

Pragmatic Language and Social Skills: 8-10 year olds after Cochlear Implantation in the CDaCI Study

Dawn Marsiglia

Christine M. Mitchell, Michael F. Hoffman, Nae-Yuh Wang,
Howard W. Francis, and the CDaCI Investigative Team



*Supported by
NIDCD R01 DC004797*

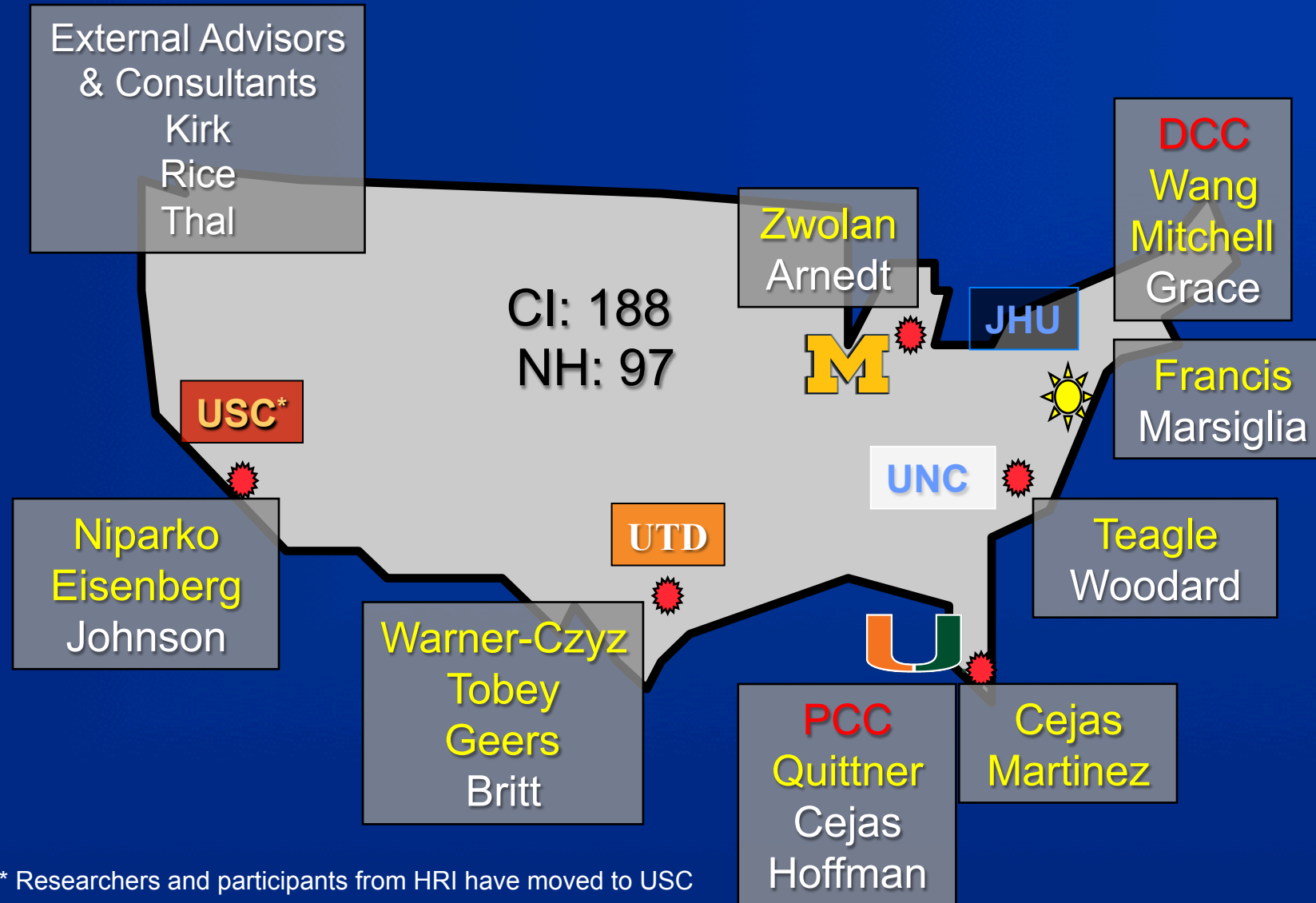


Disclosures

- **Audiology advisory board member - Advanced Bionics.**

Childhood Development after Cochlear Implantation

Study PI: Niparko



What do we know about Social Skills?

