



Speech and Hearing BC
Journal Club - Special Topics

Critical Appraisal Form February 19, 2019

Present: Barbara May Bernhardt, Elisha Blackburn, Anna Crauford, Jo-Ann Quinn

Article: **Two PAPERS - the second is a tutorial with many resources listed.** This appraisal relates to the first paper primarily.

1. Bernhardt, B.M., Stemberger, J.P., Bérubé, B., Ciocca, V., Freitas, M.J., Ignatova, D., Kogošek, D., Lundeborg Hammarström, I., Másdóttir, T., Ozbič, M., Perez, D. and Ramalho, A.M. (in progress) Identification of protracted phonological development across languages - The Whole Word Match and basic mismatch measures. Chapter 11, **An Anthology of Bilingual Child Phonology** (Eds. E. Babatsouli, M. Ball & N. Mueller)

2. **McLeod, S. & Verdon, S. and The International Expert Panel on Multilingual Children's Speech. (2017). Tutorial:** Speech assessment for multilingual children who do not speak the same language(s) as the Speech-Language Pathologist. *AJSLP*, 26, 691-708.

Participants, Bernhardt et al.: 333 preschool children aged 3 to 5, speaking one of French, Eur. Portuguese, Bulgarian, Slovenian, Swedish, Icelandic, Spanish, German; 197 typically developing and 136 with protracted phonological development (PPD)

Control or Comparison Group/s, Bernhardt et al.: 197 (76 age 3, 100 age 4, 21 age 5)

Methods, Bernhardt et al.: For this international crosslinguistic study, children were assessed with single-word elicitations (average 100 words per child) with tests designed to reflect the word structure and phonemic inventories of the languages in words familiar to children. After data collection (audio-recorded samples) and transcription by native and near-native speakers (according to project conventions), data were analysed using Phon, a computerized phonological data entry and analysis program. The major measure of interest for this study was Whole Word Match (WWM: word had to match the adult target, small phonetic deviations being ignored. A comparison of a screening and full word list was done for each language, and a cut-off point determined by visual graph inspection and taking into account mean and standard deviation for PPD. For children at the borderline, a basic mismatch tally/total words (C or V deletion, C Substitution, Epenthesis) further disambiguated status as typical or PPD.

Outcomes, Bernhardt et al.: [Click or tap here to enter text.](#)

3yolds across languages: About 40% Whole Word Match was cut-off for PPD (exception for the most difficult test, Eur. Portuguese, 15% Whole Word Match)

4yolds across languages: About 50-60% WWM cut-off (Portuguese 40%)

5yolds for Bulgarian, Spanish: 75-80%, Spanish; 55% Bulgarian

Basic mismatch score disambiguated several children with borderline PPD on WWM score.

Strengths and Limitations of Research, Bernhardt et al. : Click or tap here to enter text.

A unique measure that is quick and dirty and reasonably similar across languages for which word lists for elicitation are constructed at appropriate levels of complexity for the language and children's age. Much more data are needed to continue to promote good cut-off scores. Bayesian statistical analysis looks promising as a quantitative measure for this cut-off determination.

	Compelling	Suggestive	Equivocal/Uncertain
Validity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Clinical importance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Clinical Implications, Bernhardt et al.

1. **SLP training and study?** The authors believe that SLPs with phonetics training can learn to score Whole Word Match with minimal training for languages they do not know, if they have the word list, access to the adult target pronunciations and the IPA transcriptions. The international team would like to see an international project take shape to test this hypothesis.

2. **Multilingual practice group:** Locally, Barbara May Bernhardt would like to convene an informal Multilingual Practice Group for Speech and Hearing BC. Please contact at bernharb@mail.ubc.ca

3. **Interpreters:** Locally, people might like to see an interpreter training workshop for working with SLPs.

McLeod et al.; The participants found that this tutorial is worth reading because it (a) addresses all factors of multilingual phonological assessment, (B) describes a number of available resources, and (c) presents a sample case study of assessment for a Cantonese-English Bilingual. Download this and keep handy.

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Members in Discussion: Barbara May Bernhardt, Anna Crauford, Jo-Anne Quinn, Elisha Blackburn