

## **BaByVFSSImP® A Novel Measurement Tool for Videofluoroscopic Assessment of Swallowing Impairment in Bottle-Fed Babies: Establishing a Standard**

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**Aim:** This investigation tested the construct validity of the first standardized assessment tool, the BaByVFSS Impairment Profile, (BaByVFSSImP®), developed for the quantification of swallowing observations made from videofluoroscopic swallow studies (VFSS) in bottle-fed babies.

**Method:** Construct validity of the measures was tested using descriptive methods and confirmatory factor analysis (CFA) of swallowing scores obtained from a cohort of bottle-fed babies (median age 3 months 1 day, interquartile range 1 month 4 days-7 months 4 days) sequentially referred for VFSS based on clinical signs, symptoms, or risk factors associated with dysphagia and/or aspiration. Main outcome measures were emergence of functional domains derived from swallowing component impairment scores.

**Results:** Confirmatory factor analysis resulted in 21 significant components (factor loadings  $\geq 0.5$ ) grouping into five functional domains labeled for common contribution to overall swallowing function. The tool was organized into the BaByVFSSImP. Clinical relevance was explored using correlational analyses between domain scores, maximum penetration/aspiration scores, feeding status, and caregiver burden.

**Interpretation:** Quantification of physiologic swallowing impairment captured by BaByVFSSImP holds promise for identification of physiologically based targets for intervention, clinical decisions regarding enteral feeding, and tracking the trajectory of swallowing impairment throughout development in young children.

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