Title: Methods to Visualize Test-Retest Reliability Applied to Dichotic Listening Test Scores

Authors: Kairn Kelley, Benjamin Littenberg

Abstract: Dichotic tests, in which the right and left ears simultaneously receive different stimuli, are commonly used in batteries to diagnose auditory processing disorders. Their scores may be used to guide intervention and allocation of resources even though data about the reliability of the tests are limited, especially in children. Clinical guidelines for auditory processing assessment recommend comparing children’s scores on different dichotic tests, but associations among scores within samples of children have rarely been reported. The author evaluated children’s same-day test-retest performance on the SCAN:3 Competing Words, Musiek’s Double Dichotic Digits, and the Bergen Dichotic Listening Test with Consonant-Vowel Syllables. Sixty children, ages 7-14 with normal hearing, each made one visit during which the three tests were each administered twice. In this poster we explore ways to quantify and visualize test-retest reliability of the dichotic tests. The goal of this project is to determine which of the dichotic tests have acceptable reliability for clinical use and how best to communicate this information to the clinicians responsible for selecting dichotic tests.