imaging. Participants completed the Coping Strategies Questionnaire (CAE) that includes a subscale used to assess religious stress coping, where a higher score indicates more coping, and underwent memory testing using the Free and Cued Selective Reminding Test (FCSRT). The Geriatric Depression Scale (GDS) was used to assess depression. Mann-Whitney U tests were used to examine group differences in religious stress coping, brain pathology (i.e., cortical amyloid-beta, entorhinal and precuneus tau), memory, and depression. Nonparametric correlations were used to examine associations among religious stress coping, age, education, depression, memory, and pathology.
**Results:** Carriers had poorer FCSRT immediate free recall than noncarriers ($U$=84.5, $p$=.024). There was no difference between groups in CAE religious stress coping, other FCSRT memory scores, nor GDS score (all $p$>.05). Compared to non-carriers, carriers had more cortical amyloid ($U$=152.0, $p$<.001) and more precuneus tau ($U$=123.0, $p$=.05). In carriers, religious stress coping was positively associated with education ($r$=.57, $p$=.022), FCSRT immediate free recall ($r$=.75, $p$<.001), FCSRT cued recall ($r$=.50, $p$=.047), and FCSRT delayed recall ($r$=.52, $p$=.038). After controlling for education, religious stress coping remained positively associated with FCSRT immediate free recall ($r$=.65, $p$=.009), but not other FCSRT memory scores (all $p$>.05). Religious stress coping was not associated with age or GDS score regardless of controlling for education (all $p$>.05). In carriers, religious stress coping was negatively associated with entorhinal tau ($r$=-.73, $p$=.005) and precuneus tau burden ($r$=-.58, $p$=.037). The association between religious stress coping and entorhinal tau remained significant after controlling for education ($r$=-.67, $p$=.016), but not precuneus tau ($p$>.05). Religious stress coping was not associated with cortical amyloid regardless of controlling for education in carriers (all $p$>.05). None of the associations with brain pathology or memory were significant in the non-carrier group.
**Conclusions:** Religious stress coping was associated with better memory performance and a low AD pathology burden in individuals at genetic risk for developing AD dementia. Future studies with independent and larger samples should further examine religious stress coping strategies and their associations with other AD-related biomarkers, as well as with other risk and protective factors to better understand their role at the preclinical and prodromal stages of Alzheimer's disease.

**Categories:** Dementia (Alzheimer's Disease)
**Keyword 1:** dementia - Alzheimer's disease
**Keyword 2:** cognitive functioning
**Keyword 3:** emotional processes
**Correspondence:** Jairo E. Martinez; Department of Psychiatry, Massachusetts General Hospital, Harvard Medical School; Department of Psychological and Brain Sciences, Boston University; jmartinez24@mgh.harvard.edu

## 27 Technology Use in Activities of Daily Living Amongst Older Adults Referred for Memory Clinic Evaluations

Arsh S. Ali[1], Kevin Silva[2], Robin C. Hilsabeck[1], David A. González[3], Michael K. Scullin[4], Andrew M. Kiselica[5], Jared F. Benge[1]
[1]The University of Texas at Austin Dell Medical School, Austin, TX, USA. [2]The University of Texas at Austin, Austin, TX, USA. [3]Rush University Medical Center, Chicago, IL, USA. [4]Baylor University, Waco, TX, USA. [5]University of Missouri, Columbia, MO, USA

**Objective:** The accurate assessment of instrumental activities of daily living (iADL) is essential for those with known or suspected Alzheimer's disease or related disorders (ADRD). This information guides diagnosis, staging, and treatment planning, and serves as a critical patient-centered outcome. Despite its importance, many iADL measures used in ADRD research and practice have not been sufficiently updated in the last 40-50 years to reflect how technology has changed daily life. For example, digital technologies are routinely used by many older adults and those with ADRD to perform iADLs (e.g., online financial management, using smartphone reminders for medications.) The purpose of the current study was to a) asses the applicability of technology-related iADL items in a clinical sample; b) evaluate whether technology-based iADLs are more difficult for those living with ADRD than their traditional counterparts; and c) test if adding technology-based iADL items changes the sensitivity and specificity of iADL measures to ADRD.

