of 83 children completed the study (42 DTT, 43 ESDM). Children were, on average, white (53%) males (75%), and the average age at study entry was 25 months. Video recordings of parent-child interaction during toy play were collected monthly for 12 months. This study compares video data from months 1, 4, 8, and 12 for the quality of the parent-child interaction using the Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO).¹⁰ The PICCOLO is a checklist of 29 observable developmentally supportive parenting behaviors with children ages 10-47 months in four domains—Affection, Responsiveness, Encouragement, and Teaching. Repeated measures, random effects models will be used to model change over time in parent sensitivity/responsivity. If a significant difference is observed between groups on the overall score, secondary analyses will assess the four sub-domain scores as outcomes to probe specific areas that might explain the overall difference.

Results: PICCOLO coding is underway (12% completed at submission) and will be completed by January 2020. Ten dyads from the ESDM condition and 11 from the DTT condition have month 1 videos coded. Preliminary analysis indicates no differences in overall performance on the PICCOLO between the ESDM dyads ($M=37.89$, $SD=6.6$) and the DTT dyads ($M=38.18$, $SD=8.5$) at study entry; $t(19)=-.08$, $p=0.93$.

Discussion: Greater understanding of the effects of coaching in specific intervention strategies on parent-child interactions will lead to a greater understanding of how best to support parents of children with ASD. This information can be used to streamline parent coaching strategies, making them easier for parents to implement and for communities to gain access to them, thus improving the lives of families with children with ASD.

References/Citations

1. Schreibman L, Dawson G, Stahmer AC, *et al.* Naturalistic Developmental Behavioral Interventions: Empirically Validated Treatments for Autism Spectrum Disorder. *J Autism Dev Disord* 2015;24:11-28. <https://doi.org/10.1007/s10803-015-2407-8>.
2. Lovaas OI. Behavioral treatment and normal educational and intellectual functioning in young autistic children. *J Consult Clin Psychol* 1987;55(1):3-9. <https://doi.org/10.1037/0022-006X.55.1.3>.
3. Ingersoll BR. Teaching Social Communication. *J Posit Behav Interv* 2010;12(1):33-43. <https://doi.org/10.1177/1098300709334797>.
4. Rogers SJ, Dawson G. Early Start Denver Model for young children with autism: Promoting language, learning, and engagement. *Early Start Denver Model Young Child with Autism Promot Lang Learn Engag* 2010:xvii, 297-xvii, 297.
5. Gulsrud AC, Helleman G, Shire S, Kasari C. Isolating active ingredients in a parent-mediated social communication intervention for toddlers with autism spectrum disorder. *J Child Psychol Psychiatry* 2016;57(5):606-13. <https://doi.org/10.1111/jcpp.12481>.
6. Rogers SJ, Vismara L, Wagner AL, McCormick C, Young G, Ozonoff S. Autism Treatment in the First Year of Life: A Pilot Study of Infant Start, a Parent-Implemented Intervention for Symptomatic Infants. *J Autism Dev Disord* 2014;44(12):2981-95. <https://doi.org/10.1007/s10803-014-2202-y>.
7. Siller M, Hutman T, Sigman M. A parent-mediated intervention to increase responsive parental behaviors and child communication in children with ASD: a randomized clinical trial. *J Autism Dev Disord* 2013;43(3):540-55. <https://doi.org/10.1007/s10803-012-1584-y>.
8. Rogers SJ, Dawson G, Vismara LA. *An early start for your child with autism: Using everyday activities to help kids connect, communicate, and learn.* New York: Guilford Press; 2012.
9. Brookman-Frazee L, Stahmer A, Baker-Ericzen MJ, Tsai K. Parenting interventions for children with autism spectrum and disruptive behavior disorders: Opportunities for cross-fertilization. *Clin Child Fam Psychol Rev* 2006;9(3-4):181-200. <https://doi.org/10.1007/s10567-006-0010-4>.
10. Roggman LA, Cook GA, Innocenti MS, Jump Norman V, Christiansen K. Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO) in Diverse Ethnic Groups. *Infant Ment Health J* 2013;34(4):290-306. <https://doi.org/10.1002/imhj.21389>.