

Development of Czech short-form MB-CDI: WG

Michaela Hájková^{a,b}, Filip Smolík^{a,b}, Nikola Paillereau^{a,b}

^aInstitute of Psychology, Czech Academy of Sciences, ^bFaculty of Arts, Charles University

Contact: hajkovam@praha.psu.cas.cz

What is MB-CDI?

- the **MacArthur-Bates Communicative Development Inventories** (Bates et al., 1975; Marchman et al., 2023)
- parent-report questionnaires
- **screening tool** for potential risk of language disorders
- **MB-CDI: Words and Gestures (8-18 months)**, Words and Sentences (16-30 months)
- Czech MB-CDI adaptation: **DOVYKO I, II** (Paillereau et al., 2023a, 2023b)

Why do we need short forms?

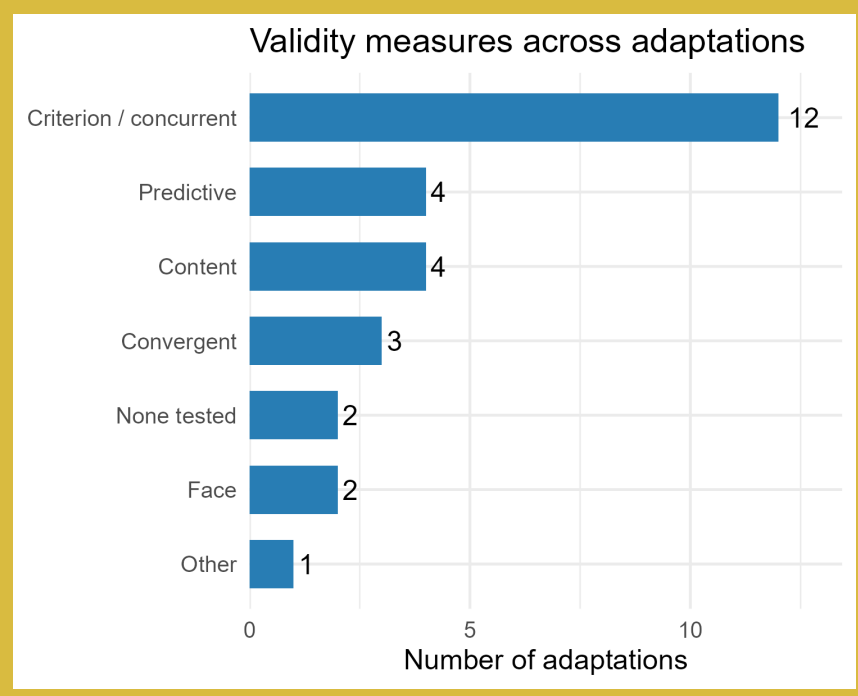
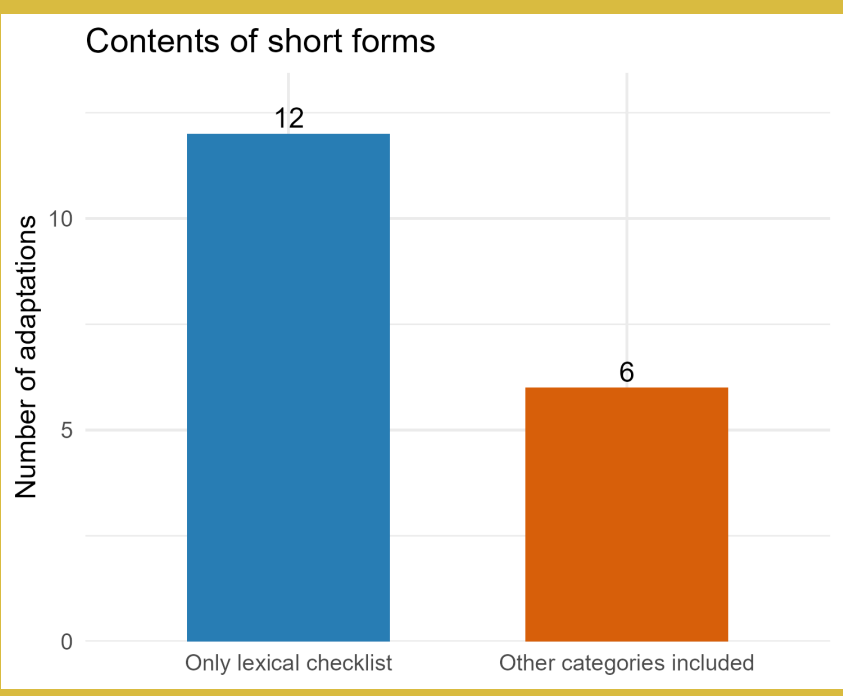
Completion time of original long forms is circa
30 minutes to an hour



