Target Area: Cognitive/Mental >Attention/ Information processing (speed), Executive function, Mood > Depression/ Anxiety

Cerasa, A., Gioia, M.C., Valentino, P., Nistico, R., Chiriaco, C., Pirritano, D. et al. (2013) Computer-Assisted Cognitive Rehabilitation of Attention Deficits for Multiple Sclerosis: A Randomized Trial with FMRI Correlates *Neurorehabilitation and Neural Repair* 27: 284-295.	PEDro score - 8/10
Method/Results	Rehabilitation Program
Design ➢ **Study Design:** RCT ➢ **Population:** n=26 RR-MS patients (8 male) ➢ **Groups:** 1. Cognitive rehabilitation intervention (n=12, 3 males) 2. Placebo intervention (n=11, 3 males) ➢ **Setting** Experimental group: Clinical centre; Control group: at home **Primary outcome measure:** ➢ Brain activation during a cognitive visual serial addition test (PVSAT) using fMRI **Secondary outcome measures:** ➢ Neuropsychological performance at baseline and after 6 weeks (phenotypic level). The majority of tests came from the Brief Repeatable Battery (BRB) e.g. SRT, SPART, PASAT. Other tests included Trail Making Test, Stroop Task and Mini-mental State Examination. ➢ Beck Depression Inventory ➢ State-Trait Anxiety Inventory Y1 and Y2 **Results:** The experimental group displayed a specific increased activity in the right posterior cerebellar lobule and the left superior parietal lobule compared to the control group. These increases were associated with improvements on the Stroop Test, the only test that showed statistically significant between-group differences.	**Aim:** To improve attentional deficits in Relapse-Remitting Multiple sclerosis (RR-MS) patients using a computer-assisted cognitive rehabilitation intervention. **Materials:** Access to a standard PC, Software RehaCom, fMRI equipment **Treatment Plan:** ➢ **Duration**: 6 weeks ➢ **Procedure:** 2 sessions per week each lasting for 1 hour. ➢ **Content:** - *Experimental group*: Patients received a computer-assisted rehabilitation training of several attention ability and information processing tasks, focusing on "divided attention," "attention and concentration," and "vigilance". - *Control group*: Performed a visuomotor coordination task where they had to respond quickly and accurately to the appearance of target visual stimuli (numbers 2-4-6-8) on the screen by pressing corresponding keys on the keyboard. Both groups underwent an fMRI scanning procedure during which they performed a cognitive paced visual serial addition test (PVSAT).