Book Review

NEUROPSYCHOLOGICAL REHABILITATION: THEORY, MODELS, THERAPY AND OUTCOME

by Barbara A. Wilson, Fergus Gracey, Jonathan J. Evans, Andrew Bateman, 350 pp., Cambridge University Press, 2009, \$99

Neuropsychological rehabilitation programs are a crucial part of the recovery process for patients with major brain injury. The content and structure of the programs, however, are a mystery to most neurology residents. *Neuropsychological Rehabilitation: Theory, Models, Therapy and Outcome*, by Barbara Wilson et al., sheds light on the neuropsychological rehabilitation process by exploring the interventions used at the Oliver Zangwill (OZ) neuropsychological rehabilitation center.

Neuropsychological Rehabilitation is divided into 4 sections. The first section reviews the theories and models of rehabilitation influencing contemporary rehabilitation programs. The second section introduces the reader to more specifics of the OZ center by discussing the various intervention groups: 1) Understanding Brain Injury, 2) Attention and Goal Management, 3) Memory, 4) Mood Management, 5) Communication, and 6) Psychological support. An additional chapter describes projects wherein participants practice the skills learned from the intervention groups, i.e., projects focused on vocational activities or independent activities of daily living.

The third section delves further into the specifics of the OZ program; it reviews the clinical courses of 9 former patients. Most patients incurred brain injury during car accidents, but the etiologies also include a gunshot wound, penetrating stab wound to brain, hemorrhage secondary to hemorrhagic telangiectasia, drug overdose with cardiac arrest, and acute disseminated encephalomyelitis with minimally conscious state. Each case describes the circumstances of the brain injury, its anatomic location, the extent of functional deficits (as assessed by the physicians, the patient, and the patient's family), and highlights of the patient's clinical course. For instance, one case was that of Peter, a 33-year-old engineer, who was involved in a motor vehicle accident and incurred bilateral carotid artery dissections complicated by bilateral temporoparietal infarcts. Peter and his wife were asked to identify the areas of difficulty since the

accident, and the patient also underwent a detailed assessment by the center's team which included several validated assessment tools such as the Wechsler Adult Intelligence Scale-Revised and the Behavioral Assessment of the Dysexecutive Syndrome, among others. The assessment conclusion was that Peter's cognitive deficits were largely in verbal and working memory, visual selective attention, executive planning, and visuomotor skills. Peter's main goal was to return to work, so along with the OZ center staff, he created 12 short-term goals to facilitate the achievement of this larger goal (i.e., increase intelligibility of speech, increase speed of typing). The chapter then describes the specific rehabilitation strategies used for each goal (i.e., breathing exercises to improve speech intelligibility, organizing his schedule so that more demanding tasks were carried out when he was less fatigued, a series of audiotapes with verbal instructions to create increasingly complex shapes). Peter was reassessed at the conclusion of his rehabilitation using the same validated assessment tools; he demonstrated improvement in most areas. He was able to return to work, though he worked only part-time because of easy fatiguing.

The final section of this book attempts to supplement the anecdotal success stories provided in section 3 with statistical proof of the OZ center's efficacy. Specifically, it reviews the positive results of questionnaires measuring patient progress and lists the OZ center's academic publications.

Those neurologists particularly interested in rehabilitation will enjoy reading this book in its entirety, including the somewhat dense review of rehabilitation theories and models presented in section 1. Those neurologists wanting a basic introduction to neuropsychological rehabilitation can focus on section 2, which is both informative and easy to read.

The main drawback of this book is its generalizability. The OZ center is located in England. It is modeled on the popular holistic approach popularized by clinical psychologists Yehuda Ben-Yishay of New York University's Rusk Institute and George Prigatano of St. Joseph's Medical Center's Barrow Institute. This approach advocates integrating the cognitive, emotional, and social rehabilitation re-

quired after brain injury. Though this approach is very popular in the United States, it is not universal across the United States, and as such, it is important for neurologists to familiarize themselves with the specific rehabilitation centers to which they tend to refer patients.

Overall, this book best targets mental health providers and neurologists interested in directing a rehabilitation center and wanting detailed insight

into a successful rehabilitation program. Nonetheless, every neurologist should understand the basic structure of neuropsychological rehabilitation programs and this book provides a rich introduction to that topic.

Reviewed by Michelle Bell, MD

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