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**Participants and Methods:** 135 clinically referred older adults (mean age 75.5 years) undergoing neuropsychological evaluation at a comprehensive multidisciplinary memory clinic were included in this study [37% with mild cognitive impairment (MCI) and 51.5% with dementia]. Collateral informants completed the Functional Activities Questionnaire (FAQ; Pfeffer, 1982) as well as 11 items created to parallel the FAQ wording that assessed technology-related iADLs such as digital financial management (i.e. online bill pay), everyday technology skills (i.e. using a smartphone; remembering a password), and other technology mediated activities (i.e. visiting internet sites; online shopping).
**Results:** Care partners rated tech iADLs items as applicable for the majority of items. For example, technology skill items were applicable to 90.4% of the sample and online financial management questions were applicable for 76.4% of participants. Applicability ratings were similar across patients in their 60's and 70's, and lower in those over age 80. Care partners indicated less overall impairment on technology-related iADLs (M =1.22, SD =.88) than traditional FAQ iADLs (M =1.36, SD = .86), t(129) = 3.529, p =.001). A composite of original FAQ paperwork and bill pay items (M = 1.62, SD = 1.1) was rated as more impaired than digital financial management tasks (M = 1.30, SD = 1.09), t(122) = 4.77, p <.001). In terms of diagnostic accuracy, tech iADL items (AUC= .815, 95% CI [.731, -.890]) appeared to perform comparably to slightly better than the traditional FAQ (AUC =.788, 95% CI [.705, .874]) at separating MCI and dementia, though the difference between the two was not statistically significant in this small pilot sample.
**Conclusions:** Technology is rapidly changing how older adults and those with ADRD perform a host of iADLs. This pilot study suggests broad applicability of tech iADL to the lives of those with ADRD and highlights how measurement of these skills may help identify trends in iADL habits that may help to mitigate the impact of ADRD on daily functions. Further, this data suggests the need to refine and improve upon existing iADL measures to validly capture the evolving technological landscape of those living with ADRD.

**Categories:** Dementia (Alzheimer's Disease)
**Keyword 1:** activities of daily living
**Keyword 2:** dementia - Alzheimer's disease
**Keyword 3:** aging disorders
**Correspondence:** Arsh Ali, The University of Texas at Austin, aliarsh2002@gmail.com

## 28 Traumatic Brain Injury and Genetic Risk for Alzheimer's Disease Influence β-Amyloid Levels

Jena N Moody, Erica Howard, Sarah Prieto, Kate E Valerio, Jasmeet P Hayes
The Ohio State University, Columbus, OH, USA

**Objective:** Traumatic brain injuries (TBIs) are a common occurrence among Veterans and may increase risk for neurodegenerative diseases, such as Alzheimer's disease (AD). Neuropathological correlates of AD, including buildup of β-amyloid (Aβ) plaques, formation of neurofibrillary tangles, and cortical atrophy, begin years before the onset of noticeable clinical and cognitive symptoms, emphasizing the importance of identifying early risk factors that could be targeted to prevent the development of AD. Of note, Aβ ratios (e.g., Aβ 42/40) have been shown to efficiently capture brain amyloid accumulation in prodromal AD, and thus may serve as a useful biological marker of preclinical AD. The present study investigates the mechanism by which TBI is associated with AD by examining the synergistic effects of TBI and genetic risk for AD on Aβ among aging Veterans without dementia.
**Participants and Methods:** Participants included 88 White, Non-Hispanic/Latino male Vietnam War Veterans ($M_{age}$ = 68.3 years) from the Alzheimer's Disease Neuroimaging Initiative Department of Defense (ADNI DoD) cohort, 49 of whom reported a history of at least one mild, moderate, or severe TBI. Genetic risk for AD was assessed via genome-wide polygenic risk scores. Aβ levels were extracted from cerebrospinal fluid and Aβ 42/40 ratios were calculated as an index of Aβ deposition in the brain. Linear regression models were run to determine if TBI history and polygenic risk influence Aβ 42/40 levels. An ANCOVA was implemented to examine the interaction between TBI severity and polygenic risk. Covariates in all models included age, education, and posttraumatic stress disorder symptoms.
**Results:** Results demonstrated a significant interaction between TBI and genetic risk on Aβ 42/40 ($B$ = -0.45, $P_{uncorrected}$ = 0.029, $P_{corrected}$ =

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