

Sign language assessment in Deaf adults in clinical settings and the role of Age of Exposure

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Introduction. Most existing tests assessing adults in clinical settings were created for spoken languages and are unsuitable for Deaf people who rely on a sign language (Denmark et al., 2016). Moreover, the majority of existing sign language assessment tools are meant for educational purposes or for linguistic research (Haug, 2005), and there is a general lack of tools that incorporate clinical neuropsychological practices and can detect deficits that might interfere with typical language processing (Hauser et al., 2015; Quinto-Pozos et al., 2014). An important aspect that makes assessment difficult for sign languages is the very diverse linguistic profiles attested among Deaf people. Native signers, defined as deaf individuals born into a Deaf signing family, are only a small minority, whereas a great portion of Deaf people is exposed to a sign language later in life. This led many scholars to challenge the reliability of the grammar of native signers as the baseline for language description and assessment. The aim of this paper is two-folded: i) present three language-specific comprehension assessment tests (two lexical and a syntactic one) as potential tools to assess language impairments in atypical populations in Deaf signing adults in three sign languages (Catalan Sign Language, French Sign Language, and Italian Sign Language), and ii) support the importance of using different baselines based on Age of Exposure (AoE) to assess Deaf signing adults.

The tests. The lexical tests are sign-to-picture matching tasks that assess comprehension of lexical signs against phonological distractors and semantic distractors, respectively. This was meant to disentangle phonological or semantic impairments in lexical access. The syntactic test is a truth-value judgment task that assesses comprehension of sentences with agreement verbs, a structure in which agreement is expressed through articulation in space of the trajectory associated with the verb. Agreement verbs have been proved to be sensitive to AoE (Emmorey et al. 1995; Cormier et al. 2012; among others). With the goal of establishing baselines to be used in the assessment of the Deaf population also in clinical settings, in each language all tests were administered to three groups of about 45 Deaf signing participants based on AoE to sign language: native (AoE from birth), early (AoE = from 1 to 5 years) and late (AoE = from 6 to 15 years) signers.

Discussion. In the lexical comprehension tasks and in the agreement test, results showed an overall good performance in the three groups of participants (Figure 1, 2, 3). Concerning AoE effects, a different pattern was found between the syntactic test and the lexical ones. While AoE had an impact on comprehension of agreement, this was not the case for the lexical tasks, probably because AoE does not have an impact on the size of the lexicon (e.g., Dye & Shih, 2006; Carreiras et al. 2008).

Conclusions. The overall good performance in the three groups of participants (normative population) suggests that these three tests could be used as reliable tools to assess Deaf adults in clinical settings. Moreover, our results suggest that different normative data based on AoE are

necessary when assessing morpho-syntactic competence but might not be necessary when assessing vocabulary.

References

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Figures

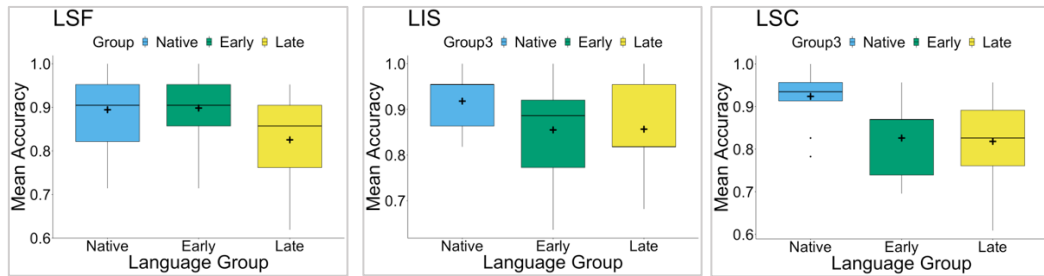


Figure 1: Mean accuracy across language groups (native in blue, early in green and late in yellow) in the comprehension with phonological distractors test.

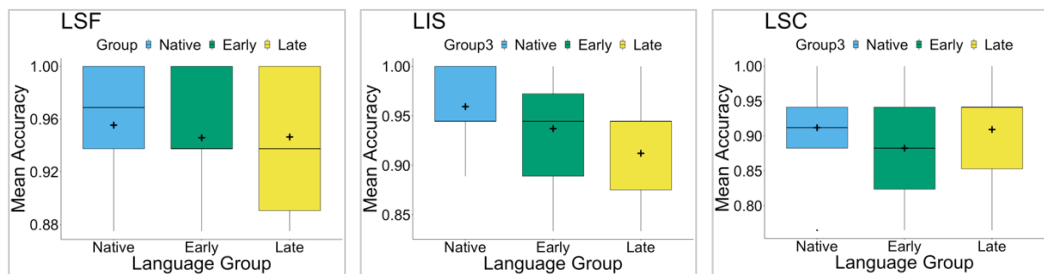


Figure 2: Mean accuracy across language groups (native in blue, early in green and late in yellow) in the comprehension with semantic distractors test.

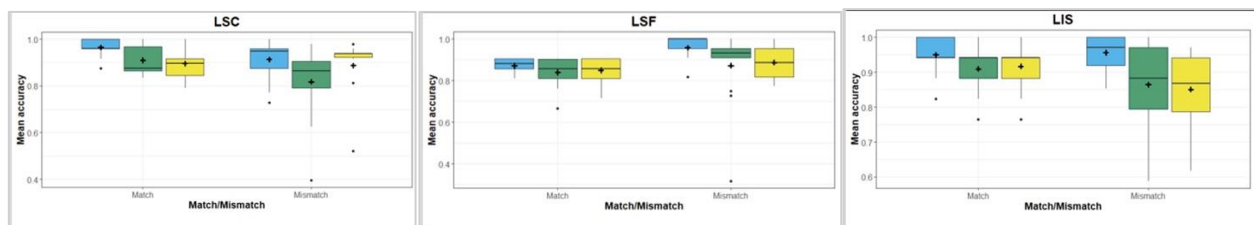


Figure 3: Mean accuracy across language groups (native in blue, early in green and late in yellow) in the agreement test.