.034) than T/T (*d* range: 0.13 to 0.36, *p* range: .022 to .682). Sex also interacted with *SNAP-25* to predict Aβ-PET positivity (*p*=.046) such that female C-carriers exhibited the lowest prevalence of Aβ-PET positivity (13%) compared to other groups (23% to 35%). C-carriers exhibited larger temporal lobe volumes across sex, yet this effect only reached statistical significance among females (females: *d*=0.41, *p*=.018; males: *d*=0.26, *p*=.179). In post-hoc analyses, larger temporal lobe volumes were selectively associated with better verbal memory in female C-carriers (β=0.36, *p*=.026; other groups: |βs|<0.10, *p*s>.538).
Conclusions: Among clinically normal older adults, we demonstrate female-specific advantages of carrying the *SNAP-25* rs105132 C-allele across cognitive, neural, and molecular markers of AD. The rs105132 C-allele putatively reflects higher endogenous levels of *SNAP-25*. Our findings suggest a female-specific pathway of cognitive and neural resistance, whereby higher genetically-driven expression of *SNAP-25* may reduce likelihood of amyloid plaque formation and support verbal memory, possibly through fortification of temporal lobe structure.

Categories: Genetics/Genetic Disorders
Keyword 1: genetic neuropsychology
Keyword 2: cognitive reserve
Keyword 3: dementia - Alzheimer's disease
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74 Adherence to Behavioral Interventions is Associated with a Change in Participant Adjustment in a Sample of aMCI Patients

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Objective: Behavioral interventions are a non-pharmacological treatment that shows improvement in the everyday functioning of people with Mild Cognitive Impairment (MCI). Multiple studies have focused on examining factors that can reduce or enhance adherence to behavioral interventions. However, few studies use adherence as a predictor of functional changes. The goal of this study was to analyze the association between adherence, age, and education in factor score changes of participant impairment, participant adjustment, and partner adjustment in a sample of participants with amnestic MCI (aMCI) and their study partners.
Participants and Methods: We included fifty-two dyads of a person with aMCI and their study partner with intervention data at baseline and 24-week follow-up from the Physical Exercise and Cognitive Engagement Outcomes for Mild Neurocognitive Disorder (PEACEOFMND) study. At baseline, participants were randomized to one of three behavioral interventions: computerized cognitive training (BrainHQ; n=19), yoga (n=15), or wellness education (n=18). Factors were established from a larger clinical sample that used the same measures as PEACEOFMND. The three-factor latent structure was constructed as the following: 1) participant adjustment combined scores of the Center for Epidemiologic Studies Depression Scale (CES-D), Quality of Life in Alzheimer's Disease (QoL-AD), and Self-Efficacy for managing MCI scales; 2) partner adjustment included study partner's scores in CES-D, QoL-AD and Caregiving Competence and Mastery Components (CCMC) of the Pearlin scales; 3) participant impairment included participant's scores in E-Cog memory domain, and study partner's scores in the Functional Activity Questionnaire (FAQ) and Zarit Burden Interview. We calculated factor changes by obtaining the difference between factor scores at follow-up and baseline. Bayesian correlation analysis was performed to investigate the association between age, education, adherence to the combined behavioral interventions, participant adjustment, participant impairment, and partner adjustment.
Results: The Bayesian correlation results showed moderate evidence (BF10=6.8, Pearson's r=0.38) supporting a positive correlation between adherence and change in participant adjustment. Additionally, there was moderate evidence (BF10=2.18, Pearson's r=0.32) supporting a positive correlation between change in participant impairment and participant level of education as well as participant age and change in partner adjustment (BF10=2.8, Pearson's r=0.33).
Conclusions: Bayesian correlations replicated results from previous analysis using a traditional

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method, showing that increased adherence to combined behavioral interventions is associated with an increase in participant's quality of life, self-efficacy, and better mood. Thus, commitment to behavioral intervention completion in aMCI participants is related to overall participant adjustment.

Categories: MCI (Mild Cognitive Impairment)
Keyword 1: mild cognitive impairment
Keyword 2: quality of life
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75 The Association Between Cognitive Function and Older Adults Performance on a Naturalistic Cooking Task in the Home Environment

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Objective: Cognitive impairment can affect an individual's ability to perform routine tasks. In this study, we investigate how cognitive abilities relate to the accuracy and efficiency of performance on a naturalistic cooking task completed in older adults' home environments. We hypothesized a positive association between task accuracy and global cognitive status, and task efficiency and executive functioning. We further hypothesized a negative association between omission errors and immediate and delayed memory recall.
Participants and Methods: Fourteen community-dwelling older adults (Age, M = 73.92 years; Female = 9; Education, M = 16.38 years) along the continuum from normal aging to mild dementia completed a "Cooking Task" in their home environment. Specifically, participants were instructed to fry or scramble an egg, prepare slice of toast with jelly, serve side of sliced apple, pour glass of water, bring prepared items to table, and clean dishes used. Participants received ingredients necessary for task completion and a task list to reference. The task efficiency score (range 0-6) was based on multi-tasking and organizational skills (e.g., beginning the egg task early in session, plating items as prepared). Overall accuracy was computed by identifying error types (e.g., inefficiencies, substitutions, omissions, and subtasks attempted) and scaling accuracy (range 1-5) for each subtask, then summing all six subtask accuracy scores to get overall accuracy (range 6-30). Participants also completed a range of neuropsychological assessments, which included the Telephone Interview for Cognitive Status, Letter and Category Fluency from the Delis-Kaplan Executive Function System, and immediate and delayed recall measures from the Repeatable Battery for the Assessment of Neuropsychological Status. Due to the small sample size, findings are preliminary, and scatterplots were evaluated for outliers that might influence findings.
Results: Consistent with hypotheses, as overall accuracy on the Cooking Task increased so did performance on the global cognitive measure (TICS: $r = 0.61$, $p = 0.02$). Lower rates of omission errors were also associated with better performance on both immediate ($r = -0.75$, $p < 0.01$) and delayed ($r = -0.55$, $p = 0.04$) recall indices. However, these findings were not specific, as overall accuracy also significantly correlated with the memory indices and verbal fluency measures ($ps < 0.05$). Additionally, lower rates of omission errors significantly correlated with performance on the TICS and the D-KEFS Letter Fluency ($ps < 0.05$). Contrary to our hypothesis, no significant associations were found between cooking task efficiency and executive functioning (D-KEFS subtests). There were also no significant correlations between cooking task efficiency and global cognitive status or memory.
Conclusions: The present study supported our hypotheses that better overall task accuracy is associated with higher cognitive status and lower rates of omission errors correlate with better immediate and delayed recall abilities. However, the findings were not specific to these domains of functioning but rather suggest that clinical assessments measuring a range of cognitive abilities are related to the accuracy of daily task performance and omission errors on routine daily tasks. Future research will explore the validity of the efficiency measure.

Categories: MCI (Mild Cognitive Impairment)
Keyword 1: ecological validity
Keyword 2: cognitive functioning
Keyword 3: everyday functioning

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