Neuropsychological Assessment of Children

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In articles by Kaufman, Long, and O’Neal1 and Kaufman, O’Neal, and Avant,2 Journal of Child Neurology readers have been presented with reviews of two sets of measures that are now commonly employed in the neuropsychological assessment of children: the Wechsler Intelligence Scale for Children—Revised (WISC-R),3 and the Kaufman Assessment Battery for Children (K-ABC).4 It may be helpful to those who consider referrals for neuropsychological assessment to know what child-clinical neuropsychologists typically aim to provide in such assessments. The following is my attempt, within the brief space available, to characterize these aims and to suggest additional readings that may be of some benefit.

Recently, there has been considerable research and theory generation in the emerging field of developmental and child-clinical neuropsychology.5-10 The findings and implications of this scientific enterprise have led to the formulation of neuropsychological assessment strategies and techniques for the evaluation of children with various types of neurological disease and dysfunction.6,8,9,11-13 At the minimum, the child-clinical neuropsychologist typically aims to provide a comprehensive assessment of children that emphasizes the interrelationships of the following: sensory-perceptual skills, motor and psychomotor abilities, attentional and mnestic capacities, linguistic skills, and high-order cognitive and problem-solving capacities. It is for this reason that the use of multifaceted tests and batteries such as the WISC-R and the K-ABC have come to form part of this process for a number of child-clinical neuropsychologists. These instruments and other, more traditional, test batteries such as the Reitan-Indiana Neuropsychological Test Battery14 are frequently employed by practitioners in the field. The purpose of this exercise is usually two-fold: (1) to clarify in a reliable fashion the nature and extent of the child’s adaptive abilities and deficits, and (2) to suggest ways in which the child’s abilities and skills may be enhanced so that he or she may deal more effectively with present and future developmental demands.

For example, in the case of a child aged 8 years who has sustained a closed head injury of some severity, it is crucial to determine prior to the child’s return to the academic situation the extent to which he or she likely to deploy the attentional, mnestic, and problem-solving capacities that are demanded in the classroom milieu. It is also important that school authorities and parents become aware of the implications of any relatively permanent or transitory deficits exhibited by the child so that these caretakers might better be able to arrange for modifications in the child’s environment that are necessary to enhance academic and social learning and minimize confusion and frustration for the child. The situation with respect to the child who has a significant learning disability is essentially no different: Knowledge of the child’s particular pattern and levels of neuropsychological abilities and deficits, in addition to the short- and long-term prognoses that these imply, can form the basis for reasonable psychoeducational intervention.8,11 As one final example, the survivors of acute lymphocytic leukemia and other forms of childhood cancer often exhibit particular information-processing deficits that impede posttreatment adaptation and that are difficult, if not impossible, to establish on the basis of routine bedside examination.12

The crucial clinical considerations in such instances are a direct reflection of issues such as the following: the necessity to generate a comprehensive picture of the neurologically impaired child’s prin-
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Principal adaptive abilities and deficits and the conditions under which the child would be expected to perform well or ill, the multifaceted nature of the neuropsychological abilities and deficits of learning-disabled children, and the translation of neuropsychological assessment findings into usable and ecologically relevant remedial strategies for parents, therapists, teachers, and other care-givers.

For these and other reasons, it is clear that the readers of Journal of Child Neurology can expect to see many more helpful articles (such as those provided by Kaufman and his colleagues) about the instruments and batteries that are being employed for these purposes. What emerges from even a cursory consideration of the tangled web of the neuropsychological correlates of neurological disease and dysfunction in children is the stark necessity for neuropsychological assessment strategies, techniques, and instruments that will do justice to the complex diagnostic—and, especially, the very compelling therapeutic—needs of children so afflicted. There is no neuropsychological "quick fix" for either of these clinical imperatives.

References