

Results: Participants most often endorsed strategies from Session 2 (44% of participants) and Session 3 (44%) as being helpful and applicable in daily life. Session 1 content was also frequently endorsed (36%). Content from Session 5 was noted to have been helpful/applicable least often (12%). Participants also reported having found common factors of the program to be helpful (35%), such as interaction with the clinician, education on relevant resources, or greater self-reflection and self-awareness through the program. A minority of participants reported “all” (22%) or “none” (24%) of the content to be helpful.

Conclusions: Among older adults with MCD, strategies related to prospective memory (e.g., calendar training) and attention (e.g., mindfulness) were most frequently reported as being helpful and applicable in daily life. Participants reported confidence in their ability to continue using these strategies after the program, along with continued implementation of lifestyle factors to promote healthy brain aging (e.g., exercise). Clinicians interested in providing CCT to older adults with MCD may find the most benefit from emphasizing and prioritizing strategies within these domains. Future research could use ecological momentary assessment techniques to gather real-time measures of how these learned strategies are employed in daily life. Continued exploration of the most salient and effective compensatory strategies for older adults with MCD will support effective intervention and promote independence among aging patients.

Categories: Cognitive Intervention/Rehabilitation

Keyword 1: cognitive rehabilitation

Keyword 2: mild cognitive impairment

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85 Evaluating the Improvement on the Naturalistic Action Task After the Virtual Kitchen Intervention: A Case Study

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Objective: The goal-control model of the functional impairment in dementia posits two different underlying mechanisms: decay of task goals (reduced task accomplishment) and poor control over goal execution (high error rates). Here we present a case series in which we explore the effects of a performance-based, functional intervention on two participants. Outcomes were evaluated using the goal-control framework.

Participants and Methods: Two participants with dementia (CS: age 70, 14 years of education; EM: age 93, 18 years of education) completed neuropsychological tests (scored using age, education, and IQ-adjusted norms) and baseline testing with the Naturalistic Action Task (NAT; a validated performance-based task of everyday function including a Breakfast and Lunch task). The Virtual Kitchen (VK) was used to train, through repeated performance, either the Breakfast (CS) or Lunch (EM) tasks for 30 minutes (or 10 total repetitions) per day over 5 days. After VK training, participants performed the NAT Breakfast and Lunch tasks again to evaluate improvement on the trained and untrained tasks. Baseline and post-training NATs were scored for task accomplishment and errors by two coders observing video recordings. Z scores were derived by calculating accomplishment and error change scores for each participant relative to the mean and standard deviations of change scores from a cohort of 36 healthy controls (mean age: 73.3, SD: 6.44; mean education: 17.42, SD: 2.17).

Results: Both participants exhibited similar cognitive profiles: high estimated IQ; low MMSE (total = 19 for both CS and EM; 1st percentile); anterograde amnesia, slowed processing speed and impaired executive function; average scores on tests of attention, language, and self-reported depression. Informant report of daily functioning (FAQ) suggested that EM (FAQ=28) exhibited greater functional impairment than CS (FAQ=9). Both participants completed all VK training sessions. Z scores of the change from pre- to post-training showed significant increases in task accomplishment on the trained task (trained condition change z scores: EM = +27.69; CS = +6.06), but significantly less improvement or

worse task accomplishment on the untrained task (untrained condition change z scores: EM = +4.06; CS = -13.69). The training did not reduce errors, as error rates increased for both participants on the trained task.

Conclusions: The participants presented in this case study exhibited comparable cognitive profiles, including marked anterograde amnesia. Our results suggest that repeated training in a virtual context can improve specific aspects of functioning on real, life everyday tasks. Further, according to the goal-control framework, repeated practice reduces the decay of the task goal, as represented by greater task accomplishment, but does not improve executive control over the task execution. Important future directions are to determine if people with different cognitive profiles will demonstrate different benefits from VK training and to examine if virtual training of personally relevant, everyday tasks can promote independent living and improve quality of life.

Categories: Cognitive Intervention/Rehabilitation

Keyword 1: aging disorders

Keyword 2: cognitive functioning

Keyword 3: dementia - Alzheimer's disease

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86 Subjective Executive Dysfunction Mediates Relationship Between Perceived Sleep Quality and Societal Participation in Veterans with TBI

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Objective: Perceived poor sleep quality is the most commonly reported issue among veterans with a history of mild traumatic brain injury (mTBI). Poor sleep can impact aspects of objective and subjective executive functioning abilities (e.g., planning, organization, decision-making) and lead to decreased societal

participation. However, less is known about how perceived executive dysfunction impacts the relationship between perceived poor sleep and societal participation in veterans with a prior history of mTBI. We hypothesized that executive dysfunction mediates the relationship between subjective sleep quality and societal participation.

Participants and Methods: Participants included sixty-two U.S. veterans [Age: M=41.73 (SD=13.19); Education: M=15.16 (SD=2.20); 14.5% female]. The participants completed the Mayo-Portland Adaptability Inventory - 4 (MPAI-4; total scores), the Behavior Rating Inventory of Executive Function - Adult (BRIEF-A; subscale planning/organizing), and the Pittsburgh Sleep Quality Index (PSQI; total scores). 21 participants met diagnostic criteria for Post-traumatic stress disorder (PTSD) [as determined by a cutoff score of 45 on the PTSD Checklist for DSM-5 (PCL-5)]. A mediation analysis was utilized to examine the impact of executive functions on the relationship between perceived sleep quality and societal participation.

Mediation analyses were conducted via linear regression modeling using SPSS Version 27. Post hoc analyses were conducted to control for PTSD, which is common in veteran populations.

Results: The total PSQI scores significantly predicted MPAI-4 total scores $F(1, 53) = 16.740$, $p < .001$ ($R^2 = .55$) when controlling for PTSD diagnoses. A mediation analysis showed that BRIEF-A Planning/Organizing T-scores partially mediate the relationship between PSQI scores and MPAI-4 scores when controlling for PTSD diagnoses $F(2, 54) = 12.055$, $p < .001$ ($R^2 = .61$).

Conclusions: Results suggest that perceived sleep quality impacts societal participation. However, how patients perceive their executive functioning abilities partially mediates the relationship between perceived sleep quality and societal participation, such that perceived poor sleep quality leads to reduced societal participation when there is subjective executive dysfunction. Therefore, clinical interventions should focus on the cognitive rehabilitation of executive functioning among veterans with a history of mTBI to improve their subjective experience. Ultimately, these efforts may improve veterans' participation and utilization of healthcare services.

Categories: Cognitive Intervention/Rehabilitation