

Preface

The field of child neuropsychology has exploded over the past four decades. In times past, the subspecialty of child neuropsychology may have been served by a chapter in a single textbook, but now there are dozens of textbooks devoted to this area of specialization, with more written each year. There also are a variety of professional journals devoted exclusively to child/developmental neuropsychology, with many other journals providing more pages for articles devoted to pediatric brain development and function. While these texts, journals, and other available works in the broad area of pediatric/child neuropsychology have provided in-depth discussions of many critical topics in the field, they are almost all written for professionals and graduate students devoted to some aspect of neuropsychology or neuroscience. As these books have a predesignated audience, they generally are not easily transferable and adapted to other audiences who are less sophisticated with respect to their knowledge base on brain functioning, but who nonetheless are highly interested in the topic and motivated to learn more. Precious few, if any, of the available texts would be appropriate for regular education teachers, special educators, social workers, counselors, or other child-oriented professionals. For example, despite the relative success of such volumes as *Introduction to Neuropsychology* (Beaumont, 2008), *Handbook of School Neuropsychology* (D'Amato, Fletcher-Janzen, & Reynolds, 2010), and the revered *Neuropsychological Assessment* text now in its fifth edition (Lezak, Howieson, Bigler, & Tranel, 2012), the crossover of this information to other professionals remains challenging.

For all of the volumes and other publications on the market, it is suspected that even many highly trained professionals (e.g., school psychologists, social workers, nurses) will experience difficulties digesting the necessary neurological information in these texts, in large part because this type of information is not a core component of their training programs. Even our own texts over the years (e.g., *Assessment Issues in Child Neuropsychology*, Tramontana & Hooper, 1988; *Advances in Child Neuropsychology*, Tramontana & Hooper, 1992, 1994, 1995) likely have not crossed over into many different audiences.

Please know that these are not criticisms of these exceptional texts but, rather, an opportunity to highlight the need for a book that is more easily translatable for the non-neuropsychologist. In this regard, what is needed is a text—a primer—that can reach a broader audience of child-oriented professionals and, perhaps, lay audiences—a text that is written at a level that will not intimidate these eager learners, but at the same time motivate them to expand their knowledge base in brain development and the field of child neuropsychology. It is my hope that this is the first iteration of such a text.

This book is divided into five parts, with each chapter providing a concise overview of the topic. Part I, Foundations, introduces the individual to the field. This section comprises two chapters, one devoted to historical foundations in the broad field of neurology (Chapter 1) and the other to the development of the field of clinical neuropsychology (Chapter 2), including current training standards for the field. Part II, Development, Structure, and Associated Functions of the Central Nervous System, comprises two chapters devoted to these specific topics. From this section, the reader will gain basic information with respect to brain development (Chapter 3) and brain structure and its related functions (Chapter 4) without the need to consult a medical dictionary, Google a plethora of terms, or take additional coursework in neuroanatomy. This latter type of information will be essential for those who wish to go beyond the boundaries of this text. Part III, Neurodiagnostic Procedures and Interventions, provides an overview of the various strategies and procedures to examine brain structure and to assess brain functions. This section includes a discussion of the pediatric neuropsychological examination (Chapter 5) as well as an overview of the pediatric neurological examination—including various neuroimaging procedures (Chapter 6). This section also highlights key evidence-based interventions in the behavioral, therapeutic, educational, and pharmacological domains (Chapter 7). The intent here is to provide the non-neuropsychologist with a clear perspective for looking for evidence-based treatments, but also to briefly discuss selected available treatment

strategies as well. Part IV is devoted to “briefs” on various childhood disorders. The primary intent of these chapter briefs is to provide an overarching categorization of some of the more common childhood disorders, with a focus on the neurological/neuropsychological findings that have been associated with these disorders. The brief descriptions in each of these chapters are carefully crafted such that the information is contemporary, but not so detailed that it becomes immediately dated. Targeted disorders include neurodevelopmental disorders (Chapter 8), neuropsychiatric disorders (Chapter 9), genetic and chromosomal disorders (Chapter 10), and neurological disorders (Chapter 11). Each of the first four sections concludes with key Take-Home Points from the chapters and a brief resource section should a reader want to learn more. The text concludes with Part V, Epilogue. This final section comprises one chapter (Chapter 12) that provides an overview of what was covered and addresses several key issues that are currently confronting the field of child neuropsychology, and perhaps the non-neuropsychologist. This section guides readers on how best to utilize the information provided in the text and where to look for additional information for expanding their knowledge base in child neuropsychology.

So, who will benefit most from this primer? As noted earlier, the readership for this book includes regular education teachers, special educators, social workers, counselors, nurses, school psychologists, early interventionists, and other non-neuropsychologist professionals. It also is written such that it can be extended to graduate students in these fields as well as undergraduate students interested in exploring this topical domain. The book will *not* be appropriate, however, for graduate students in neuropsychology or neuroscience, or professionals in the field of (child) neuropsychology.

I hope that *Basics of Child Neuropsychology* provides an avenue for expanding the awareness of others to the field of child neuropsychology and its potential utility for understanding childhood disorders. Of course, any shortcomings of this text rest with me.