Unusable during routine health check-ups and contributes to attrition of participants in research

Review of pre-existing short forms

- **review of available documentation** summarizing the process of creating the short-form MB-CDI: WG adaptations (**18 short forms**)
- information regarding target age group, number of questionnaires developed, exact contents and the process of item selection, inclusion of regional/ethnic words, consideration of language properties, assessment of psychometric properties, norming study...



Czech short-form MB-CDI: WG

Characteristics of DOVYKO I

- **Lexical checklist** (402 items), **gesture checklist** (70 items)
- items in the lexical checklist sorted into **19 semantic categories**
- 65 % nouns, 17 % verbs, 7 % interjections, 4 % adverbs, 3 % adjectives, 3 % pronouns, 1 % remaining classes

Steps of the development

- 1) Based on review: three forms (**8, 12, 18 months**), **only lexical checklist** with cca **100 items each**, with **4 control items** (ceiling and floor effects)
- 2) All items with **reported frequency between 50 and 75 %** selected from normative data
- 3) Items included/excluded to reflect **semantic distributions** from long form
- 4) Items included/excluded to reflect **morphosyntactic distributions** from long form
- 5) Identification of unsuitable items via **item analysis** (replaced with more suitable option when possible)

Characteristics of each form

Short form	N. of items	Distribution of word classes	Control items
8 m.	102	65 nouns, 18 verbs, 7 interjections, 5 adverbs, 3 adjectives, 3 pronouns, 1 rest	Nemocný (sick), komín (chimney), paci paci (patty-cake), máma (mum)
12 m.	103	66 nouns, 18 verbs, 7 interjections, 5 adverbs, 3 adjectives, 3 pronouns, 1 rest	Nemocný (sick), komín (chimney), ham (yum), máma (mum)
18 m.	103	65 nouns, 18 verbs, 7 interjections, 5 adverbs, 4 adjectives, 3 pronouns, 1 rest	Komín (chimney), trenky (underpants), ne (no), pápá (bye-bye)

Scan for references and content of forms!



What is next?

- pilot testing since late 2025: **19 (8 m.), 22 (12 m.), 31 children (18 m.)**
- modification of contents after conclusion of pilot tests
- collection of **norming data**
- assessment of **psychometric properties**

REFERENCES: Bates, E., Camaioni, L., Volterra, V. (1975). The acquisition of performatives prior to speech. Merrill Palmer Quart. Behav. Dev. 21, pp 205–226.; Marchman, V. A., Dale, P. S., Fenson, L. (2023). MacArthur-Bates Communicative Development Inventories: User's Guide and Technical Manual, 3rd Edition. Brookes: Baltimore; Paillereau, N., Sloupová, T., Chládková, K., Jarůšková, L., Fialová, T., Dvořáková, B., Oceláková, Z., Ungrová, V., Kynčlová, K., Pešek, J., Kadavá, Š. (2023a). Dovyko I. Dotazník pro screening jazykového vývoje u dětí od 8 do 18 měsíců. [Unpublished manuscript]. Retrieved from www.dovyko.cz; Paillereau, N., Sloupová, T., Chládková, K., Jarůšková, L., Fialová, T., Dvořáková, B., Oceláková, Z., Ungrová, V., Kynčlová, K., Pešek, J., Kadavá, Š. (2023b). Dovyko II. Dotazník pro screening jazykového vývoje u dětí od 16 do 30 měsíců. [Unpublished manuscript]. Retrieved from www.dovyko.cz.

ACKNOWLEDGMENTS: This work was supported by the Czech Science Foundation, grant no. 24-11139M (Junior Star) and the project MEDIS:ON (CZ.02.01.01/00/23_025/0008713). The funders had no role in study design, analysis of data, interpretation of results, or writing of the report. The authors declare no conflicts of interest with regard to the funding source for this study.