Several studies have demonstrated that age-related hearing loss (defined as ≥25 dB pure tone average [PTA]) is longitudinally associated with worse cognition. We aimed to investigate whether subclinical hearing loss (SCHL), or imperfect hearing traditionally categorized as normal (PTA ≤25 dB), may be similarly linked to cognitive decline. Subjects included cognitively normal adults ≥50 years old in the Baltimore Longitudinal Study of Aging with PTA ≤25 dB measured between January 1991 - September 1994 who had repeated cognitive assessments from January 1991 - November 2019 (n=263). The exposure was hearing based on the better ear PTA. The outcomes were standardized test scores in the following domains: learning/memory, mental status, executive function, visuospatial ability, and language. Multivariable linear-mixed effects models with random intercepts and slopes and unstructured variance-covariance structure were used to model the association between hearing and change in cognition over time, adjusting for baseline age, sex, years of education, and race. Mean age was 68.3 years (standard deviation [SD]=8.9) and follow-up ranged from 0-27.7 years (mean=12.5, SD=7.9). A 10-dB worsening in hearing was longitudinally associated with an annual decline of 0.016 SDs (95% confidence interval [CI]: 0.0002, 0.033) in California Verbal Learning Test (CVLT) short-delayed recall, 0.019 SDs (95% CI: 0.002, 0.036) in CVLT long-delayed recall, and 0.017 SDs (95% CI: 0.006, 0.028) in letter fluency after covariate adjustment. Poorer hearing among those with SCHL was associated with steeper declines in memory and verbal fluency scores. This relationship may begin at earlier levels of hearing loss than previously recognized.

**CLINICAL INTERVENTIONS FOR HIV-ASSOCIATED NEUROCOGNITIVE DISORDER (HAND): A SYSTEMATIC REVIEW**

Hannah Mitchell, Erin Robinson, and Allison Donehower, University of Missouri Columbia, Columbia, Missouri, United States

Despite the widespread use of antiretroviral therapy, HIV-associated neurocognitive disorder (HAND) continues to be one of the most common central nervous system complications of human immunodeficiency virus type 1 (HIV-1). The severity and prevalence of HAND underscores the need for safe, effective therapies to mitigate or eliminate the impacts of the disorder to improve the quality of life of individuals living with HAND. The current study conducted a systematic review of the literature regarding experimental studies of clinical therapeutic interventions for HAND. An electronic search of four databases (PsycINFO, SCOPUS, Ovid MEDLINE, and CINAHL) initially returned 4,280 articles, 31 of which met the inclusion criteria for this study. Articles were selected for inclusion based on several criteria, including the use of a clinical experimental study design and measurement of neuropsychological performance. A large number of studies were excluded due to utilizing observational or cross-sectional designs, relevance, or for otherwise not meeting inclusion criteria. The results of this review revealed 31 articles that investigated both pharmaceutical and cognitive therapies for HAND. Pharmaceutical interventions range from common antiretroviral therapies to novel drug classes with various mechanisms of action. Importantly, this review revealed a number of limitations present in the greater body of HAND research including inconsistencies among methods of diagnosis of HAND and study design, which ultimately make comparisons across studies difficult. This review presents the current evidence that exists regarding therapies for HAND and broadly discusses trends, limitations, and gaps in the literature.

**COGNITIVE IMPAIRMENT AND DECLINE IN PHYSICAL FUNCTION AMONG OLDER MEXICAN AMERICANS OVER 20 YEARS**

Amy Givan, and Soham Al Snih, The University of Texas Medical Branch at Galveston, Galveston, Texas, United States

The aim of this study was to examine cognitive function as a predictor of physical function decline over a 20-year follow-up period among older Mexican Americans who were non-disabled and were able to complete the Short Physical Performance Battery (SPPB) at baseline. The sample consisted of 2,232 Hispanics 65 years and older from the Hispanic Established Population for the Epidemiological Study of the Elderly. Measures included socio-demographics, self-reported medical conditions, body mass index (BMI), disability, depressive symptoms, limitations in activities of daily living, Mini-Mental State Examination (MMSE), and SPPB. General linear mixed models were used to estimate changes in SPPB over time as a function of MMSE. At baseline, 11% of the participants had cognitive impairment (MMSE < 21) and the average SPPB score for those with and without cognitive impairment was 7.16 + 2.75 and 7.81 + 2.36, respectively. Mixed model analysis showed that those with cognitive impairment (MMSE < 21) experienced a decline in the SPPB of 0.34 points per year (Standard Error = 0.09, p-value = 0.0002) after controlling for all covariates. Other significant predictor factors of decline in the SPPB were older age, depressive symptoms, diabetes, any assistance with activities of daily living, having had a hip fracture, and high BMI. Cognitive impairment predicted decline in physical function among older Mexican Americans who were non-disabled at baseline. These findings underscore the need of developing interventions to maintain cognitive and physical function to delay or prevent disability in this underserved population with high rates of disability.

