

The German adaptation of the Intelligibility in Context Scale (ICS-G) – Reliability and Validity Evidence

Background: Speech intelligibility supports effective communication and is one of the foremost issues of importance in the discipline of speech-language pathology. However, little is known about the specific issues that restrict the communicative participation of children with speech sound disorder and reduced speech intelligibility. Therefore, McLeod, Harrison, & McCormack developed a parent report questionnaire for assessing children's speech intelligibility in social contexts, the Intelligibility in Context Scale (ICS; McLeod et al., 2012), based on Environmental Factors identified within in the framework of the International Classification of Functioning, Disability and Health-Children and Youth Version (ICF-CY; WHO, 2007). The authorized German adaptation was established by Neumann in 2012 (McLeod, Harrison, & McCormack, 2012, Neumann, Trans.).

Purpose: The aim of the present study was to explore the reliability, esp. internal consistency and test-retest-reliability, and construct validity of the authorized German adaptation of the ICS [Skala zur Verständlichkeit im Kontext; ICS-G]. Following previous study designs (McLeod et al., 2012; Ng, To, & McLeod, 2014) we aimed to prove construct validity by using the clinical measures of severity of speech sound disorder: (a) percentage of consonants correct (PCC), (b) percentage of initial consonants correct (PICC), (c) percentage of vowels correct (PVC) and (d) percentage of phonemes correct (PPC). For data sampling, we used the German Psycholinguistic Analysis of Childhood Speech Sound Disorder-II/PLAKKS-II (Fox-Boyer, 2014).

Method: Participating families' typically developing children (TDC; $n = 151$) and children with speech sound disorder (CSSD; $n = 30$) ($N = 181$; 90 males, 81 females; range 3;0–5;11

years, $M = 4.18$ years, $SD = 0.79$ years) were recruited through 13 kindergartens and 15 speech-language pathologists (SLP's) in Germany. All parents completed the ICS-G. For analysis of test-retest reliability the ICS-G was administered in a sub-sample of parents ($n = 36$) again after one week. The speech skills of the CSSD were assessed and analyzed with the PLAKSS-II.

Results: The ICS-G had high values for internal reliability and test-retest-reliability.

Correlations between ICS-G mean scores and PLAKSS-II-scores (e.g. number of phonological processes) demonstrated significant associations concerning construct validity. Construct validity was also established through significant correlations between the ICS-G and the PCC, PICC, PVC and PPC.

Conclusion: The study provides evidence on strong internal consistency, test-retest-reliability and construct validity of the German adaptation of the ICS and supports its use by SLPs for clinical and research purposes assessing intelligibility in social context.

References

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Key Words: Intelligibility in context scale (ICS), reliability, validity, children, ICF-CY