

Target Area: Attention/Information processing

<p>Flavia, M., Stampatori, C., Zanotti, D., Parrinello, G. & Capra, R. (2010). Efficacy and specificity of intensive cognitive rehabilitation of attention and executive functions in multiple sclerosis <i>J Neurological Sci</i>, 288, 101-105.</p>	<p>PEDro score - 7/10</p>
<p>Method/Results</p>	<p>Rehabilitation Program</p>
<p>Design</p> <ul style="list-style-type: none"> ➤ Study Design: NRCS ➤ Population: Clinically-stable patients with relapsing-recurring multiple sclerosis (RR MS), and low levels of disability. ➤ Groups: <ol style="list-style-type: none"> 1. Study group ($n = 10$, all female, median age = 44 years) 2. Control group ($n = 10$, all female, median age = 42 years) ➤ Setting: Community/ outpatient <p>Primary outcome measures:</p> <ul style="list-style-type: none"> ➤ Selective Reminding Test for verbal learning, long-term and delayed retrieval (SRT/CLTR and SRT/DR) ➤ Symbol Digit Modalities Test (SDMT) ➤ Paced Auditory Serial Addition Test 2" and 3" (PASAT) for attention and memory ➤ The Wisconsin Card Sorting Test (WCST) for reasoning ability and cognitive flexibility ➤ Controlled Oral Word Association Test (COWAT) for cognitive flexibility and word fluency ➤ Divided Attention Test of Everyday Attention (TEA) ➤ Montgomery-Asberg Depression Rating Scale (MADR) for mood state ➤ Self-report Multiple Sclerosis Quality of Life (MSQoL) <p>Results: At 3 months, the SG performed significantly better than the CG on tests of attention/information-processing (PASAT 2" and 3") and decision-making (WCST), and had lower depression scores (MADR). Additionally, from baseline to 3 months (T0 to T1), the SG made significantly greater improvements than the CG on measures of attention/information processing (PASAT, TEA) and executive functions (WCST, COWAT), and depression. These effects held even after controlling for age, baseline neuropsychological performance, and disability level.</p>	<p>Aim: To investigate the effectiveness of a computer-based intensive training program of attention, information processing, and executive functioning in clinically-stable patients with RR MS and low levels of disability.</p> <p>Materials: Neuropsychological testing materials and questionnaires, software used for SG intervention, "Plan a Day and Divided Attention", part of the RehaCom package (www.Schuhfried.at).</p> <p>Treatment Plan:</p> <ul style="list-style-type: none"> ➤ Duration: The SG intervention comprised 3 x 1 hr sessions per week over three consecutive months. ➤ Procedure: Participants were screened for disability level, and impairments on information processing, working memory, and attention (PASAT, WCST). Participants' depression, QoL, and neuropsychological performance were assessed at baseline (T0) and 3 months (T1, post-intervention for SG) by two blinded Psychologists. ➤ Content: The SG undertook a computer-based neuropsychological intervention comprising "Plan a Day" and "Divided Attention" activities. "Plan a Day" trained participants' ability to plan and schedule a set of errands/appointments at specific places set out on a small city map. Improvement on this task required realistic scheduling and sufficient timing to complete all set errands. In the Divided Attention task, participants assume the imaginary role of a train driver, who must attend to the train controls and potential hazards as they arise (e.g., animals crossing), and adjust speed accordingly. Both tasks had levels of increasing difficulty. The control group did not receive any intervention.