

with hearing children, children with hearing loss receive a lower quality of input. The input is less syntactically diverse and more directive. Although the performance of children with MHL on formal language tests was well within the average range, parents rated the language of these children lower than hearing children. The children with MHL performance on the language assessments was achieved in quiet clinical settings. Parents were more likely rating their children's performance in a variety of naturalistic contexts in daily life. These ratings likely took into account children's lower communication skills with multiple persons and in noisy environments.

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## RESOURCE REVIEW

Reviewed By Carol Westby

## Clinical Assessment of Pragmatics

Lavi, A. (2019). *Clinical assessment of pragmatics*. Western Psychological Services.

Many children and adolescents who exhibit social language deficits in daily life activities attain average scores not only on tests measuring semantic, morphological, and syntactic skills but also on tests designed to assess pragmatic skills. School systems frequently will not qualify students for special education services unless their performance on standardized tests is 1.5 to 2.0 *SD* below a test mean. Most standardized language tests evaluate structural language and typically do not assess the pragmatic and discourse deficits. Even standardized tests that purport to assess these factors may not capture the difficulties exhibited by children with social communication disorders (SCD). Standardized tests assess discrete pieces of behaviors out of context. Furthermore, for many students with SCD, it is not a matter of knowing what to do, but of knowing when and how to do—They may have the necessary factual information, but not know how to use it in context. This is particularly true for aspects of social cognition. For example, children with SCD may not differ from typically developing (TD) children on the standardized tests of pragmatic, such as the *Test of Pragmatic Language–2* (TOPL-2; Phelps-Terasaki & Phelps-Gunn, 1992), or the *Nonliteral Language, Inferences, and Pragmatic Judgment* subtests from the Comprehensive Assessment of Spoken Language (CASL; Carrow-Woolfolk, 1999), yet they produce significantly more inappropriate pragmatic behaviors in conversational interactions. These tests are not so much assessment of the ability to use pragmatic skills,

but rather of cognitive knowledge of pragmatic rules. Although such factual knowledge (or pragmatic judgment) is foundational for appropriate pragmatic behaviors, this knowledge does not ensure that persons can interpret the relevant cues in real-life situations and organize an appropriate response. On most test items, students need only to know the rule for the situation. They need not integrate multiple pieces of information to comprehend subtleties in the situation, and they need not give a complex response.

The Clinical Assessment of Pragmatics (CAPs) is a standardized, norm-referenced test of pragmatics for students aged 7 years 0 months through 18 years 11 months, which may overcome some of the weaknesses of other standardized tests of pragmatics. The CAPs uses videos of teenagers from diverse backgrounds engaging in true life social interactions to evaluate two aspects of students' pragmatic skills: pragmatic judgment or appraisal (their ability to comprehend social situations) and pragmatic performance (their ability to express themselves appropriately in various social situations). On pragmatic judgment subtests, students are asked to judge the appropriateness of social interactions by answering, "Did anything go wrong on this video?" and "What went wrong?" On the Pragmatic Performance subtests, students are asked, "What would you say and how?" The CAPs is intended for the following uses: (a) to identify pragmatic language deficits and determine the degree of the deficits, (b) to determine strengths and weakness within several pragmatic

domains, (c) to document progress in pragmatic language skills and measure treatment efficacy, and (d) to analyze social pragmatic skills in children and young adults for research purposes. (Note: Examples of CAPs videos are available on YouTube. Put “Clinical Assessment of Pragmatics” in the search box on YouTube.)

The intent of the CAPs is to evaluate students’ abilities to interpret and use language in context. By responding to video stimuli, students demonstrate their ability to consider multiple contextual cues to interpret the purpose and appropriateness of communication in a specific situation, and to organize responses that incorporate appropriate language, facial expression, gestures, and tone of voice. Because the CAPs requires the ability to rapidly and simultaneously interpret multiple cues in social situations and to integrate language, facial expressions, gestures, and tone of voice to produce appropriate and effective responses in realistic social situation, it may better identify social deficits in students with average or above average skills in cognition and structural language than pragmatic tests that employ static pictures or language vignettes only as stimuli.

The CAPs assesses students’ awareness of basic social routines (e.g., introductions, requesting information, asking permission), their ability to read social contextual cues, infer what others are thinking and interpret figurative language, and their ability to appropriately express emotions, such as regret, sorrow, empathy, and encouragement verbally and nonverbally. Three areas of judgment/appraisal and performance are assessed for a total of six subtests: instrumental intent (judgment: awareness of basic social routines, for example, introductions, requesting information, asking permission; and performance: using social routine language in these situations), affective intent (judgment: ability to read social contextual cues, infer what others are thinking, and interpret figurative language; and performance: the ability to appropriately express emotions such as regret, sorrow, empathy, and encouragement verbally and non-verbally), and paralinguistic cohesion (judgment: ability to detect a speaker’s intent by recognizing meaning of facial cues, tone of voice, prosody, and gestures; and performance: ability to use facial expressions, tone of voice, prosody, and gestures to express a variety of communicative intents). Each item is scored on a 0 to 2 or 0 to 3 scale, with 0 indicating an incorrect response and 1 to 3 indicating a correct response with increasingly detail in the explanations or specificity in the language and behaviors used. A response is scored 1 when the

student detects there is or is not a problem; a 2 when the student identifies the problem from the perspective of one character; a 3 when the student identifies the problem from the perspective of two characters. Examples of scored responses are available for all items.

