

Neuropsychological and psychological methods are essential for neurorehabilitation

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Clinical neuropsychology and psychology have evolved as diagnostic and treatment-oriented disciplines necessary for individuals with neurological, psychiatric, and medical conditions. In this [collection of articles](#) in the journal [NeuroRehabilitation](#) experts highlight medical advances in neuropsychological and psychological applications in neurorehabilitation.

"Neuropsychology and psychology are practical disciplines that provide the underpinnings for understanding etiology and formulating diagnoses, and they serve as the cornerstones of some of the most successful neurorehabilitative treatment approaches," explained guest editor Dr. Vivian L. Begali, PsyD, Neuropsychology and Psychological Healthcare, Richmond, VA, U.S.. "This thematic issue aims to exemplify the advantages of neuropsychological and psychological principles and their influential role in rehabilitation, The central focus is [brain dysfunction](#) occurring from [traumatic injury](#) or a more insidious process such as progressive brain disease, or as the result of abrupt and sudden interruption in normal cerebral blood flow (stroke)."

Neuropsychological and psychological applications in neurorehabilitation encompass a broad range of services including direct clinical work (e.g., assessment, psychotherapy, psychoeducation, behavioral management); medical, family and agency consultation; experimental and [clinical research](#); community reintegration; vocational rehabilitation; forensic applications; and therapeutic end-of-life planning.

The articles in this collection address multiple etiologies, recovery of function, brain plasticity, functional outcomes following neurological injury, method research, experimental methodologies and include illustrative case studies. Collectively, they address stroke, traumatic brain injury (TBI), persistent sport-related post-concussive syndrome, and the dementia spectrum. Two innovative and provocative treatment methodologies are described: solution-focused brief therapy (SFBT) and medical assessment counseling. Rounding out this issue are the findings of two original research studies, one on the predictors of depression trajectories following hospitalization for TBI in Latin America, and the other on community reintegration outcomes at 30 years post-discharge from holistic milieu-oriented neurorehabilitation.

The issue includes multiple examples of the intersection between medicine, diagnoses, and need for practical information. Lead author Dr. Robert Conder, PsyD, Carolina Neuropsychological Service, Raleigh, NC, U.S., and colleagues highlight the importance of identifying and differentiating co-occurring symptoms such as depression, anxiety, migraines, insomnia, and attention deficits in order to prevent misdiagnosis of persistent sport-related post-concussion syndrome and lead to more effective treatment outcomes.

"There is much misunderstanding about the etiology, causation, diagnostic formulations, symptom presentation, prolonging factors, and treatment involved in this syndrome," commented Dr. Conder. "We posit an individualized multisystem diagnostic formulation, examining all relevant factors, as generating the best interventions for neurorehabilitation of patients with this syndrome."

An article on community reintegration following holistic milieu-oriented neurorehabilitation up to 30 years post discharge offers a glimpse into the real-life advantages of a holistic approach to neurorehabilitation. Lead author Dr. Pamela S. Klonoff, Ph.D., Director, Center for Transitional Neuro-Rehabilitation, Barrow Neurological Institute/St. Joseph's Hospital and Medical Center, Phoenix, AZ, U.S., writes, "The benefits of this approach stem from its emphasis on improving self-awareness and metacognition when combined with interpersonal and functional skills redevelopment. The results of our study demonstrated that 89% of patients who had acquired significant brain injury were productive at up to 30 years post-discharge as determined by degree of work or school re-engagement, driving, and psychosocial success."

"The core principles of psychotherapy such as listening, reflection, support, empathy, confrontation, problem identification, solution orientation, integration, relationship building, awareness and insight, and the reduction of discomfort remain just as, if not more relevant,

following neurological injury," added Dr. Begali. "Ultimately, the process of [neurorehabilitation](#) is a personalized, integrated transdisciplinary undertaking that helps ameliorate, modify, and compensate for the effects of impairment caused by nervous system injury. Neuropsychological and psychological methods are essential components of the neurorehabilitative process for individuals with acquired central nervous system injury."

More information: "Neurorehabilitation of Persistent Sport-Related Post-Concussion Syndrome," by Alanna Conder, Robert Conder, and Christopher Friesen. content.iospress.com/articles/neurorehabilitation/nre192966

"Community Reintegration Following Holistic Milieu-Oriented Neurorehabilitation up to 30 Years Post-Discharge," by Ramaswamy Kavitha Perumparaichallai, Rivian K. Lewin, and Pamela S. Klonoff. content.iospress.com/articles/neurorehabilitation/nre192968

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