

associated with lower adaptive skills ($t=2.90$, $p=.003$) and IQ ($t=2.02$, $p=.026$). Of those enrolled in school, 59% received special education services and/or accommodations (IEP $n=18$, Early Intervention $n=6$; 504 Plan $n=3$).

Conclusions: Overall, PRT before age 4 years was associated with difficulties with withdrawal, adaptive skills, and executive functioning. Younger age at PRT was associated with lower adaptive functioning, lower social skills, and higher hyperactivity, but not with IQ, attention, mood, or anxiety. While a longer time interval since treatment was associated with improvement in activities of daily living, anxiety was increased, suggesting some late emotional effects. Furthermore, posterior fossa syndrome after surgery was related to lower adaptive skills and IQ. Attention problems were not indicated. Approximately half received school services/accommodations. Young children treated with PRT require proactive support and services to foster their developmental outcomes.

Categories: Cancer

Keyword 1: adaptive functioning

Keyword 2: brain tumor

Keyword 3: pediatric neuropsychology

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24 Mindfulness-based cognitive therapy enhances executive control in recurrent depression in a randomized wait-list controlled trial

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Objective: Adults with recurrent depression have been shown to have cognitive deficits also while in remission. Thus, it has been suggested that with a chronic course of depression, poorer executive control can be a vulnerability factor for depressive relapse. This has led to research on how cognitive remediation training can protect

against recurrent depressive episodes. Findings indicate that such training has short term effects on cognitive functioning, and small effect on depression symptoms. Less focus has been on how “standard” psychotherapy can have positive effects on executive and attentional control. Mindfulness-based cognitive therapy (MBCT) has been shown to be as effective as antidepressant medication in preventing relapses of depressive episodes. Mindfulness training in healthy samples seems to improve executive and attentional control. However, the few studies of MBCT in recurrent depression show mixed effects on executive and attentional control. As far as we know, no prior study has investigated the effect of MBCT in recurrent depression with the revised version of the attention network test (ANT-R). In a randomized controlled trial, we expected that the MBCT group would show enhanced executive control and lower levels of attentional fluctuations than the wait-list controls (WLC) from pre (T0) to post (T1) treatment. We further investigated if positive effects of MBCT on executive and attentional control were associated with reduction in depression symptoms.

Participants and Methods: Adults with recurrent depression in partial or full remission ($N = 64$) were randomized to MBCT or WLC. In the MBCT and WLC groups, 25 and 29, respectively, performed the ANT-R at T0 and T1. The attention network reaction time scores of executive control, alerting, and orienting were calculated in addition to attention fluctuations scores of intra-individual reaction time variability (IIVRT) and exgaussian-mean of longer reaction times (TAU). Self-reported depression symptoms were measured with BDI-II. The two groups were compared at baseline on full-scale IQ (WASI), executive control (D-KEFS Stroop), and processing speed (D-KEFS TMT).

Results: The MBCT and WLC groups did not differ significantly in age or gender distribution, education, full-scale IQ or in baseline executive and attentional control as measured with the ANT-R, Stroop and TMT. The MBCT group showed a higher efficiency in conflict detection as measured with the executive control score from T0 to T1 compared to the WLC. This positive effect of MBCT on executive control was independent from the greater reductions in depression symptoms in the MBCT group compared to in the WLCs. However, reduction in depression symptoms at T1 was associated with enhanced efficiency in responding to alerting cues in conflict detection. No effects of MBCT

compared to WLC were found at T1 on the attention fluctuation measures (IIVRT and TAU). **Conclusions:** The findings from the current study indicates that MBCT enhances executive control in adults with recurrent depression. As such, MBCT may target an important cognitive vulnerability factor in the chronic course of recurrent depression that may contribute to its efficacy in preventing depressive relapses. It was also observed that reductions in depression symptoms led to higher alertness in conflict detection.

Categories: Cognitive Intervention/Rehabilitation

Keyword 1: depression

Keyword 2: executive functions

Keyword 3: treatment outcome

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25 Biases in Informant Ratings of Functional Abilities in Mild Cognitive Impairment: Predictors of Caregiver-Rated Functional Abilities While Controlling for Patient Objective Cognitive Status

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Objective: An understanding of factors that contribute to informant ratings of patients' functional abilities is crucial, not only because these ratings are used to diagnose individuals with mild cognitive impairment (MCI) versus dementia, but also because these ratings are commonly used as outcome measures in clinical trials. While these ratings are assumed to be largely accurate, research shows they are subject to biases. Caregiver distress, higher caregiver educational attainment, and higher patient age are associated with a higher discrepancy between informant and patient reports of functional abilities. Studies on informant ratings of functional abilities that simultaneously control for patient objective cognitive abilities remain sparse. The current

study aims to evaluate caregiver characteristics as predictors of informant-rated functional status while controlling for patient objective cognitive abilities in MCI.

Participants and Methods: Individuals with a clinical diagnosis of MCI (Albert, 2011 criteria) were referred to the Cognitive Empowerment Program (CEP), a comprehensive lifestyle program addressing modifiable risk factors associated with progression. This study included cross-sectional data from 118 newly enrolled individuals and their caregivers who served as informants. Patient cognitive functioning was assessed with the Montreal Cognitive Assessment (MoCA). Predictors of interest included caregiver-rated functional abilities (Functional Activities Questionnaire; FAQ), caregiver burden (Zarit Burden Interview; ZBD), caregiver depressive symptoms (Center for Epidemiological Studies Depression scale; CES-D), caregiver stress (Perceived Stress Scale; PSS), and caregivers' self-rated communicative effectiveness (Communicative Effectiveness Index; CETI). Hierarchical linear regression models were run to predict FAQ while controlling for patient MoCA scores. Separate models were run for the caregiver variables of interest including caregiver age, ZBD, CES-D, PSS, and CETI.

Results: Caregivers were 75.6% spouses, 17.1% adult children, 3.3% unmarried partners/cohabitating partners, and 4.1% friends. The mean age of individuals with MCI was 74.7 years (SD: 6.96, mean education = 16.2±2.60 years; 47% female) and the mean age of caregivers was 66.4 (SD: 12.88, mean education = 16.3±2.34; 66% female). Worse ratings of functional abilities on the informant-rated FAQ were found for patients with lower MoCA scores ($\beta = .242, p = .008$). Importantly, while controlling for MoCA scores, worse ratings of functional abilities on the FAQ were found for informants with lower age ($\beta = -0.269, p = .003$), higher perceived stress ($\beta = 0.267, p = .003$), higher caregiver burden ($\beta = 0.289, p < 0.001$), and lower self-rated communication effectiveness ($\beta = -0.324, p < .001$). Caregiver depression ($\beta = 0.089, p = .084$) and education ($\beta = -0.137, p = .147$) were not significant predictors of functional ability ratings while controlling for MoCA scores.

Conclusions: Results of the current study highlight the potential for biases in informant ratings regarding functional abilities in MCI. Informant ratings were found to be significantly influenced by caregiver age, stress, burden, and