- Internal control and external environments
- Follow a “dynamic systems approach”
- Developed primarily through language and communication
- Influence relationships, academic achievement, and developmental outcomes



Research Limitations

- Previous research has produced mixed results
- Limitations include:
 - Advances in CI technology
 - Small sample sizes
 - Single site
 - Lack of diversity
 - Cross-sectional
 - Failure to assess interrater differences

- Tasker et al. 2012; Bat—Chava, Martin & Kosciw, 2005; Antia & Kreimeyer, 1996; Capelli et al. 1995



Objective

- Evaluate the relationship between pragmatic abilities and social competence through multiple raters in 8-10 year old children
- CDaCI study model provided
 - Large study size
 - Participant diversity
 - Multiple raters
 - “Gold Standard”



Methods

Childhood Development after Cochlear Implantation

- **Annual Visits**
 - **Multiple domains studied**
 - Cognition
 - Language Evaluation
 - Speech Perception
 - Psychosocial
 - Quality of Life
- **Cross-sectional data collected**
 - Children ages 8-10 years old
 - NH=21; CI=69
 - Pragmatic Judgment and Social Skills



Pragmatic Judgment Subtest

- **Comprehensive Assessment of Spoken Language (CASL)**
 - Mean = 100, SD = 15
 - Measures knowledge and use of pragmatic rules of language
- **The child is asked to:**
 - Express communicative intent
 - Recognize appropriate topics for conversation
 - Initiate conversation or turn-taking
 - Adjust to situational factors
 - Judge pragmatic appropriateness of tester's communication



