

Development and Standardization of Dichotic Speech Tests in Sinhala

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Abstract

Dichotic speech tests involve simultaneous presentation of auditory stimuli to both ears, with the stimulus presented to each ear being different. The stimuli utilized in dichotic speech tasks include digits, nonsense syllables, spondee words and sentences. Listeners may be required to repeat information being presented to both ears (binaural integration) or repeat the auditory message presented to one ear while ignoring the message presented to the other ear (binaural separation). Binaural integration and binaural separation are auditory processes that holds great importance in everyday listening conditions, especially for understanding spoken messages in noisy environments. These two processes are found to be dysfunctional in individuals having difficulties in processing auditory information in the central nervous system, namely Central Auditory Processing Disorders (CAPD). Most often, CAPD coexist with learning disabilities and Attention Deficit Hyperactivity Disorder. CAPD are multiple in nature and often require a collection of tests to assess the dysfunctional auditory processes. In Sri Lanka, children with CAPD are most often missed or misdiagnosed as having peripheral hearing loss due to the scarcity of standardized assessment tools. The proposed study is aimed at developing a Dichotic Digit Test, a Dichotic Nonsense Syllable Test and a Synthetic Sentence Identification test with Contralateral Competing Message (SSI-CCM) to diagnose binaural integration and binaural separation deficits. It also aims at establishing norms for the above tests for children between 7-12 years of age. The study will be beneficial to clinical audiologists in terms of access to valid and reliable assessment tools that would effectively diagnose those with deficits in auditory performance with competing acoustic signals. It will also help teachers, speech language therapists and other involved professionals in designing appropriate deficit-specific management strategies for affected individuals.

Keywords: *Dichotic Speech, Dichotic Digit Test (DDT), Contralateral Competing Message (SSI-CCM)*