Redefining language diagnosis with multimodal assessment: Advancing dynamic assessment approaches for DLD and ASD.

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ABSTRACT

Multimodal language—the seamless integration of gestures, gaze, facial expressions, and speech—plays a fundamental role in language development, enhancing both comprehension and learning. Research has consistently shown that multimodal communication supports children's understanding of oral instructions and facilitates language acquisition, making it a critical factor in assessing language abilities. Despite its established significance, multimodal elements remain underrepresented in current language assessment frameworks.

Dynamic assessment (DA) of language provides a flexible, interactive approach to evaluating how children learn language, emphasizing potential rather than static performance. While DA has demonstrated validity, it has been insufficiently applied in research and clinical settings for diagnosing language disorders (Arias & Friberg, 2017). Integrating multimodal language into DA offers the potential to enhance its ecological validity and diagnostic precision.

This research investigates how multimodal DA can differentiate language-learning profiles in children with developmental language disorder (DLD) and autism spectrum disorder (ASD). It explores whether multimodal narrative assessments can effectively capture distinct patterns of language use. A novel perceptive assessment categorizes multimodal narrative profiles—compensatory, redundant, discursive, and self-regulatory—while detailed narrative analysis quantifies microstructural, macrostructural, and gesture-based features. Preliminary findings indicate that children with NDD display more frequent compensatory profiles and reduced macrostructure and microstructure scores, underscoring the diagnostic value of multimodal measures.

Furthermore, this project adopts a participatory approach, involving families, professionals, and neurodivergent individuals to investigate their needs related to language assessment, specifically from a multimodal perspective. By emphasizing inclusivity and accessibility, this mixed-methods research aims to improve early detection practices for DLD and ASD, advancing diagnostic accuracy and

providing actionable innovations for speech and language pathologists.