
BOOK REVIEWS

Recommendations for Children and Adolescents Based on Evidence

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Pediatric Neuropsychological Intervention. Scott J. Hunter and Jacobus Donders (Eds.). 2007.
New York: Cambridge University Press, 493 pp., \$115.00 (HB).

Reviewed by JOHN T. BEETAR, PH.D. ABPP, *Kennedy Krieger School Programs, Baltimore, Maryland, USA*.

Pediatric neuropsychologists have a new resource to add to their growing collection of texts. Hunter and Donders have edited an invaluable resource with chapters on basic developmental and assessment issues, reviews of both common and less commonly known conditions that often result in disability, and suggestions for empirically based treatment. The editors' goal is to direct researchers toward intervention studies to demonstrate that practice is indeed based on evidence.

The book is divided into three main sections: (I) *Fundamentals of pediatric neuropsychological intervention*; (II) *Managing neurocognitive impairments in children and adolescents*; and (III) *Medical, rehabilitative, and experimental interventions*. Fennell's chapter on her thoughts regarding future interventions for neurodevelopmental disorders comprises the fourth section.

In their introductory chapter, the Editors note the importance of viewing pediatric neuropsychology as its own discipline instead of as a downward extension of adult neuropsychology. This approach is well elucidated in the first section given a focus on development, multicultural aspects of assessment and intervention, and the importance of parents and educators in the process of understanding the needs of children and adolescents following neuropsychological assessment. The first section should be required reading for any student of neuropsychology, regardless of interest in the lifespan.

Spevack's opening chapter on development is a well organized discussion of basic principles of developmental neuroscience, and of structural and functional concepts and systems. She concludes with a review of guiding principles for intervention which provides a context for the developmental and acquired neuropsychological disorders that follow in the second section. In their chapter on cultural aspects of brain and behavior relationships, Ries, Potter and Llorente make a convincing case for a culturally sensitive neuropsychological practice given the impact of cultural diversity on testing, one's understanding of the formulation regardless of diagnosis, and response to intervention. Sparrow's chap-

ter on pediatric neuropsychological assessment emphasizes the need for parental involvement in the evaluative process so that findings and recommendations may be placed in a meaningful context once formal testing has been completed. Concluding the first section, Maedgen and Semrud-Clikeman have written a chapter on educational intervention that aims to familiarize neuropsychologists with laws affecting elementary, secondary and higher education students. This chapter contains a useful table contrasting the types of available services as well as suggestions for dealing with educational personnel.

The second section is comprised of eleven chapters that cover a wide variety of conditions often seen by a pediatric neuropsychologist. Each chapter provides a review of the acquired or developmental disorder(s) under discussion, the effects on cognitive functioning, the role of assessment, "best practices" (p. 4) for intervention, and suggestions for future research. The range of neurological and neuropsychiatric disorders is impressive. In addition to informative chapters on autism, traumatic brain injury, seizures and cancer, there are other notable contributions. For example, in her chapter on diagnosing and treating right hemisphere disorders, Forrest has undertaken the daunting task of organizing and defining disorders that emanate from the right hemisphere. These disorders, given a tendency to overlap, often are diagnostically perplexing for pediatric neuropsychologists. This chapter should assist the student and clinician alike in conceptualizing right hemisphere disorders in their own practice and research. In a chapter on remediating learning disabilities, Wills provides a brief history of the definition of a learning disability including the discrepancy model versus a student's response to intervention as criteria in its assessment. In addition, her chapter is replete with practical suggestions for reading, writing, and math disorders that will surely find their way into many a report.