The six subtests are grouped into three indexes: a pragmatic judgment index, a pragmatic performance index, and a paralinguistic index that includes the paralinguistic subtests plus the expressing affective intent subtest. Scaled scores and percentile ranks are available in each of the six subtests; standard scores and percentile ranks are available for the overall core pragmatic language composite and the three indexes. The test form also includes a *Conversational Adaptation Checklist* designed to note information obtained through observation or interviews of parents or teachers. The categories and specific items on the checklist mirror the content of the video stimuli, for example,

- Instrumental Performance Appraisal
  - Understands when interruptions are appropriate
  - Understands rules of conversational turn-taking
- Affective Expression
  - Expresses emotions appropriately, e.g., empathy, sorrow, regret, apology
- Support for a peer encouragement

The CAPs was normed on a sample of 914 students selected to match the U.S. Census data in gender, race/ethnicity, parents’ educational level, and geographic region. The CAPs has reliability information for internal consistency, standard error of measurement (SEM), interrater reliability, and test–retest. To determine interrater reliability, five speech-language pathologists were trained on item-by-item scoring rules and procedures and then independently evaluated 24 randomly test administrations. The CAPs has information on three types of validity—content validity, criterion validity, and clinical/diagnostic validity. Content validity was judged by having 27 speech-language pathologists experienced with assessment of children with autism and pragmatic language impairment watch all videos and answer five questions regarding how each of the subtests related to test content and whether they believed the test was an adequate measure of pragmatic language skills. Criterion validity was assessed by correlating four of the CAPs subtests with four other well-known tests that assess pragmatic skills (CASL, Carrow-Woolfolk, 1999; TOPL, Phelps-Terasaki & Phelps-Gunn, 1992;

and the *Social Language Developmental Test* [SLDT]—Elementary and Adolescent Editions, Bowers et al., 2008a, 2008b). The two paralinguistic subtests were not correlated with other assessments because their content and design are unique. To demonstrate clinical/diagnostic validity of the CAPs for autism, the author reports sensitivity ranges from .90 to 1.0 and specificity ranges from .85 to .97. Means and standard deviations of CAPs scores are reported for three clinical groups—autism spectrum disorder, pragmatic language disorder, and specific language impairment—and a demographically matched TD group. All clinical

groups were significantly different from the TD group at greater than  $p < .001$ .

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By Carol Westby

## Considerations in Selecting Digital Media

In an earlier issue of *Word of Mouth*, I reviewed the research that indicated that children with autism spectrum disorders (ASD) are at increased risk for the negative effects of screen time. Screens (digital media) are here to stay, and their use is likely to increase. Even though there should be efforts to limit the amount of time children are on screens, they will be on screens. How can parents and professionals make the best use of screen time? The national Zero to Three organization (Barr et al., 2018) and Hirsh-Pasek and colleagues (2015) have proposed a framework for evaluating the use of digital media with children.

There is no one right answer for all children to questions regarding how much time they should be exposed to screens each day and just what content is most appropriate. Developmental research tells us that creating a healthy screen media environment for children is about more than just the amount of screen time; it is also about selecting media experiences informed by the characteristics of the individual child, the context in which the media is used, and the content of children's digital media exposure (Barr & Linebarger, 2017). Speech-language pathologists (SLPs) should consider these three factors, which determine what digital media to use and when and how to use it.

### Child Characteristics

Children have differing sensitivities to the environment (Pluess et al., 2018). Some are like dandelions. They grow and thrive in any type of environment; they adapt to any situation. Others are like orchids. They are highly sensitive to the environment. They require supportive,

nurturing conditions, and a regular routine to thrive. And still other children are like tulips—they fall between high and low sensitivity. Children with developmental disabilities are more likely to be orchid children. They are more sensitive to the negative effects of screen time with less exposure. They may be more sensitive to disrupted sleep, over-arousal, inattention, and addiction in response to screen use with less screen exposure. Hefler and Oestreicher (2016) proposed that children with ASD are genetically particularly attracted to screens. They hypothesize that exposure to screen-based input in genetically susceptible children stimulates specialization of nonsocial sensory processing in the brain. The young child with ASD develops the skills that are driven by the screen viewing. The neuronal pathways developed by screen viewing compete with preference for social processing, negatively affecting development of social brain pathways and causing global developmental delay. Therefore, SLPs and parents must give more thought to the amount of time these children are on screens and the context and content of their screen time.

### Media Context

Adults should also consider the context in which children are using digital media. For example, is the child alone or sitting with an adult when watching or playing something on screen? Young children learn more when an adult is with them to respond to questions, and help them understand and apply what they are seeing and experiencing on screen. In fact, children under age 3 do not transfer what they appear to learn on