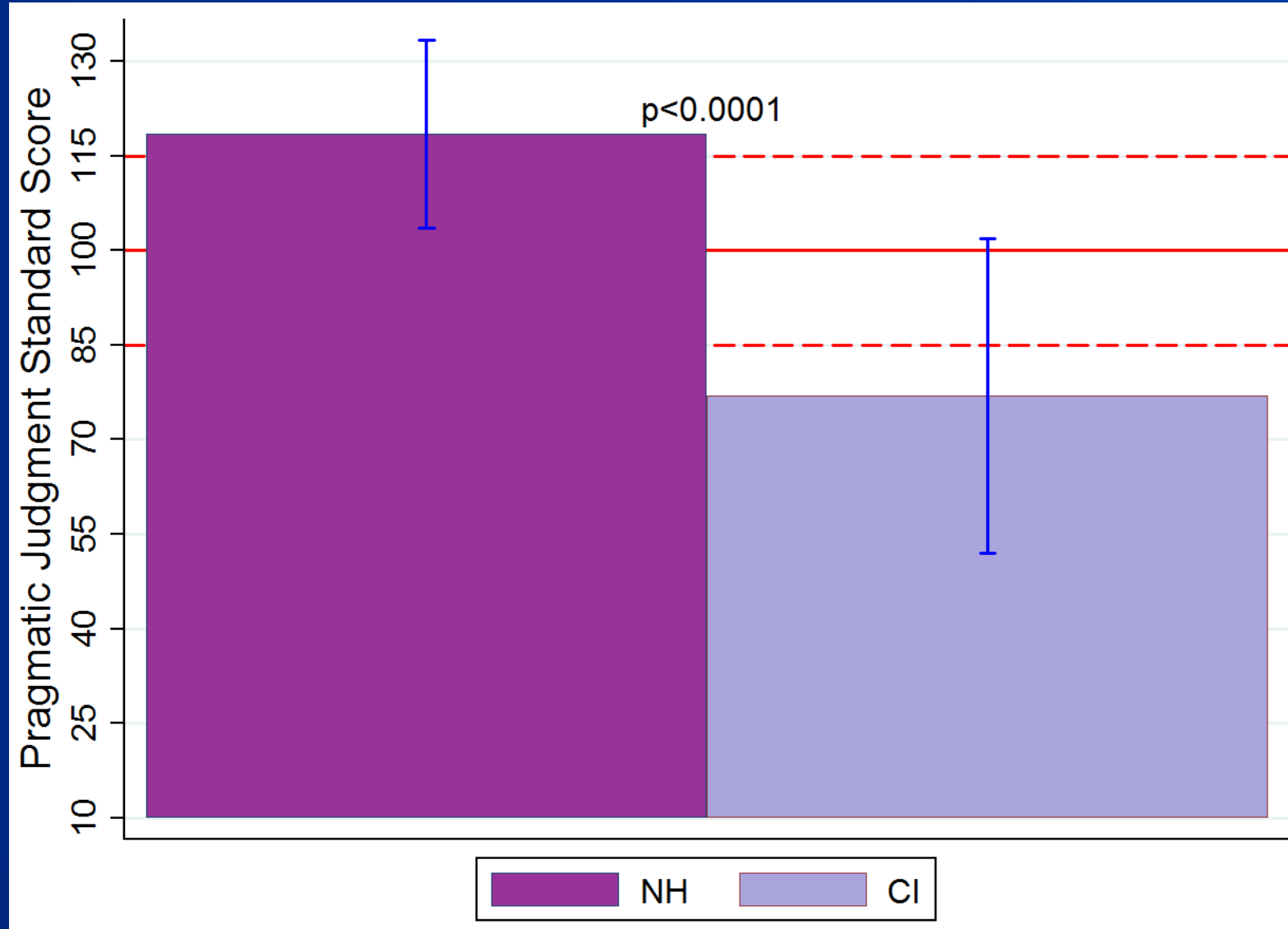
Social Skills Rating Scale

- **Social Skills Rating Scale (SSRS) – Elementary Version**
 - Mean = 100, SD = 15
 - Behaviors that affect teacher-student relations, peer acceptance, & academic performance
- **Subscales include:**
 - Cooperation
 - Assertion
 - Responsibility
 - Empathy
 - Self-control
- **Multi-rater assessment**
 - self, parent, and teacher