The second section also addresses the management of attentional and executive disorders in separate chapters. In their chapter on managing attentional problems, Palumbo

and Diehl review what is known about the neurobiology of Attention Deficit Hyperactivity Disorder and commonly used measures for diagnosis. Stimulant medications, non-stimulant medication and psychosocial interventions are all discussed as treatment strategies. In a discussion of executive dysfunction, Mahone and Slomine have included a table of 16 evidence-based investigations with information that includes intervention(s) used and results. Another table of nonpharmacological intervention strategies for initiation, planning and organization, inhibitory control, and working memory is divided into age groups so that appropriate recommendations may be offered for preschoolers, elementary school students, and adolescents. In addition to the above, a chapter by Klein-Tasman, Phillips, and Kelderman on genetic syndromes associated with intellectual disability provides numerous references for treatment strategies given a variety of syndromes such as Fragile-X, Down, Angelman, and Prader-Willi. The second section concludes with several chapters devoted to the pathophysiology, classification, and management of pediatric movement disorders.

The third section explores broad-based interventions that, for the most part, have not been previously discussed. In a chapter on quantitative electroencephalography and neurofeedback, Krull, George, and Strother provide the reader with basic information about each approach as well as with results on investigations performed thus far. Given a conclusion that both interventions lack appropriate evidence to support their use, they have provided an outline of the criteria necessary for an approach to meet adequate empirical standards. In a chapter devoted to neuroimaging, Bigler uses traumatic brain injury as an exemplar to posit that structural and functional imaging not only aids in diagno-

sis, but also helps monitor recovery and/or one's response to intervention. His cases are well illustrated with scans that have color counterparts in the Plate section at the end of the text. Owley uses autistic-spectrum disorders as a model to discuss the challenges of using medication in the treatment of a neurodevelopmental disorder and its target symptoms. The author's point that the field of pediatric psychopharmacology is in its infancy makes it ripe for study. The final two chapters of the third section discuss cognitive rehabilitation of pediatric brain injury. According to Butler, this is a field left largely to educators given shrinking insurance coverage. A cognitive remediation program is presented; however, like psychopharmacology, this is an understudied area. As such, there is a paucity of empirically based intervention strategies for cognitive rehabilitation.

While *Pediatric Neuropsychological Intervention* covers a broad range of disorders, there are some omissions. For example, myelomeningocele is not covered; and pediatric stroke is given only scant mention. Regardless, the text has much to offer. For example, opening with a discussion on basic development, and the need for parents and educators to be involved in the process of assessment reinforces the notion that the best practice of pediatric neuropsychology is an upward rather than downward extension. Additionally, the text provides background information on many of the disorders seen in both inpatient and outpatient clinical practice. Finally, it contains the most up-to-date research in the area of intervention for children and adolescents. The finding that some populations have not been studied as extensively as others ideally will drive future research, a goal of the Editors. Overall, there is no doubt that this resource will more often be *off* rather than *on* the bookshelf.

Neurotherapeutics: Alternative Career or at Least Novel Information

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Progress in Neurotherapeutics and Neuropsychopharmacology. Volume 1. Jeffrey L. Cummings (Ed). 2006. Cambridge, England: Cambridge University Press, 169 pp., \$122.00 (HB).

Reviewed by JIM ANDRIKOPOULOS, PH.D., ABPP, *Ruan Neurology Clinic, Des Moines, Iowa, USA*.

Progress in Neurotherapeutics and Neuropsychopharmacology provides an overview of what is for most neuropsychologists a new content area—clinical trials. Had I not spent five years in the pharmaceutical industry, I probably would have not given the topic of neurotherapeutics a second thought. This book can be useful on a number of counts. First, knowledge of neurotherapeutics is an indirect method for understanding the basic science of neurological diseases since drug development hinges upon appreciating the pathology of the disease. Second, three factors make neuropsychologists uniquely qualified to understand neu-

rotherapeutics in the form of clinical trials—knowledge of most neurological disease states and research training. Finally, all clinical trials have a primary outcome measure. When the primary outcome measure is cognition, our contribution as neuropsychologists can be paramount. My introduction to neurotherapeutics was as outcome rater. An increasing number of neuropsychologists are being recruited by the pharmaceutical industry to work in medical affairs, mostly as medical science liaisons. For those interested in a career alternative, or the topic of neurotherapeutics, this text provides a starting point.