THE MACARTHUR CDI: PAST, PRESENT & FUTURE

IASCL-SRCLD 2002

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PARENT REPORT IN CHILD LANGUAGE RESEARCH: HOW TO BOTTLE THE DIARY STUDY
DIARY STUDIES: CLASSICS


DIARY STUDIES: MODERN ERA


PARENT REPORT IN GROUP STUDIES


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RESEARCH NETWORKS ON EARLY CHILDHOOD TRANSITIONS

Robert Emde, Director

• Early formulations
  - Parallel developments in US/Italy
  - Initial items based on
    • Prior parent report studies in both countries
    • Literatures for each language

• Successive norming efforts
  - Small sample pilot studies/parent focus groups
  - 500+ “pre-norming” in English
  - Final norming with +1800 infants in English
    • San Diego, Seattle, New Haven
    • Monolingual (biased toward middle class)
OBTAINING VALID & RELIABLE DATA WITH PARENT REPORT: 3 RULES

• Only ask about current behaviors

• Only ask about salient, emerging behaviors that parents can recognize and track

• Respect the science of adult memory
OBTAINING VALID & RELIABLE DATA WITH PARENT REPORT: Rule #1

- Only ask about current behaviors
  - Retrospective reports are subject to ‘embellishment’
  - When accurate on the facts, retrospective reports tend to be wrong on the timing
• Only ask about salient, emerging behaviors that parents can recognize and track
  - Phonology is hard for parents to think about
  - Parents believe that production = comprehension
  - Word comprehension can be tracked up to ~18 months (or the developmental equivalent)
  - Word production can be tracked up to ~30 months (or the developmental equivalent)
    • But see “special lexical categories”, e.g. emotion words
  - Early grammar can be assessed with concrete examples
• Respect the science of adult memory
  - Rely on recognition rather than recall
    • Checklists
    • Sentence pairs
  - Probe within categories
    • Items serve as contextual cues for each other
  - Minimize the amount of inference that is required
  - Provide examples if/when necessary
New Manual with Updated Norms Due 2003 (Brookes Publishing)

Fenson et al.

NOTE: VIRGINIA MARCHMAN IS ASKING FOR LOW-EDUCATION/NON-WHITE CDI’S TO CONTRIBUTE TO UPDATED NORMS (CALL ON INFO-CHILDES)

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TWO FORMS OF THE CDI

- WORDS & GESTURES FORM
  - 8-18 months or developmental equivalent
  - Early signs of comprehension
  - Gesture checklist
  - Word comprehension & production checklist (396 items)

- WORD & PHRASES FORM
  - 16-30 months or developmental equivalent
  - Word production checklist (680 items)
  - Grammatical complexity checklist (37 sentence pairs)
  - Morphology checklist (regulars, irregular, overgeneralizations)
  - Three longest utterances
USES OF PARENT REPORT

• PARENT REPORT COMPLEMENTS OTHER METHODS

- CANNOT REPLACE OBSERVATIONAL AND/OR EXPERIMENTAL METHODS FOR MOST PURPOSES

- FILLS IN WHERE OBSERVATIONAL/EXPERIMENTAL METHODS ARE IMPractical
  • BECAUSE OF COST
  • BECAUSE PARENTS KNOW THINGS WE CANNOT SEE WITHOUT MOVING INTO THE HOME
USES OF PARENT REPORT

- Collection & comparison of norms with large samples
- Outcome measure for large-sample studies
- Dependent variable for experimental studies
- Independent variable for experimental studies
- Individual tracking in case studies
- Screening for clinical purposes
USES OF PARENT REPORT

- Collecting/Comparing Norms w. Large Samples
  - Charting growth within domains
    - Curve-Smoothing: “Height-Weight Charts for Language”
    - Curve-Fitting: comparing models of growth
  - Relationships between domains
    - Changes in the composition of vocabulary
    - Production as a function of comprehension
    - Gesture as a function of vocabulary level
    - Grammar as a function of vocabulary level
  - Group comparisons
    - Demographics (gender, social class)
    - Cross-linguistic comparisons
    - Comparisons across clinical groups
USES OF PARENT REPORT

• Outcome measure for large-sample studies
  - Multi-Site Daycare Initiative
  - Treatment of Otitis Media (Pittsburgh study)
  - Behavioral Genetics
    • Twin studies
      - Plomin, Bishop, Dale
      - Reznick et al.
    • Adoption studies
USES OF PARENT REPORT

• Dependent variable for experimental studies
  - Complement to laboratory observations
    • Free speech
    • Experimental probes
    • Cross-validation of methods
    • Hundreds of validation studies now available

  - “Shape of Change”
    • Growth parameters in longitudinal studies as dependent variables that subsume multiple single-point observations
USES OF PARENT REPORT

- Independent variable for experimental studies
  - To define children by language level as well as age
    - Predicting current language behavior
    - Predicting current non-language behavior
    - Predicting long-term outcomes in longitudinal designs
    - Predicting short-term effects of training
    - Predicting brain activity
    - Risk indicators for current status and long-term outcomes in clinical studies
  - To select the items used in experimental studies
USES OF PARENT REPORT

• Individual tracking in case studies
  - Structured diaries
    • “Baby book” for the modern parent/scientist
    • Permits comparison with group norms (see Screening)
  - Comparison of structured and open-ended diaries
    • Mervis’ study of Ari
    • Coverage of CDI drops as individual vocabularies increase
  - Bilingual tracking
    • By a single bilingual parent
    • By one caretaker in each language
USES OF PARENT REPORT: HOPES FOR THE FUTURE

• **Screening**
  - Full coverage short forms
    • Sensitivity at all levels of difficulty
    • High correlations with full form
    • Preferable for pediatric practices & individual parents
  - Screening forms
    • Sensitivity in the lower range of difficulty
    • Lower correlations with full form
    • Preferable for clinics & health care services
USES OF PARENT REPORT:
HOPE FOR THE FUTURE

• Computerized Screening
  • Shorten testing by automated step-up/step-down presentation of items
  • Individualized assessment at work stations in pediatric waiting rooms
  • Web-based services for individual parents
  • Versions available in multiple languages to compensate for limited availability of multilingual clinical services