Separating auditory processing disorders from other causes of listening difficulties in children

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Many children act as though they have hearing loss, but in most cases, it is something other than hearing loss that causes the symptoms. Listening difficulties can be caused by several types of auditory processing deficits, several types of cognitive deficits, and several types of language deficits. Not only do these different types of deficits share symptoms, but performance on tests designed to detect one type of deficit can be affected by the other types of deficits. Test scores of speech understanding in noise can be affected by deficits in all three domains of auditory processing, cognition, and language. This talk will propose, with examples, new methods for identifying and quantifying how much of a child’s listening difficulties is due to deficits within each of these domains. Quantitative comparisons between deficits in different domains is achieved by measuring what improvement in SNR an individual child needs to perform as well as typically developing same-age peers.

The new methods also enable specific types of auditory processing disorders to be identified, without the diagnosis being invalidated by cognitive or language deficits. These methods include the use of difference tests, language-free tests, and correction of scores to allow for the effects of working memory and attention.

Although the talk will be presented in the context of listening difficulties in children, the same issues are likely applicable to elderly adults, except with the extra complication of some hearing loss being present.