a good indicator of preclinical AD and predict eventual conversion to symptomatic AD.

Categories: Dementia (Alzheimer's Disease)
Keyword 1: neuropsychological assessment
Keyword 2: dementia - Alzheimer's disease
Keyword 3: assessment
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Paper Session 09: Parkinson's disease and Multiple Sclerosis topics

4:00 - 5:25pm
Thursday, 2nd February, 2023
Town & Country Ballroom D

Moderated by: Cady Block

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1 Cognitive Rehabilitation and Mindfulness Reduce Cognitive Complaints in Multiple Sclerosis (REMIND-MS): a Randomized Controlled Trial

Roy P.C. Kessels[1,2], Ilse M. Nauta[3], Dirk Bertens[1,2], Luciano Fasotti[2,1], Jay Fieldhouse[3], Bernard M.J. Uitdehaag[3], Anne E.M. Speckens[4], Brigit A. de Jong[3]
[1]Radboud University, Nijmegen, Netherlands. [2]Klimmendaal Rehabilitation Center, Arnhem, Netherlands. [3]Amsterdam UMC, Amsterdam, Netherlands. [4]Radboud University Medical Center, Nijmegen, Netherlands

Objective: Cognitive problems, both complaints and objective impairments, are frequent and disabling in patients with multiple sclerosis (MS) and profoundly affect daily living. However, intervention studies that focus on cognitive problems that patients experience in their daily lives are limited. This study therefore aimed to investigate the effectiveness of cognitive rehabilitation therapy (CRT) and mindfulness-based cognitive therapy (MBCT) on patient-reported cognitive complaints in MS.

Participants and Methods: In this randomized-controlled trial, MS patients with cognitive complaints completed questionnaires and underwent neuropsychological assessments at baseline, post-treatment and 6-month follow-up. Patient-reported cognitive complaints were primarily investigated. Secondary outcomes included personalized cognitive goals and objective cognitive function. CRT and MBCT were compared to enhanced treatment as usual (ETAU) using linear mixed models.
Results: Patients were randomized into CRT (n=37), MBCT (n=36) or ETAU (n=37), of whom 100 completed the study. Both CRT and MBCT positively affected patient-reported cognitive complaints compared to ETAU at post-treatment ($p<.05$), but not 6 months later. At 6-month follow-up, CRT had a positive effect on personalized cognitive goals ($p=.028$) and MBCT on processing speed ($p=.027$). Patients with less cognitive complaints at baseline benefited more from CRT on the Cognitive Failures Questionnaire (i.e. primary outcome measuring cognitive complaints) at post-treatment ($p=.012$-$.040$), and those with better processing speed at baseline benefited more from MBCT ($p=.016$).
Conclusions: Both CRT and MBCT alleviated cognitive complaints in MS patients immediately after treatment completion, but these benefits did not persist. In the long term, CRT showed benefits on personalized cognitive goals and MBCT on processing speed. These results thereby provide insight in the specific contributions of available cognitive treatments for MS patients.

Categories: Multiple Sclerosis/ALS/Demyelinating Disorders
Keyword 1: cognitive rehabilitation
Keyword 2: treatment outcome
Keyword 3: executive functions
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2 Neuropsychological Rehabilitation of Multiple Sclerosis Patients: Long-Term Effects on Everyday Functioning

Inês Ferreira, Ana Martins daSilva, Ernestina Santos, Raquel Samões, Ana P Sousa, Sara Cavaco

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Objective: Cognitive difficulties in Multiple Sclerosis (MS) are important contributors to impairment in instrumental activities of daily living. A non-randomised controlled trial was conducted to explore the effects of a cognitive rehabilitation protocol on MS patients' daily life functionality.
Participants and Methods: Seventy-five relapsing-and-remitting MS patients were recruited. Intervention Group (IG, n=31) underwent 16 individual rehabilitation sessions (1hx2/week; weeks 2-10), which included paper and pencil cognitive stimulation exercises and training memory strategies and external memory aids; and a booster session (week 37). Control Group (CG, n=44) received care as usual. These primary outcome measures were applied at baseline and at weeks 11, 36, and 62: Multiple Sclerosis Neuropsychological Screening Questionnaire (MSNQ), Mental Slowness Questionnaire (MSQ), Mental Slowness Observation Test (MSOT), and Sydney Psychosocial Reintegration Scale-2 (SPRS-2). Score differences from baseline were calculated for all measures and follow-up time points except for SPRS-2, which was only applied twice (baseline and week 62). Linear regressions fitted with generalized estimating equations (GEE) were performed to verify the effects of time and group on the outcome measures. Baseline scores were included in the model as covariates for all outcome measure except SPRS-2. Chi-square and Mann-Whitney tests were applied to compare demographic and clinical characteristics of the groups.
Results: Groups had similar demographic (i.e., sex, age, and education) and clinical (i.e., age at disease onset, disease duration, disease modifying treatments, and Expanded Disability Status Scale score) characteristics. IG's MSQ score progressively improved, whereas CG's score did not change from baseline (group x time effect: $p<0.001$) throughout follow-up. IG's MSNQ score improved from baseline at weeks 11 and 36, but not at week 62. CG's MSNQ score did not change from baseline throughout follow-up (group x time effect: $p=0.025$). Both IG's and CG's performance on the MSOT improved (time effects). Though, the IG showed greater improvement at follow-up (group effects) on MSOT score and time (both $p<0.001$). IG's SPRS-2 improved, whereas CG's score declined (group x time effect: $p<0.001$).
Conclusions: Combining restorative techniques with strategy-based compensatory techniques may produce significant and persistent effects on MS patients' self-reported everyday functioning and on their objective performance of instrumental tasks.

Categories: Multiple Sclerosis/ALS/Demyelinating Disorders
Keyword 1: everyday functioning
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3 Race/Ethnicity-Related Differences in Volumetric Brain Measures in Persons with Multiple Sclerosis

Cristina A. F. Román[1], Indira C. Turney[2], Ashish Mistry[1], Nancy Chiaravalloti[3], Ekaterina Dobryakova[3], Helen Genova[3], Brian Sandroff[1], Brian Yao[1], Glenn Wylie[1], John DeLuca[1]
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Objective: Multiple sclerosis (MS) has historically been considered a syndrome that primarily affects White persons of northern European ancestry. This has been strongly disproven in recent decades with prevalence/incidence studies showing that MS impacts individuals from diverse backgrounds. The few studies available investigating clinical characteristics of MS across diverse groups have shown that Hispanic/Latinx/e (Latinx) and non-Hispanic Black/African American (NHB) persons with MS (pwMS) have more severe disease trajectories compared to non-Hispanic Whites (NHW), including an earlier age of disease onset, greater disability, and more severe symptoms overall. Changes in brain structure have been linked outcomes and MS-itself, but what remains understudied is how brain structure differs across race/ethnicity. As such, the current study aims to investigate

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