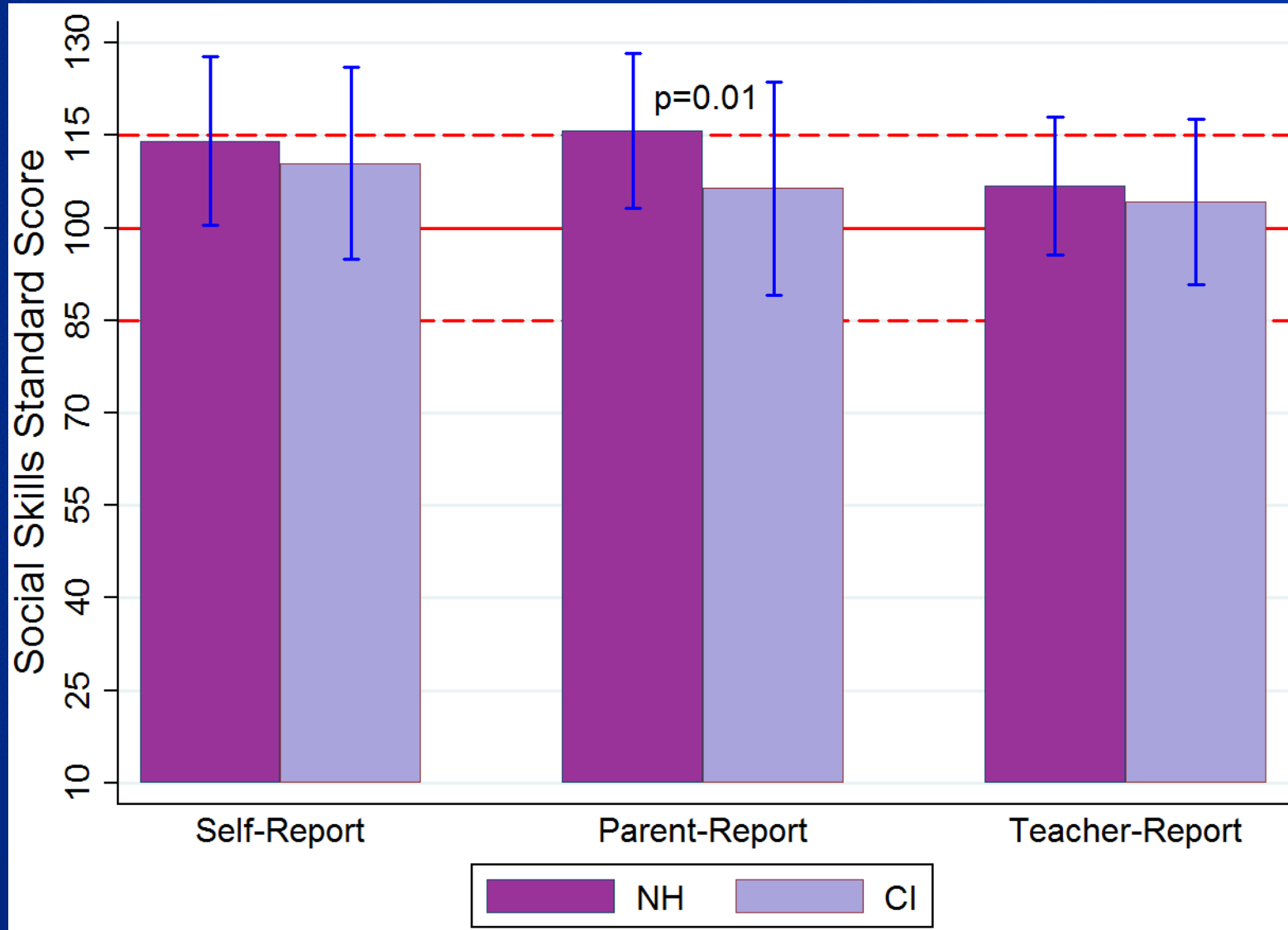
Results

Pragmatics Skills by Hearing Status



Results

Social Skills by Hearing Status



Relationship between Pragmatics & Social Skills

Child Rating

