

# The Impact of Parent Education and Clinician Collaboration on Parent Knowledge and Parenting Stress in Early Intervention Programs

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## Background

Research has consistently demonstrated that caregiver knowledge of early milestones is associated with feelings of competence and skill-building in their children (Schaefer, 1991). Gaps in knowledge regarding childhood development often act as barriers to seeking developmental evaluations and early intervention (EI) services to address delays in early childhood (Reyes et al., 2018).

Autism Spectrum Disorder (ASD) is the fastest growing neuro-developmental diagnosis in the United States (Maenner et al, 2020). Per of the most recent estimates, the median age of diagnosis is 51 months; however, ASD can be reliably diagnosed early in toddlerhood by trained professionals (Maenner et al., 2020). Earlier diagnosis and participation in EI services during the period of birth to three years old have been associated with developmental skill-building and resource connection among families (Fuller & Kaiser, 2019).

## Project Introduction

The CLEAR Autism Diagnostic Evaluation (CADE) is an assessment that measures 11 domains of child development as reported by primary caregivers and clinicians (Willard & Kronke, 2019). Used with families regardless of a child's diagnosis or delay, this is a 33-item rating scale designed to educate caregivers on these 11 domains and sub-domains that are often affected in ASD. The CADE is designed for use with individuals ages 24 months and older. Findings from the CADE have been highly correlated with the Autism Diagnostic Observation Schedule, Second Edition (ADOS – 2), which is a highly reliable and valid tool to diagnose ASD (Crepeau-Hobson et al., 2021).

The 11 domains of development as measured by the CADE include (1) Understanding; (2) Learning; (3) Communicating; (4) Socializing; (5) Daily Living; (6) Moving and Sensing; (7) Focusing; (8) Remembering; (9) Organizing; (10) Feeling; and (11) Behaving. Through assessment of a child in each of these areas, the CADE seeks to provide a holistic understanding of a child's strengths and challenges through graphical pictures (see figures 1 and 2), next steps, and intervention recommendations.

The present study sought to use the CADE with families participating in EI Colorado services.

## Project Aims

- o To examine the impact of parent education on:
  - o Parent understanding of child development, skills, and perceived concerns
  - o Collaboration between parent and clinician
- o Examine the association of:
  - o Parent knowledge with parent reported stress and parent confidence in supporting their child

## Hypotheses

- o Parent education regarding concerns specific to their own child (through use of the CADE tool) will increase parent knowledge over time.
- o Parent and clinician views on a child's skills and challenges will be in greater alignment over time (using the CADE tool symptom profiles).
- o As parents become more knowledgeable by using the CADE tool, parental stress will decrease over time.

## Participants

Up to 25 clinicians will be recruited and enrolled from ENRICH and Rocky Mountain Human Services (RMHS). ENRICH is a grant-funded team of early intervention therapists employed by the University of Colorado Anschutz Medical Campus within JFK Partners. RMHS is the Community Centered Board (CCB) that executes EI programming within Denver County.

### Clinician Inclusion Criteria:

- PTs, OTs, SLPs, ESCEs, BCBAs contracted to provide EI services
- Licensed clinician holding accreditation
- Providing in-person or telehealth services to children 2 years, 0 months to 3 years, 0 months for minimum of 2 monthly visits
- Willing to ask caregivers on caseload to participate in study
- Between the age of 18 and 88 years

### Caregiver Inclusion Criteria:

- Cares for a child (with or without ASD dx) receiving EI services from a consented clinician
- Cares for a child age 2 years, 0 months to 3 years, 0 months
- Will participate in EI services with the consented clinician for services for at least 10-12 sessions over the course of 3-6 months
- Between the ages of 18 and 88 years

## Methods

Pre-Study	Time Point 1	Therapy Sessions	Time Point 2	Post-Study
<ul style="list-style-type: none"><li>• Clinician Consent</li><li>• Clinician: Demographic Survey</li><li>• Two CADE Clinician Trainings</li><li>• Caregiver Consent</li><li>• Caregiver: Demographic Survey, Knowledge Survey, PSI-4-SF</li><li>• Clinician: Pre-Survey</li></ul>	<ul style="list-style-type: none"><li>• Clinician: CADE Profile</li><li>• Caregiver and Clinician: Complete CADE separately</li><li>• Clinician discusses CADE with caregiver</li></ul>	<ul style="list-style-type: none"><li>• 10-12 therapy sessions over 3-6 months</li></ul>	<ul style="list-style-type: none"><li>• Clinician and Caregiver: Complete CADE separately</li><li>• Clinician discusses CADE with caregiver</li></ul>	<ul style="list-style-type: none"><li>• Caregiver: Completes knowledge survey and PSI-SF-4</li><li>• Clinician: Completes Post-Survey</li></ul>

This study is currently in the pre-study phase. Consented clinicians participated in two CADE trainings. The Parenting Stress Index, 4<sup>th</sup> Edition, Short Form (PSI-4-SF) is a standardized assessment that will be used pre- and post-study to identify sources of stress based upon three domains: (1) Parental Distress, (2) Parent-Child Dysfunctional Interaction, and (3) Difficult Child. During Time Points 1 and 2, clinicians and caregivers will complete the CADE separately and discuss perspectives, perceived concerns, and the clinician's results within at least three areas, including: (1) socializing domain, (2) communicating domain, and (3) one other domain to guide education and intervention (see figures 1 and 2). Consent forms, surveys, and data collection are managed through REDCap, and the PSI-4-SF will be completed online via the PARiconnect database.

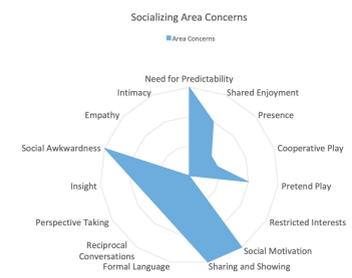


Figure 1. Example of graphical socializing area concerns.

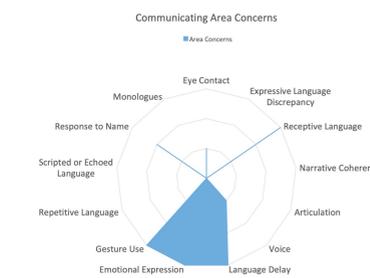


Figure 2. Example of graphical communicating area concerns.

## Outcome Measures

- o CADE Training Post Competency Questions
  - o 7-item questionnaire to assess clinician competency of CADE following self-paced training module
- o Caregiver and Child Demographics Survey
- o Caregiver Knowledge Survey
  - o 41-item survey to assess perceived knowledge of child development aligned with CADE items; completed pre- and post-study
- o Parenting Stress Index, 4<sup>th</sup> Edition, Short Form
  - o 36-item assessment completed pre- and post-study
- o Clinician Demographic Survey

## Data Analysis and Next Steps

This study is ongoing with rolling clinician and caregiver recruitment. Clinicians and caregivers will receive compensation after completing Time Point 1 and again after Time Point 2. At the study's conclusion, quantitative data analysis will determine interrater reliability between clinicians and caregivers. Descriptive and inferential statistics will assess for significant differences between pre- and post-study measures.

## References

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