(Immediate and Delayed Logical Memory and Visual Reproduction) to evaluate memory performance over time. A linear mixed-model adjusting for age, education, sex, ethnicity, and number of APOE e4 alleles evaluated memory performance across 5 visits for the groups. To assess if depression followed a similar course, a linear mixed-model evaluated Geriatric Depression Scale (GDS) scores over time. **Results:** At baseline, groups differed by age ($F=22.82$; $p<.001$), education ($F=8.60$; $p<.001$), MMSE scores ($F=9.38$; $p<.001$), GDS-30 scores ($F=3.56$; $p=.015$), and memory composites ($F=24.29$; $p<.001$). A significant group X time interaction was observed ($F=4.83$, $p<.001$). Memory performance improved in both the SMC and the NC groups, remained stable in the impaired but not MCI group, and declined (as expected) in those who converted to amnestic MCI. Depression scores also showed a significant group X time interaction ($F=2.43$; $p=.004$), in which the NC to MCI group endorsed slightly more depression symptoms over time, while other groups declined or remained stable. **Conclusions:** Memory trajectories in this diverse sample differed across groups. Individuals with SMC but without objective memory impairment and normal controls showed some improvement in memory over time, presumably due to practice effects. Those with subtle memory impairments but no complaint (i.e., did not meet MCI criteria) remained stable and those who converted to amnestic MCI had worse memory across time. The stability of memory performances in the impaired not MCI group suggests these subtle memory inefficiencies may be longstanding or unperceived. However, because our sample achieved retrospective diagnoses of SMC and impaired not MCI, it will be important for future studies to prospectively follow these groups to determine which risk factors may predict progression to MCI and what impact ethnicity may have on these trajectories.

Categories: MCI (Mild Cognitive Impairment)
Keyword 1: memory complaints
Keyword 2: mild cognitive impairment
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88 Single Trial of Biber Figure Learning Test Captures Subjective Cognitive Decline

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Objective: The Biber Figure Learning Test (BFLT) is a serial figure learning assessment previously been shown to be sensitive to various biomarkers of the aging brain. BFLT is an extensive assessment requiring about 30 minutes for administration. In this study, we investigated BFLT's associations with subjective cognitive decline (SCD), an early marker for preclinical Alzheimer's Disease (AD), and examined whether alternative BFLT indices could be utilized to considerably shorten the length of assessment without decreasing its sensitivity to SCD.
Participants and Methods: Participants were 50 cognitively normal older adults (8% Hispanic, 92% Non-Hispanic; 78% White, 16% Black; 64% female; mean age =72.7 (SD =6.2); mean education =17.05 (SD =2.09)). SCD was measured using a 20-item age-anchored dichotomous questionnaire that assessed complaints of cognitive functioning, and the BFLT was administered in full. Pearson correlations were conducted between SCD and BFLT scores including: Trial 1 Learning (T1), Trials 1 to 2 Total Learning (T1T2), Trials 1 to 3 Total Learning (T1T3), Trials 1 to 5 Total Learning (Total Learning), Immediate Recall, Delayed Recall, Proactive Interference (Trial B – Trial 1), Retroactive Interference (Immediate Recall – Trial 5), and Total Discrimination (calculated as [Recognition Total Correct + 0.5]/16) − ([Total False Alarms + 0.5]/31]). A Fishers Exact Test was utilized to compare the correlational strength between SCD and each of the BFLT scores. Lastly, demographically adjusted (age, gender, and education) regression models were conducted to examine SCD as an individual predictor for the various BFLT scores.

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Results: SCD was negatively associated with BFLT T1 (r =-0.406, p =0.003), T1T2 (r =-0.331, p =0.019), T1T3 (r =-0.323, p =0.022), Total Learning (r =-0.283, p =0.046), Immediate Recall (r =-0.322, p =0.023), Delayed Recall (r =-0.318, p =0.025), and Retroactive Interference (r =-0.388, p =0.005) and positively associated with Proactive Interference (r =0.308, p =0.029). There was no significant difference in correlational strength between any of these BFLT scores and SCD. Adjusting for demographics, SCD predicted Immediate Recall (B =-0.273, p =0.029), Total Learning (B =-0.253, p =0.040), T1 (B =-0.412, p =0.002), T1T2 (B =-0.326, p =0.010), T1T3 (B =-0.299, p =0.017), Proactive Interference (B =0.292, p =0.050), and Retroactive Interference (B =-0.330, p =0.025).
Conclusions: Eight of the nine assessed BFLT scores were strongly correlated with age-anchored SCD and age-anchored SCD predicted seven of the nine assessed BFLT indices when adjusted for demographics. Although additional work is needed, these findings suggest SCD's sensitivity to changes in visuospatial learning and memory, supporting its use as an early marker for preclinical AD. Likewise, our results suggest that an abbreviated version of the BFLT could be utilized that shortens testing time and reduces participant fatigue without a decrease in clinical relevance. Through ongoing longitudinal work, we hope to further disentangle the relationship between SCD and visuospatial learning and memory as measured through the BFTL and to examine how associations between SCD and the BFLT assessment change over time.

Categories: MCI (Mild Cognitive Impairment)
Keyword 1: memory complaints
Keyword 2: dementia - Alzheimer's disease
Keyword 3: visuospatial functions
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89 The Effect of Personality Traits on the Development of Predementia Cognitive States: Results from the Einstein Aging Study

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Objective: Recent research has found associations between the Five Factor Model (FFM) personality traits (Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) and risk of developing subjective cognitive decline (SCD), mild cognitive impairment (MCI), and/or dementia. It has therefore been proposed that personality should be incorporated into conceptual models of dementia risk, as personality assessments have utility as readily available, low-cost measures to predict who is at greater risk for developing pathological cognitive decline. The objective of the present study was to explore the relationship between FFM personality traits and predementia cognitive syndromes including SCD, amnestic MCI (aMCI), and non-amnestic MCI (naMCI). The first aim was to compare baseline personality traits between participants who transitioned from healthy cognition or SCD to aMCI vs. naMCI. The second aim was to determine the relationship between FFM personality traits and risk of transition between predementia cognitive states. The third aim was to explore relationships between levels of FFM personality traits and performance on a comprehensive cognitive battery.
Participants and Methods: The participants for this study were 562 (Aim 3; Mean Age = 78.90) older adults from the Einstein Aging Study, 378 of which had at least one follow-up assessment (Aims 1 & 2; Mean Age = 78.60). Baseline levels of FFM personality traits were measured in the EAS using the 50-item International Personality Item Pool (IPIP) version of the NEO-Personality Inventory. Baseline levels of anxiety and depressive symptoms, medical history, performance on a cognitive battery and age sex, and years of education were also collected. A multistate Markov approach was used to model the risk of transition across the four predementia states (cognitively healthy, SCD, aMCI, and naMCI) with each FFM personality trait as covariates.
Results: Regarding Aim 1, Mann-Whitney U tests revealed no differences in levels of FFM personality traits between participants who developed aMCI compared to those who developed naMCI. Regarding Aim 2, the multistate Markov model revealed that higher levels of conscientiousness were protective against developing SCD while higher levels of neuroticism resulted in an increased risk of developing SCD. Further, the model revealed that higher levels of extraversion were protective

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