NH $r = -0.32$

CI $r = 0.22$

Parent Rating

NH $r = 0.06$

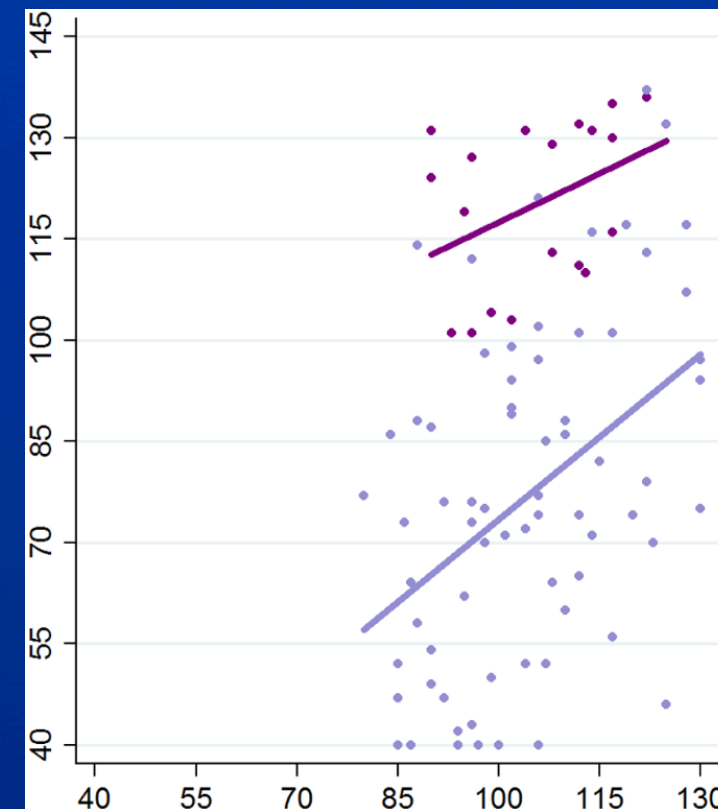
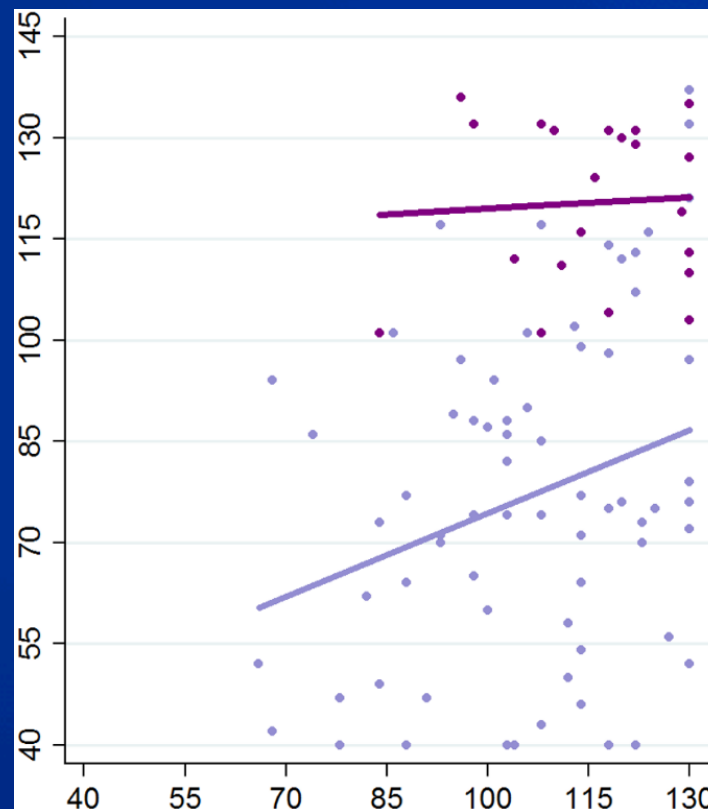
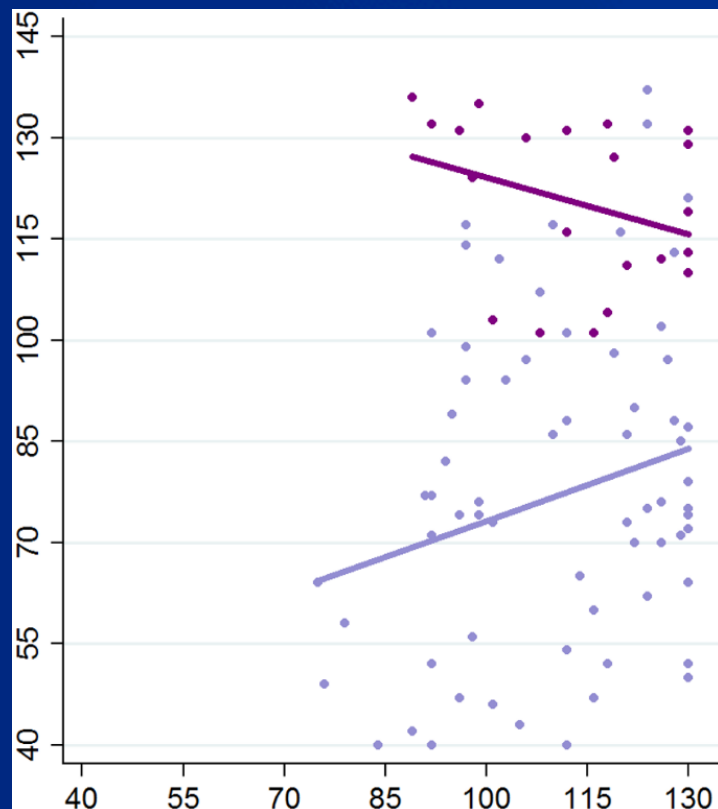
CI $r = 0.28^*$

