

(ASPO) and to study which of these factors were predictors of caregiver overload.

**Participants and Methods:** During the first 3 months of the ASPO (June 2020 to September 2020). A sample of 112 caregivers (75.89% female; age  $58.65 \pm 14.30$ ) of patients with dementia from a Memory Center answered, remotely (online or telephone) a survey with the following questionnaires: the Zarit Caregiver Overload Scale (ZBI), Weekly hourly load dedicated to the care of patients with dementia), the use of time in unpaid activities through an activity diary, provided by Argentine National Institute of Statistics and Census (INDEC), the Caregiver Activities Survey (CAS) and the Anxiety, Depression and Stress Scale (DASS-21). These questionnaires evaluate the conditions and characteristics of caregiving tasks and their impact on the caregiver in the context of ASPO. Additionally, it was recorded whether the person with dementia, the caregiver, or persons living with them had had COVID-19.

**Results:** Descriptively, a disparity in frequency was observed in the gender of caregivers of persons with dementia, i.e., caregiving is inequitably distributed between men (24.11%) and women (75.89%). This difference hinders direct comparison between men and women. A regularized L2 regression was performed for the identification of predictors of caregiver overload identifying the number of caregiving hours ( $\beta=0.090$ ), DAS depression ( $\beta=0.085$ ), DASS anxiety ( $\beta=0.099$ ) DASS stress ( $\beta=0.164$ ), fear of Covid (0.141) and lower patient cognitive performance according to MMSE ( $\beta=-0.41$ ) and to lesser extent sex as the greatest contributors to patient overload. Additionally, a mediation analysis was performed in which the factors number of caregiving hours (CAS;  $r=0.254$ ,  $r=0.292$ ,  $r=0.252$ ,  $r=0.252$ ,  $r=-0.37$ ), being a primary caregiver and fear of Covid-19 ( $r=0.335$ ,  $r=0.432$ ,  $r=0.402$ ,  $r=-0.496$ ) were found to be mediators of the effect between anxiety, depression, stress (DASS) and overload (ZBI).

**Conclusions:** Caregivers of patients with dementia have suffered sequelae such as anxiety, stress, depression, and overload (caregivers' burden) in the context of the COVID-19 virus spread and during mandatory preventive social isolation. Being a primary caregiver, dedicating more hours to caregiving, and fear of Covid-19 are factors that contribute significantly to caregiver burden and mediate between this burden and mood variables. Public

policies to support caregivers and information about the disease could modify these variables and reduce caregiver burden.

**Categories:** MCI (Mild Cognitive Impairment)

**Keyword 1:** cognitive course

**Keyword 2:** neurocognition

**Correspondence:** Micaela Arruabarrena, Fleni, mica.arruabarrena@gmail.com

## 87 Not Normal but not MCI: Course of Memory over time

Michael Conley, Jeff Schaffert, Anthony Longoria, Jessica Helphrey, C Munro Cullum, Laura Lacritz  
UT Southwestern Medical Center, Dallas, TX, USA

**Objective:** A diagnosis of mild cognitive impairment (MCI) requires memory complaint and objective memory impairment. However, some individuals report subjective memory complaints (SMC) despite having intact memory performance, while others demonstrate subtle impairment on memory testing but have no memory complaints; neither case would meet criteria for MCI. This study aimed to compare memory performances over time in individuals who do not meet traditional MCI criteria to those with normal cognition and those who converted to MCI.

**Participants and Methods:** Diagnoses for a longitudinal sample from the Texas Alzheimer's Research and Care Consortium were reviewed by a consensus panel of neuropsychologists and neurologists and reclassified at time of last visit. Diagnostic categories included SMC (i.e., memory complaint but no impairment on testing), objective cognitive impairment but no complaint (Impaired but not MCI), normal control (NC), MCI, and dementia. In this study, 827 participants were divided into 4 groups: 1) NC over 5 visits ( $n=511$ , 71% female; 42% Latinx/Hispanic), 2) baseline NC to amnesic MCI ( $n=62$ ; 63% female; 57% Latinx/Hispanic), 3) SMC at last visit ( $n=133$ ; 58% female; 70% Latinx/Hispanic), and 4) impaired but not MCI at last visit ( $n=121$ ; 71% female; 60% Latinx/Hispanic). A memory composite (z-score) was created from the CERAD list-learning task (immediate, delayed, and recognition-discrimination) and Wechsler Memory Scale

(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 amnesic 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 amnesic 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

**Correspondence:** Michael Conley, UT Southwestern Medical Center, Michael.Conley@UTSouthwestern.edu

## 88 Single Trial of Biber Figure Learning Test Captures Subjective Cognitive Decline

Michael Kann<sup>1</sup>, Peter Zeiger<sup>2</sup>, Silvia Chapman<sup>1</sup>, Shaina Shagalow<sup>3</sup>, Jillian Joyce<sup>1</sup>, Leah Waltrip<sup>3</sup>, Sandra Rizer<sup>3</sup>, Martina Azar<sup>1</sup>, Stephanie Cosentino<sup>1</sup>

<sup>1</sup>The Gertrude H. Sergievsky Center, New York, NY, USA. <sup>2</sup>Vagelos College of Physicians and Surgeons, New York, NY, USA. <sup>3</sup>Taub Institute for Research in Alzheimer's Disease and the Aging Brain, New York, NY, USA

**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  $[\text{Recognition Total Correct} + 0.5]/16 - ([\text{Total False Alarms} + 0.5]/31]$ ). 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.