

delivered by classroom aides within a school setting.

Participants and Methods: 20 children between ages 6-12 years ($\bar{x} = 10.83$ years) with NDDs and identified executive function deficits and their assigned classroom aides (i.e., “interventionists”) were randomly assigned to either DI or an educational game control condition. Interventionists completed a 2-4 hour online training course and a brief, remote Q&A session with the research team, which provided key information for delivering the intervention such as game-play and metacognitive/behavioral strategy instruction. Fidelity checks were conducted weekly. Interventionists were instructed to deliver 14-16 hours of intervention during the school day over 6-8 weeks, divided into 3-4 weekly sessions of 30-60 minutes each. Baseline and post-intervention assessments consisted of cognitive measures of cognitive flexibility (Minnesota Executive Function Scale), working memory (Weschler Intelligence Scales for Children, 4th Edn. Integrated Spatial Span) and parent-completed EF rating scales (Behavior Rating Inventory of Executive Function).

Results: Samples sizes were smaller than expected due to COVID-19 related disruptions within schools, so nonparametric analyses were conducted to explore trends in the data. Results of the Mann-Whitney U test indicated that participants within the DI condition made greater gains in cognitive flexibility with a trend towards significance ($p = 0.115$). After dummy coding for positive change, results also indicated that gains in spatial working memory differed by condition ($p = 0.127$). Similarly, gains in task monitoring trended towards significant difference by condition.

Conclusions: DI, a novel EF intervention, may be beneficial to cognitive flexibility, working memory, and monitoring skills within youth with EF deficits. Though there were many absences and upheavals within the participating schools related to COVID-19, it is promising to see differences in outcomes with such a small sample. This poster will expand upon the current results as well as future directions for the DI intervention.

Categories: Cognitive Intervention/Rehabilitation

Keyword 1: cognitive rehabilitation

Keyword 2: executive functions

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84 Preferred Compensatory Cognitive Training Strategies Among Older Adults with Mild Cognitive Difficulties

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Objective: Older adults experiencing mild cognitive difficulties (MCD) may benefit from compensatory cognitive training (CCT) to address cognitive changes. CCT can be delivered over various lengths of time and can focus on a specific cognitive domain (e.g., memory) or multiple domains. Identifying the most relevant and impactful portions of a CCT intervention could allow for more effective and streamlined delivery of compensatory strategies, perhaps allowing this type of training to be included in feedback sessions or brief interventions. This study sought to investigate which factors older adults with MCD found to be most beneficial and applicable to their daily lives after completion of a brief telehealth CCT program.

Participants and Methods: Adults age 55+ with documented MCD ($n=28$) and an optional care partner (CP; $n=18$) were recruited for video-chat delivery of a 6-week, motivationally-enhanced CCT program adapted from CogSMART. The six weeks included content addressing: Education and Lifestyle Strategies (Session 1); Organization, Prioritization, and Prospective Memory (Session 2); Attention, Concentration, and Working Memory (Session 3); Learning and Memory (Session 4); Executive Functions: Decision-Making, Problem-Solving, and Planning (Session 5); and Skills Integration and Next Steps (Session 6). After completing the course, participants ($n=25$) provided open-ended feedback on course content, including the areas they found most helpful. They were also asked which strategies from the course they had successfully applied in their daily lives, and which they expected to continue using following the course. Qualitative data were coded and analyzed by two researchers.

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