

The Relation between Speech-Sound Perception and Reading Ability

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Abstract

Reading disabilities (RDs) are thought to affect at least 15% of children (IRA, 1998; NICHD/NRP, 2000). We propose that RDs start prior to formal reading instruction, present challenges into adulthood (Pratt & Brady, 1988), and are fundamentally related to the auditory perception of speech sounds. This study aims to determine if children with RDs demonstrate greater perceptual confusion of 24 consonants (Cs) and 15 vowels (Vs) than typical readers, and to describe the nature and degree of any confusions. Eleven children with RDs and six reading controls (RCs), 8 to 11 years old, participated in two tasks. The *Syllable Confusion Oddball Task* presented a sequence of three natural CV or VC syllables (prerecorded by 18 different talkers), with one syllable differing in its C or V. The child then identified the odd syllable. The *Nonsense Syllable Confusion Matrix Task* randomly presented the same syllables one at a time, and the child imitated each. The RD group made significantly more perceptual confusions than the RC group on both tasks. Confusions were primarily for fricatives, affricates, and lax vowels. Children with RDs demonstrated many idiosyncratic confusions and more errors in syllable-final position. Findings suggest that children with RDs experience moderate difficulty perceiving a substantial number of Cs and Vs. We theorize that this level of confusion presents challenges when learning to read. Mapping the perceptual confusions of children with RDs may contribute to our understanding of perceptual vulnerabilities in dyslexic or aging adults, and to the development of training to improve perception.