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Strategic thinking for functional task performance

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Introduction: Cognitive deficits following brain injury may include poor attention and memory, impaired planning and organisation of thoughts and behaviours, difficulty initiating and sequencing task performance, and reduced ability to effectively reason and solve problems. Inability to effectively apply cognitive processes to daily tasks limits the occupational performance of adults with brain injuries.

Objective: Introduce and evaluate the effectiveness of a cognitive strategy training approach, the Perceive, Recall, Plan and Perform (PRPP) System with adults during acute brain injury rehabilitation.

Methods: Adults with brain injuries participated in a cross-over study in which current occupational therapy (OT) intervention was compared to PRPP Intervention. Current OT intervention included systematic instruction and task/environmental modification. The PRPP System differed from this, by targeting sequential stages of information processing using cognitive strategies to enable task performance (Stop, Attend, Sense, Think, Do).

Measures: Functional task performance and use of cognitive strategies were measured daily using the PRPP System of Task Analysis, a criterion-referenced, task embedded, observation based assessment.

Results: Use of cognitive strategies and overall task performance improved more in response PRPP cognitive strategy intervention than in response to current OT. Differences in performance between intervention phases were statistically significant, producing a large treatment effect in favour of PRPP Intervention. Cognitive strategy training led to greater improvement in planning and problem solving skills and facilitated application of these cognitive strategies during everyday performance of self-care, leisure, and community living tasks. PRPP Intervention produced a stronger association between functional task performance and underlying cognitive capacities.

Conclusion: PRPP intervention based on cognitive strategy instruction was highly effective for improving daily task performance and underlying cognitive capacities in adults with brain injury during acute rehabilitation.

Contribution to the practice/evidence base of occupational therapy: This clinical study is the first to examine the effects of PRPP intervention in adults, thus providing new empirical evidence to the discipline of occupational therapy. An integrated assessment and intervention approach, embedded within the Occupational Performance Model (Australia) was used, demonstrating the clear link between clinical research and clinical practice in the area of adult brain injury rehabilitation.