



How high is the risk of language misdiagnosis in multilingual children?



New evidence from early second language learners of German

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Background

Children with undiagnosed Specific Language Impairment (SLI) are at risk for poor academic and social achievement. Studies in monolinguals and bilinguals indicate that underdiagnosis, i.e. diagnosis of SLI-children as typically developing (TD) exists along with overdiagnosis, diagnosis of TD-children as SLI (Botting et al. 1997, Paradis 2007, Grimm & Schulz in press). It is assumed that especially early second language (eL2) learners are at risk of underdiagnosis (Rothweiler 2007); however, to date there is little empirical evidence. Using referral to speech-language services as the indicator of having SLI, research so far provided mixed results. Multilingual children are argued to be overrepresented (e.g., for the Netherlands, Yagmur and Nap-Kolhoff 2010) as well as underrepresented (e.g., for Sweden, Salameh 2006) in special language service institutions. In Germany, pediatricians are responsible for diagnosis of SLI and assignment to language-intervention. This study hence examines pediatricians' diagnostic accuracy regarding to eL2-learners' language abilities.

Research question

Does pediatricians' diagnosis of eL2-children as (un-)impaired agree with the identification via a standardized language test suitable for eL2-learners?

Participants

- 27 eL2-learners of German (mean age: 4;6 years, mean age of onset: 2;10 years, 19 girls and 8 boys) with age-appropriate nonverbal IQ (measured by K-ABC) and hearing abilities (parental questionnaire).
- 27 pediatricians (9 female, 18 male)

Design and Method

- Test of children's language abilities with LiSe-DaZ (Schulz & Tracy 2011); standardized test for eL2-learners; 9 subscales assessing receptive and expressive morpho-syntactic and semantic abilities. Identification as SLI if T<40 in at least 2/9 subtests, and as TD otherwise.
 - Identification
- Telephone interview about the language diagnosis given by the pediatrician in the examination procedures
 - Diagnosis



Results

Pediatricians' judgments ('diagnosis') were compared with the test-result ('identification') and categorized as overdiagnosis, underdiagnosis, or correct-unimpaired, correct-impaired. The pediatricians classified 4/27 eL2-children as impaired and 23/27 as unimpaired. The language test identified 7 eL2-children as SLI and 20 as TD. A cross-classification yields correct diagnoses for 67% (18/27) of the eL2-children (Table 1). Underdiagnosis was higher than overdiagnosis.

Table 1: Agreements and incorrect diagnoses of 27 eL2-children by pediatricians

		Diagnosis by pediatrician	
		unimpaired	impaired
Identification based on LiSe-DaZ	unimpaired	17 (63%) correct-unimpaired	3 (11%) overdiagnosis
	impaired	6 (22%) underdiagnosis	1 (4%) correct-impaired

Sensitivity (1/7, 14%), the proportion of SLI children who are correctly identified as language-impaired, was lower than specificity (17/20, 85%), the proportion of TD children who are correctly identified as unimpaired.

Conclusion

Our study confirms that eL2-children are subject to misdiagnosis in Germany. Comparable to Salameh (2006), we found more underdiagnosis than overdiagnosis. These findings imply that many children do not receive the intervention, they need. These children are at risk for poor academic and social achievement. The high rate of misdiagnosis may be caused by the fact that many pediatricians, despite their responsibility for diagnosis are ill-prepared for identifying SLI, and they adopt a wait-and-see attitude (Voet Cornelli in Vorb.). Professionalization of pediatricians and/or a change of the language assessment practice in Germany is needed to reduce the rate of over- and underdiagnosis in eL2-children.

References

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