

**Executive Function and Dysfunction:
Identification, Assessment and Treatment**

edited by Scott J. Hunter, PhD, and Elizabeth P. Sparrow, PhD. New York, NY, Cambridge University Press, 2012, 308 pages, \$99.00 (hardcover).

If you are a child clinician, then you have undoubtedly spent time wrestling with the concept of executive functions. From Baddeley's first description of *executive control*, the term has quickly evolved to describe a host of skills that support behavioral and emotional regulation. *Executive dysfunction* has become the term used to describe the behavior observed across a wide range of psychiatric and neurodevelopmental disorders.

It is in this context that Hunter and Sparrow have ambitiously brought together a variety of pediatric clinicians to discuss the development of executive functions and the patterns of dysregulation that occur in common neurodevelopmental syndromes. Given the intense interest in the popular press and the frequency with which such issues are encountered clinically, the book is long overdue and begins to fill the void for reference material on this topic. Unfortunately, it is not obvious from the title that the book is focused on childhood development, but the authors' developmental perspective on cognitive functioning is evident from the beginning until the end.

The first chapters provide a summary of the editors' forward-thinking views on executive functions and warrant review by any child clinician. Their points are intuitive and yet represent major and important shifts in canonical thinking. First among these is the idea that executive functions do not emerge at the cusp of adulthood but evolve across the lifespan. Executive functions have traditionally been defined on the basis of adult cognitive skills, and thus they have been assumed to be absent in childhood. The editors clearly articulate how executive functions manifest throughout infancy and early childhood. Acceptance of this position enables the emergence of a theoretical framework that may eventually allow us to define milestones in executive function development, much as we define milestones in language or motor development. It also allows for us to understand executive functions as a collection of higher-order cognitive skills, rather than as a uniform construct. At the level of an individual, this perspective allows for greater variability in human behavior and for an individual's strengths and weaknesses to be more clearly delineated.

As a second and related point, the authors posit that the brain systems involved in supporting executive functions in adulthood may not necessarily be the same ones that are involved in childhood and adolescence. In adulthood, executive dysfunction is often synonymous with damage to the frontal cortex and only occasionally recognized as involving associated subcortical networks. In childhood, executive dysfunction may reflect disruption within a widespread network involving cortical and subcortical systems, which may account for the prevalence of executive dysfunction across a wide spectrum of neurodevelopmental disorders.

In the second section of the book, individual chapters review the literature on executive functions in discrete pediatric psychiatric and neurologic conditions. Many of the chapters cover issues related to neuropsychological assessment of executive functions, but the authors have clearly made efforts to increase the applicability of these findings. Yet, most likely reflecting the relative infancy of research on executive functions and brain development in pediatric populations, the research that is included does not neatly fold into the hypotheses outlined in the first section. Similarly, there are only occasional references to the high rate of comorbidity across clinical populations (ie, that executive dysfunction may be the common element that results in multiple behaviorally based diagnoses in the same patient). Nonetheless, the discussion of the clinical conditions is excellent and has an unparalleled breadth and scope.

The final section of the book focuses on research-based clinical interventions. This section truly shines. In the past several years, there has been an explosion of books that claim to teach executive functions to children and adolescents, and these chapters provide a critical perspective to identify empirically supported interventions.

This book represents an important contribution to the quickly growing literature on executive functions in childhood and adolescence and will be useful to a variety of child clinicians, including pediatricians, neurologists, psychiatrists, and other neuropsychologists.

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