Measuring early development of language skills: The European Portuguese MacArthur-Bates Communicative Development Inventories short forms

Sónia Frota, Joseph Butler, Susana Correia, Cátia Severino, Selene Vicente & Marina Vigário

2016 EARLI – SIG 5 Conference

BACKGROUND & GOALS

Parental reports > a way of gaining knowledge on early language development in a feasible way covering the range of variation in large samples.

The long forms of the CDI showed limitations, restricted applicability and effectiveness in several research, educational and clinical settings (Fenson et al., 2000; Jackson-Maldonado, 2013)

Development of SHORT FORM versions of the CDI: as effective, reliable and valid, and more applicable in a variety of contexts (e.g., part of a long protocol, repeated administration, longitudinal studies, bilingual settings, quick assessment for clinical purposes, less demanding on educational background of caregivers).

European Portuguese CDI short forms (EP-CDI SFs)

a norming study of the EP population

PARTICIPANTS & PROCEDURE

Population: 511,054 children between 0 and 4 years of age (INE, 2012); 7 regions x gender

Sample: G*Power 3 medium effect size .25, significance .05 confidence interval .95

Normative sample: Monolingual EP children, no hearing loss, Down Syndrome or known cognitive deficits

Data collection: Effects of age, gender and SES on language outcomes; percentile scores and fitted scores calculated through growth-curve modeling using the logistic function (Fenson et al. 2000; Fenson et al. 2007)

RESULTS

Developmental trends - Toddlers: Word combinations

Strong correlations: Expressive vocabulary and production of complex words (r = .68, p < .001)

Word combinations and the vocabulary score (r = .76, p < .001)

Weaker correlation: Word combinations and age (r = .59)

Cross-language comparison: All: Galician, Spanish, EP (vocabulary)

Infants: no effects of Language, no interactions, borderline effect of Gender for production (G > B)

Toddlers: Main effect of Language*** and Gender***

Developmental trends - Infants: receptive vocabulary >> expressive vocabulary

Comprehension: Main effects of age group***, gender***, and SES*** (medium: highest; lowest)

Developmental trends - Toddlers: Vocabulary and complex words

Production: Main effects of age group*** and gender***

Production of complex words: Main effects of age group*** and gender***

DISCUSSION

- New approach to the development of CDI short forms that produces reliable and valid CDI data
- Similar to findings for other languages: comprehension precedes production, steady increase of receptive vocabulary, acceleration in vocabulary growth in the 2nd year
- Word complexity: half of the children produce complex words by 26 mos
- Word combinations: acceleration by 22 mos in age
- Vocabulary: Ceiling effects only after 27 mos (for top half); No ceiling effects for word complexity & word combinations > EP-CDI SFs may be appropriate for use with at risk or language-impaired children
- Effectiveness of the short form versions of the CDI to detect early grammatical development patterns (Fenson et al., 2000; Pérez-Pereira & Resches, 2007)
- Gender differences: Robust finding, already at the infant stage and increasing with age
- Very limited effect of SES

- Across languages: Robust gender differences, regardless of language; developmental trends more similar in infants, strong differences in toddlers; differences across languages due to language-specific sound features

http://labfon.letras.ulisboa.pt/babylab/pt/CDI/ sonia.frota@mail.telepac.pt

EXCL/MHC-LIN/0688/2012