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# Validating Child Outcomes Summary Ratings of Young Children's Functional Outcomes: Addressing Methodological Challenges

Lauren Barton, Cornelia Taylor, Kathleen Hebbeler, & Donna Spiker

Conference on Research Innovations in Early Intervention (CRIEI)  
San Diego, CA February 2012



## Background

- The Child Outcomes Summary (COS) process is the basis for accountability data in more than 40 state early intervention (EI) or early childhood special education (ECSE) programs.
- The COS process was adopted by states to meet federal requirements before studies validating the COS had been conducted.
- The COS process is challenging to validate.

## What is ENHANCE?

- The first large-scale project designed to investigate the validity of the COS process
- The main research question is: Are COS data valid for accountability purposes?
- A set of studies examining validity—a characteristic of the data produced and how they are used; not a characteristic of the tool
- Project approach involves:
  - Developing a set of 17 claims expected to be true if data are valid
  - Testing those claims using multiple approaches in many different programs
  - Four studies that are underway in 36 sites
- Data presented are:
  - Preliminary (based on about 2/3 of the final projected sample)
  - From one study—child assessments study
  - Focus on only one of the 17 validity claims under investigation

## Instruments

**Child Outcomes Summary (COS) Process**

- Teams synthesize multiple sources of information about how children function across settings.
- Teams consider children's functional skills integrated across domains.
- Teams assign a consensus rating about the child's current functioning relative to age-expectations for each outcome.
- Ratings range from a low of 1 to a high of 7, with specific criteria for each.
  - 6 & 7 reflect functioning within age expectations.
  - 1-5 reflect increasing distance from age-expectations levels of functioning.
- Progress is determined based on the difference between exit and entry ratings and attainment of new skills between entry and exit.

**Outcomes measured with COS process:**

- Children have positive social relationships.
- Children acquire and use knowledge and skills.
- Children take appropriate action to meet their needs.

## Child Assessments Study—Initial Sample

Sample	EI	ECSE
Number of children	71	49
Mean age at entry (SD)	15.3 months (9.8)	43.5 months (7.7)
Age at entry	31% < 8 months 31% 8-20 months 38% > 20 months	8% < 36 months 61% 36-47 months 31% ≥ 48 months
Male	64%	59%
Disability	75% developmental delay 25% diagnosed condition	40% speech/language impairment 38% developmental delay 22% another diagnosis, most frequently autism
Number of states	7	6
Number of programs	19	14

NOTE: These are preliminary data for only a portion of the final projected sample.

## Child Assessment Studies—Sample COS Ratings

Ratings      1    2    3    4    5    6    7

Figures 1 & 2. Percentage of children with each COS rating, by outcome

Figure 1. EI (n = 71)

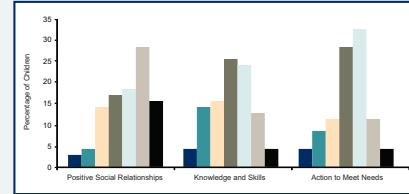
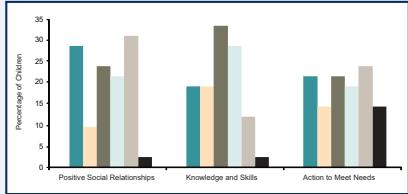


Figure 2. ECSE (n = 49)

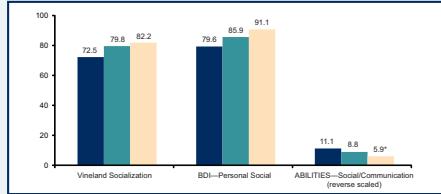


## Findings

COS Group 1    COS Group 2    COS Group 3

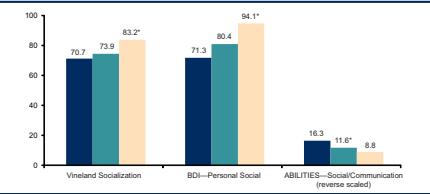
Figures 3 & 4. Positive social relationships: Mean assessment scores across COS groups

Figure 3. EI



\* p < .05.

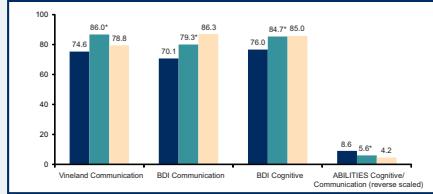
Figure 4. ECSE



\* p < .05.

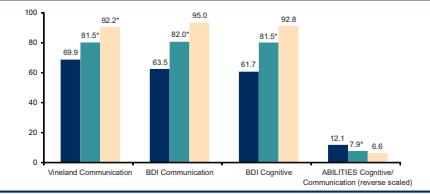
Figures 5 & 6. Acquisition and use of knowledge and skills: Mean assessment scores across COS groups

Figure 5. EI



\* p < .05.

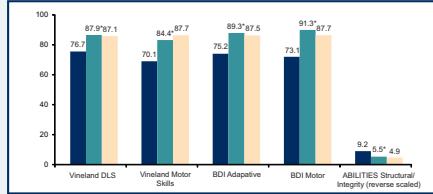
Figure 6. ECSE



\* p < .05.

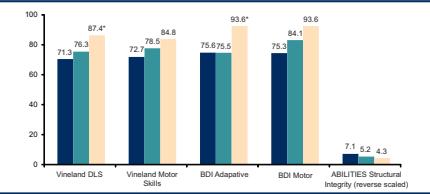
Figures 7 & 8. Use of appropriate behaviors to meet their needs: Mean assessment scores across COS groups

Figure 7. EI



\* p < .05.

Figure 8. ECSE



\* p < .05.

## Methodological Challenges

- Comparing outcomes to domains is an imperfect standard because functional outcomes, by definition, integrate skills across domains.
- Assessment tool subdomains provide content match, but they have poor reliability.
- COS ratings are not on an interval scale, a characteristic which limits the usefulness of correlations as evidence for validity claims.
- There is variation in COS implementation across programs and states, including the team process.
- Preliminary data suggest examining EI and ECSE separately may be important, but there was a limited sample size in preliminary data.
- Collapsing the seven COS rating points into three groups alters the metric used for accountability reporting.