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Food for Thought on Reliable CAPD Testing

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A few years ago, a psychologist referred an adult, age 40, for a central auditory processing disorder (CAPD) evaluation. The client previously was diagnosed with anxiety, and was experiencing work related problems with her co-workers due to noise from a copy machine as well as an inability to remember auditory information. The psychologist decided that because the client displayed weak working memory scores on his test battery that she should be referred for a CAPD evaluation.

The Staggered Spondaic Word (SSW) test indeed showed left competing (LC) score deficits on the SSW test, indicting weak auditory memory type of APD; normal speech-in-noise skills, and the Pitch Pattern Sequence (PPS) test could not be completed- the client would provide verbal responses of high-high-high-low-low when she was given stimuli of high-high-low tones. The PPS test was stopped after four attempts as the client's observed enhanced anxiety was interfering with her ability to properly respond to the PPS test stimuli.

Now some clinicians would ask – if this is the case, then did her anxiety interfere with the LC measure on the SSW test?

If her anxiety was a factor on the SSW test then there would be more than a LC measure deficit. We would observe deficits in the right competing (RC), left non-competing (LNC) and right non-competing (RNC) SSW measures. In addition, the client provided normal speech-in-noise test results. The PPS test is one that delivers three tones and the client must hear the tones and respond verbally as to the pattern of the tones. It is probable that the tones are non-meaningful to her and her diagnosed anxiety disorder precluded her from performing this part of the test battery.

The end result was explaining to the client and to the psychologist that while she was found with normal speech-in-noise skills (at +5 dB and 0 dB signal-to-noise ratios) she does experience noise-related work issues at her job.

Could these issues be related to her anxiety rather than a CAPD?

Yes, of course they can be. What about the auditory memory type of CAPD found on the SSW test which coincides with the psychologist's test results of weak working memory? She was referred to a speech-language pathologist who works with individuals with such a CAPD diagnosis in learning strategies on how to accurately understand the lengthy auditory message in her daily life.

I am often asked if individuals with attention deficit hyperactivity disorder (ADHD) can be reliably diagnosed with CAPD.

In 20 years, I have had less than 15 clients who could not be administered the CAP test battery due to their constant extremity movements or verbose communication that of course would produce errors on any evaluation provided to them. Because I encourage parents to sit in with me and their child during the testing, it helps to explain to the parent when I cannot reliably provide the test battery. For example, on one occasion the father (a neurologist) of a 10-year-old male child

witnessed his son standing in the sound booth while properly responding to the speech-in-noise tests. When the SSW test was being administered, the boy began to move his arms up and down the side of the booth which influenced the 10 sets of stimuli provided to him. I stopped the test and explained to the father that the test could not be continued until his son was seen by a psychologist to ascertain the cause of such activity. A year later, they returned, with the boy being diagnosed with ADHD and successful use of medication. The father was pleased that his son was not found to have CAPD.

What about evaluating CAPD in individuals with intellectual disabilities?

Indeed, I have worked with individuals with 40 to 80 IQs. One of these clients was a gift to work with as I learned so much while working with her. She was born with Kabuki syndrome and was referred to me at 14 years of age. She was found with 10 errors (out of 40 possible answers) in the LC measure and 30 errors in the RC measure of the SSW test, normal speech-in-noise skills and 4 proper responses on the Phonemic Synthesis (PS) test. She received CAP therapy two sessions every week for 18 months concentrating on her weak Decoding APD skills (e.g., phonemic synthesis, phonics, vowel discrimination, left-to-write orientation, rhyming). In four months she began to properly rhyme. In 12 months she was testing at 18 proper responses on the PS test and could accurately detect the proper grapheme for most of the provided phonemes. After concluding APD therapy with me she continued to work with a colleague who continued the therapy. This led to her learning how to use a spell checker and to be able to attend a summer camp as she could provide her own medicines to herself. (Visit the Kabuki Syndrome Network at http://kabukisyndrome.com/ for more information on the initial therapies provided to this client.)

These three cases provide insights on how to work with the individuals with diagnoses that some clinicians consider to interfere with a reliable CAPD evaluation. By the way, 40% of six year olds who I administer CAPD evaluations pass the test battery with test results in the norms of an eight or 12 year old. While the families pursue other avenues it is a relief to them that their child’s auditory processing skills are found to be normal.