**EARLY INDICATORS OF COGNITIVE DECLINE IN ONLINE FINANCIALLY ACTIVE OLDER ADULTS**

Kimberly Grzesek Nora Mattek, Nicole Sharma, and Katherine Wild, Oregon Health & Science University, Portland, Oregon, United States

As access to computers and use of technology becomes more common in older adults, the incidence of online financial fraud increases. Law enforcement officials and fraud experts predict this trend to continue as aging baby boomers increasingly become targets. One reason this population might be at risk for financial fraud is due to subtle, undetected decline in cognitive abilities that have been associated with decline in financial capacity. Many cases of
incipient cognitive decline go undetected. Further, those with early cognitive decline often have poor insight to its potential impact on daily functioning. Assessment of Activities of Daily Living Skills (ADLs) is paramount to determine early decline in daily activities. The ORCATECH Life Lab was designed to evaluate subtle neurological and other health changes and their relation to changes in daily functioning. Older adults participating in the Life Lab complete annual ADL and neurocognitive assessments. Additionally, 97 participants completed an online technology questionnaire where 64 participants reported participating in online financial activity. Results revealed that within the online financially active group, some assistance in ADL’s was required. However, inconsistencies in ADL change over time highlight the challenges of screening for early signs of mild cognitive impairment (MCI) in patients that fall between normal cognition and MCI. In-home information technology may help overcome these challenges. Defining subtle changes in ADLs is a crucial step to enable early diagnosis of neurocognitive disorders and assist health care providers in improving disease management and to prevent incidents of financial fraud in this vulnerable population.

EXAMINING THE INTERSECTION OF COGNITIVE & PHYSICAL FUNCTION IN THE BRAIN NETWORKS AND MOBILITY FUNCTION (BNET) STUDY
Elizabeth Handing, Michael Miller, Haiying Chen, Laura Baker, and Stephen Kritchevsky, Wake Forest School of Medicine, Winston-Salem, North Carolina, United States

Cognitive function and physical function are associated however less is known about task complexity and how individual tasks relate to one another. This project seeks to describe the relationship between cognition and physical function measures across 22 tasks ranging in task complexity and difficulty. Data are from the baseline visits of a new longitudinal study, Brain Networks and Mobility Function (B-NET) Study, mean age: 76.0±4.2 years; 55% women, and 90% Caucasian. We hypothesize there would be a set of “complex” tasks that would intersect both cognitive and physical function abilities such as the Four Square Step Test or Dual Task. We conducted principal components analysis on data from the first 110 participants to describe what factors could be identified across cognition and physical function measures. Seven factors, explaining 73% of the variability, were identified: 1) a complex physical function (postural sway on foam, expanded Short Physical Performance Battery, 400 meter walk, Four Square Step Test, Dual Task), 2) physical strength (grip strength and leg press), 3) visual recall (Brief Visuospatial Memory Test-immediate and delayed), 4) Craft story recall (immediate and delayed), 5) global cognition & fluency (MoCA, category and word fluency) 6) auditory recall (Auditory Verbal Learning Test- immediate and delayed), and 7) executive function (Trail Making Test A & B). We did not identify factors that intersected both physical and cognitive tasks. These results may help to inform measurement selection in future studies that seek to evaluate components of function among older adults.

LONGITUDINAL DAILY LIVING LIMITATIONS AND COGNITIVE STATUS: RESULTS FROM THE 1998-2016 HEALTH AND RETIREMENT STUDY
Benson Wu,1 Mohammad Usama Toseef,2 Wassim Tarraf,2 Ariana Stickel,3 Sonya Kaur,4 Alberto Ramos,5 and Hector Gonzalez1 1. University of California, San Diego School of Medicine, La Jolla, California, United States, 2. Wayne State University, Detroit, Michigan, United States, 3. Shiley-Marcos Alzheimer’s Disease Research Center, La Jolla, California, United States, 4. University of Miami Miller School of Medicine, Miami, Florida, United States

Data increasingly points to midlife health and modifiable risk factors as critical targets for improving older-age health outcomes and mitigating potential cognitive impairment and disease. We used biennial Health and Retirement Study data (1998-2016) collected on adults ages 50-64 years who did not meet criteria for dementia at baseline and who remained living by 2016 (unweighted-n=4,803). Cognitive status was defined using Langa-Weir criteria: Normal, Cognitively Impaired Not Dementia (CIND), and Dementia. We examined how 18-year patterns in activities of daily living (ADLs) and instrumental activities of daily living (IADLs) predicted cognitive status in 2016. We used latent class analysis to extract longitudinal phenotypes of activities limitations, followed by survey multinomial logistic regressions to examine their associations with cognitive status and test for race/ethnic modifications. We identified three groups of functional impairment: (1) gradually increasing (15.7%), (2) stable elevated (5.6%), and (3) minimal dysfunction (78.7%). After covariates adjustment, both the gradual and stable elevated impairment groups (vs. minimal) had substantially higher relative risk ratios (RRR) for dementia (RRR=5.71[3.89;8.39] and RRR=7.87[4.23,14.64]) and CIND (RRR=2.21 [1.69,2.88] and RRR=1.92[1.16;3.17]). We detected modifications by race/ethnicity such that Hispanics with stable elevated impairment had a higher probability of dementia compared to their White counterparts. The results varied for Blacks and did not significantly differ from Whites. Data-driven methods may improve our understanding of heterogeneous functional impairment patterns among late middle-aged adults and allow for tailored ADRD prevention strategies. Focused risk-based interventions can yield important public health savings and reductions in structural, social, and individual health burdens.

PREVALENCE OF MILD COGNITIVE IMPAIRMENT IN LATIN AMERICA AND THE CARIBBEAN: A SYSTEMATIC REVIEW
Fabiana Ribeiro,1 Ana Carolina Teixeira-Santos,2 and Anja Leist1, 1. University of Luxembourg, Esch-sur-Alzette, Luxembourg, 2. University of Minho, Braga, Portugal

Background. The population of Latin America and the Caribbean (LAC) is ageing rapidly, presenting the highest prevalence rates of dementia in the world. In this context, mild cognitive impairment (MCI) is an intermediate condition between normal ageing and dementia. However, very few studies verified the prevalence of MCI in LAC countries; earlier global systematic reviews only considered prevalence...