Manade, L., Tröster, A. I., Fields, J. A., Paolo, A. M., & Koller, W. C.

Verbal Learning and Memory in Neuropsychologically Defined Subgroups of Parkinson’s Disease Patients.

It has been proposed that memory impairment in Parkinson’s disease (PD) can be explained by executive impairment. However, a review of data suggests that the executive deficit hypothesis only partially explains memory deficits in Parkinson’s disease. This study explored the relationship between executive function and verbal memory in PD by comparing performances on the California Verbal Learning Test (CVLT) of 38 PD subjects with executive dysfunction (PDE), 34 PD subjects without executive dysfunction (PDN), and 38 normal controls (NC). The groups were matched for age, education, and DRS total score. The two PD groups were also matched for disease variables. The presence or absence of executive dysfunction in the NC and PD groups was determined by a composite z-score based on the Wisconsin Card Sorting Test percent perseverative responses, trials to first category, and categories completed. Overall, PDE demonstrated a verbal memory impairment pattern typically ascribed to PD. Relative to NC and PDN groups, the PDE group demonstrated poorer immediate and delayed recall on the CVLT, but derived greater benefit from provision of a recognition relative to a free recall format. The PDE group also made a significantly greater number of intrusion errors. Since CVLT group differences cannot be accounted for by differences in overall severity of cognitive impairment, results support the conclusion that PD impairments on the CVLT are attributable, at least in part, to executive dysfunction.

May, J. M., & Smith, J. R.

Screening for Post-Trauma Vision Syndrome.

The area of neuro-optometric rehabilitation has recently come to the fore in an effort to remediate vision system deficits associated with insults to the brain. Post-trauma vision syndrome (PTVS) is a term that has recently been coined by behavioral optometrists, neuro-optometrically trained optometrists, to describe a family of visual symptoms experienced by victims of brain injury. These visual problems may potentially encumber the recovery process and ultimately limit the potential for maximal recovery. Thus, proper referral, evaluation, and management of difficulties with the visual system is essential to the rehabilitation process. However, the vision system as such, has received insufficient attention from rehabilitation professionals. Given this inattention to the vision system in the rehabilitation process, a brief yet sound screening procedure for post-trauma vision syndrome is essential. To this end a structured vision historical interview, the Vision Survey (VS) and a brief questionnaire designed to assess symptoms associated with post-trauma vision syndrome, the Post-Trauma Vision Syndrome Questionnaire (PTVSQ) were developed. The Vision Survey was developed in collaboration with behavioral optometrists. Initial items for PTVSQ were gathered subsequent to a review of the literature. The instrument was submitted to behavioral optometrists familiar with neuro-optometric rehabilitation. Only those items were retained for which there was a consensus regarding the validity of the symptoms and whether the items adequately represented the universe of symptoms associated with PTVS. The PTVSQ contains a validity scale to assess for the presence of a “yea saying” response set. These instruments represent an initial step toward addressing this relatively new, but none the less important component of the rehabilitation process.

Mayfield, J. W., & Reynolds, C. R.

Black–White Differences in Memory Test Performance Among Children and Adolescents.

Racial and ethnic group differences on mental test scores are some of the most well documented findings in the study of individual differences. Differences of about 1 standard deviation on
most cognitive tests between Blacks and Whites are well documented in nearly 100 years of research. Only in the past 10 years have neuropsychologists undertaken serious examination of ethnic and related demographic concomitants of neuropsychological test performance. The present study examined performance differences for Blacks and Whites on 14 separate measures of short-term memory including such tasks as verbal and nonverbal selective reminding, memory for stories, digit recall, letter recall, abstract visual memory, facial memory, and memory for location. Using a nationally stratified (gender, race, age, SES, region, and community size) population proportionate sampling plan, 168 Black and 983 White children and adolescents (ages 5–19 years) were tested. Age corrected deviation scaled scores (mean = 10, SD = 3) were calculated at 1 year intervals using the method of rolling weighted averages. Scores on the 14 memory tests being intercorrelated, a MANOVA was calculated by race to determine whether any Black–White differences were evident in mean levels of performance at p < .05. In sharp contrast to typical findings with intellectual and most other aptitude measures, no significant differences occurred across race on any of the 14 measures of memory.

McConnell, J. R., & Schmitter-Edgecombe, M.
Effects of Severe Closed Head Injury on Metamemory.
This study investigated the metamemory of 37 severely closed head injured (CHI) subjects (> 1 year post injury) and 37 matched controls. Each participant completed the Metamemory in Adulthood questionnaire (MIA) and subtests of the Wechsler Memory Scale-Revised (WMS-R). A total of seven metamemory factors were assessed by the MIA (Strategy, Task, Capacity, Change, Anxiety, Achievement, and Locus), in addition to two higher-order factors (Memory Self-Efficacy and Memory Knowledge). Results revealed that the CHI subjects, in comparison to the control subjects, perceived significantly more difficulty in everyday memory situations (Capacity), viewed their memory as less stable (Change), and perceived their ability to remember and use memory effectively in a variety of situations as significantly more impaired (Memory Self-Efficacy). There were no group differences on the other factors which assessed uses of strategy, perceived importance and personal control over memory abilities, knowledge of basic memory processes, and reciprocal influences of emotional state and cognitive performance. Fifteen significant others (SOs) of the CHI subjects also completed the MIA in reference to the injured participants. The results revealed that the CHI subjects, in comparison to their SOs, reported greater use of memory aids (Strategy) and more knowledge regarding memory functions (Memory Knowledge). However, in general, the metamemory factor scores of the CHI subjects and their SOs were comparable, indicating that CHI subjects are able to make reliable self-assessments of their memory. Furthermore, correlational analyses revealed little relation between metamemory and performance on WMS-R subtests for CHI subjects, suggesting that memory impairments due to head injury are not the result of metamemory failure.

McDonough, M., Tramontana, M. G., & Seger, D.
Neuropsychological Assessment Issues in Evaluating Carbon Monoxide Toxicity in an Adolescent.
The case report illustrates the interpretative complexities encountered in the evaluation of carbon monoxide (CO) toxicity. The patient was a 15.3 year old female, admitted to the hospital following a suicide attempt via CO poisoning. A select group of neuropsychological tests were administered to assess the efficacy of hyperbaric oxygen therapy (HBOT), to evaluate neurocognitive functioning relative to estimates of baseline functioning, and to provide criteria by which to decide the need for repeat HBOT. A second HBOT was performed and neuropsychological assessment was repeated. Pre-post comparisons are reviewed and