Teacher Rating

NH $r = 0.43^*$

CI $r = 0.44^{**}$

CASL Pragmatic Judgment



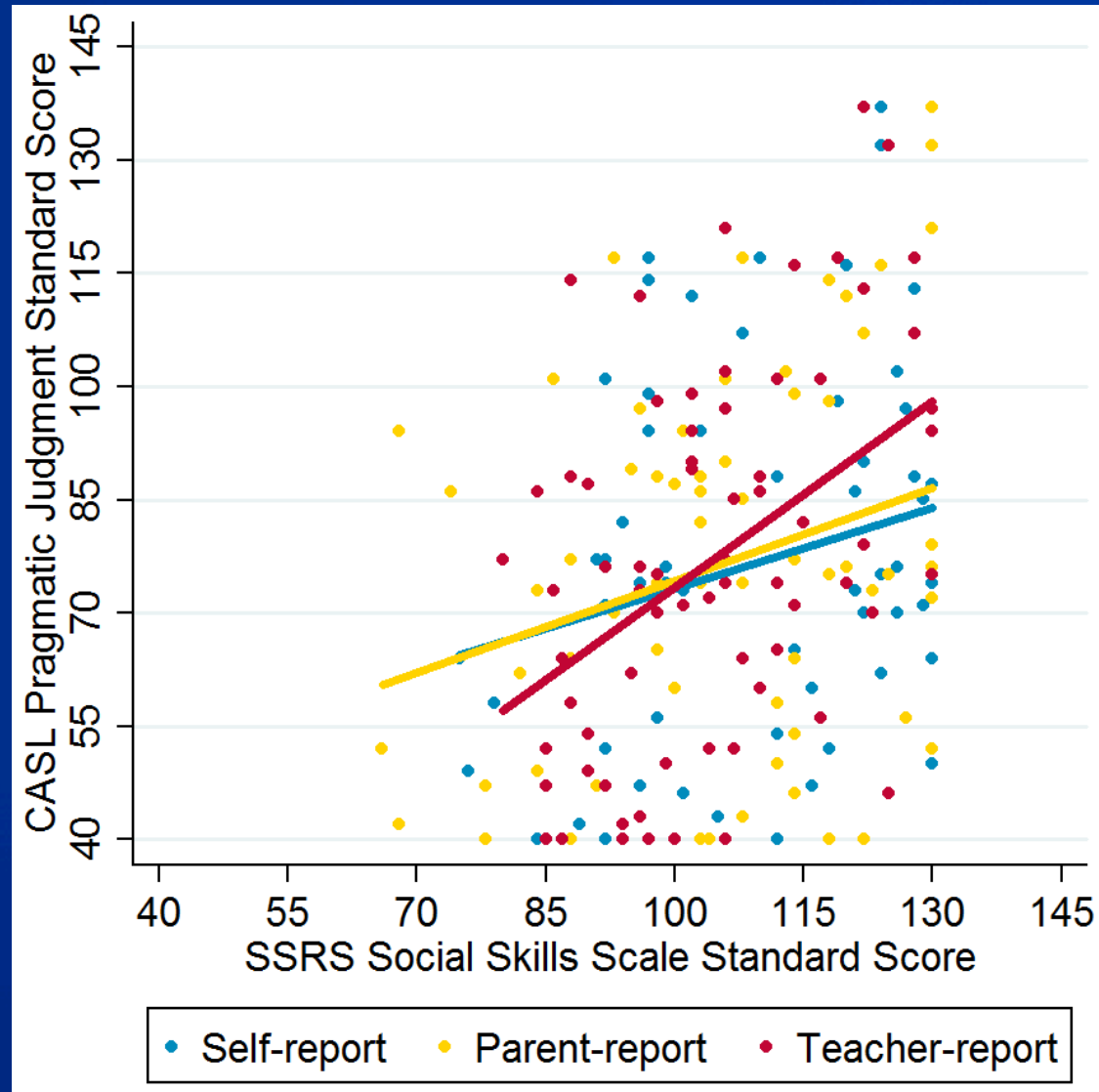
SSRS Social Skills Scale

• NH Controls • CI Recipients

* <0.05

** <0.001

Child/Parent/Teacher Ratings among CI Recipients



Conclusions

- **Pragmatic language and social skills were related.**
 - Based on parent and teacher report
 - Supports Dynamic Systems theory
- **Whole child interventions are needed**
 - Interdisciplinary approach
- **Future directions**
 - Examine predictors of pragmatic language skills and social skills
 - Comparison of longitudinal data from current CDaCI cycle