

MBSIMP TRAINED SLPS CONTRIBUTE TO CLINICAL RESEARCH



ALEX CLAIN, PHD CANDIDATE

CITATION

Clain, A. E., Alkhuwaiter, M., Davidson, K., Martin-Harris, B. (In Press) "Structural Validity, Internal Consistency, and Rater Reliability of the Modified Barium Swallow Impairment Profile (MBSImP): Breaking Ground on a 52,726-Patient, Clinical Dataset". *Journal of Speech, Language, and Hearing Research*.

PURPOSE

The purpose of this study was to extend the assessment of the psychometric properties of the Modified Barium Swallow Impairment Profile (MBSImP™), previously validated by Martin-Harris et al. (2008) on a sample of 300 patients.

AIMS

The aims of this investigation were to

- Re-examine the structural validity of the MBSImP using a large clinical-registry data set of ~50,000 patients
- Assess the extent to which the components of each domain of the MBSImP related to each other strongly enough to form a single overall-impairment variable (“internal consistency”)
- Formally evaluate rater reliability across MBSImP trained speech-language pathologists with a range of experience in a 50-patient dataset

FINDINGS

Exploratory factor analysis showed a two-factor solution with factors precisely corresponding to two multi-component MBSImP domains, Oral and Pharyngeal, consistent with findings from the initial study (Martin-Harris et al., 2008). Component 17, the Esophageal Domain, remained separate, not loading onto either factor. Internal consistency was good for both the Oral and Pharyngeal domains ($\alpha_{\text{oral}} = 0.81$; $\alpha_{\text{pharyngeal}} = 0.87$).

Inter and intra-rater reliability were found to be good with an inter-rater ICC=0.78 (CI=0.76-0.80) and intra-rater ICCs= 0.82-0.87 (Rater1: CI=0.77-0.86 | Rater2: CI=0.79-0.87 | Rater3: CI=0.83-0.90 | Rater4: CI=0.83-0.90).

WHAT DOES THIS MEAN FOR MBSIMP AND TRAINED CLINICIANS?

The present study leverages a large-scale, clinical dataset of >50,000 patients to provide strong, generalizable evidence that the MBSImP assessment method has excellent structural validity and internal consistency. In addition, the results show that MBSImP trained SLPS demonstrate good inter-rater and intra-rater reliability.