Validation of the Intelligibility in Context Scale for Jamaican-Creole speaking children (Part of Panel Presentation – Internationalization of the Intelligibility in Context Scale)

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Within a clinical context, SLPs need access to measures describing speech intelligibility across languages as part of routine speech evaluation practices. The Intelligibility in Context Scale (ICS[1]) is a screening tool that measures functional intelligibility for different languages and across communication partners[2]. It is a seven-item parent-report measure using a five-point numerical scale. Developed in accordance with the International Classification of Functioning, Disability and Health–Children and Youth (ICF-CY)[3] , it reflects Environmental Factors. Validated on 120 Australian English-speaking children, the ICS demonstrates excellent internal consistency (α=.93), sensitivity, and construct validity[2]. The ICS has been translated into 60 languages (http://www.csu.edu.au/research/multilingual-speech/ics), including Jamaican Creole-*Mezha fi Omuch ada Piipl kyan Andastan di Pikni: Jamiekan* (ICS-JC[4]). However, few validation studies have been conducted with speakers of different languages. Consequently, the purpose of this research was to describe the first ICS-validation study for use with speakers of Jamaican Creole (JC) and Standard English to describe functional intelligibility in the Jamaican population.

Participants were 145, 3-to 6-year old typically developing JC- and English-speaking children attending three regular public schools in Kingston, Jamaica. The sample included slightly more females (n=81) than males (n=64). Audio-recordings of the ICS and ICS-JC were created to support similarity in tool completion. Parents listened to ICS and ICS-JC questions on the laptop and provided language-specific responses using paper/pen format. Speech sound production in JC and English was established for each child using the Articulation and Phonology subtests of the Diagnostic Evaluation of Articulation and Phonology[5] (DEAP; Dodd et al., 2006). The DEAP is a formal measure of children's speech sound production in response to colored picture stimuli that are child friendly. The DEAP has not been normed on Jamaican children. However, the DEAP was used to provide a consistent testing format for obtaining an index of speech sound competency in each language based on well-known clinical measures: percentage-of-consonants correct (PCC), percentage-of-vowels correct (PVC) and percentage-of-phonemes correct (PPC).

The results of the research were as follows. The ICS demonstrated excellent internal consistency (α=.912), very high test-retest (one-week) r=.97, p< .001 and inter-rater reliability (mother-father) r=1.00, p<.01, with moderate-to-very high correlations for each item rated (r_s=.71—1.00, p_s<.001); and small-to-moderate positive correlations, demonstrating construct validity (amongst ICSitems) and criterion validity (between ICS total score and PCC, PVC, PPC). Additionally, the ICS-JC demonstrated excellent internal-consistency (α=.907), very high test-retest (one-week) r=.98, p< .001 and inter-rater reliability (mother-father) r=.93, p<.01, with moderate-to-very high correlations for each item rated (r_s=.77—1.00, p_s<.001); and small-to-moderate positive correlations, demonstrating construct validity (amongst ICS-items) and criterion validity (between

ICS total score and PCC, PVC, PPC). Across children, mean scores for the ICS (mean=4.43) and ICS-JC (mean=4.50) were similar.

Both tools are valid and reliable in estimating functional speech intelligibility for typically-developing Jamaican preschoolers. Use of such tools could reduce disparities in the care provided by health and educational services to JC-speaking children.

Presentation Preference

Presentation as part of an accepted panel

References

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