in models fully adjusted for demographic and health factors (OR=2.7, 95% CI=1.0-7.5, p=0.049). We conclude that VI is associated with development of CIND but not with subsequent onset of dementia. These findings suggest that the association between VI and dementia is driven by the elevated risk of dementia among those with CIND.

WORSE SELF-REPORTED HEARING ABILITY IS ASSOCIATED WITH GREATER PERCEIVED PHYSICAL AND MENTAL FATIGABILITY

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Older adults with hearing loss often report higher fatigue due to effortful listening. We evaluated whether self-reported hearing ability is associated with perceived physical and mental fatigability (a more sensitive measure than fatigue) using the Pittsburgh Fatigability Scale (PFS). Older adults (N=2,558) from the Long Life Family Study Visit 2 (71.5±11.4 years; 54.8% women) completed PFS and self-reported hearing ability (worse=[fair,poor,very poor,deaf] or better=[good, excellent]). Age-adjusted PFS Physical and Mental scores were 2.3 and 2.5 lower, respectively, for worse vs. better hearing (p<.0001). Generalized estimating equations adjusted for family-relatedness, site, age, sex, cognitive function (Mini-Mental State Examination), education, and self-reported health. Compared to individuals with better hearing, those with worse hearing had a 42% and 44% greater odds of physical (≥15) (CI:1.12-1.80,p=0.0042) and mental(≥13) (CI:1.13-1.84,p=0.0034) fatigability, respectively. These observed associations may potentially be explained via complex psychosocial and cognitive aging pathways (e.g. effortful listening) to be examined in future work.

RETINAL VASCULAR DENSITY ON OCT-A AND AGE-RELATED CENTRAL AND PERIPHERAL HEARING LOSS IN AN ITALIAN OLDER POPULATION

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Age-related hearing loss (ARHL) and retinal vessel changes have both been associated to neurodegeneration/dementia, suggesting a possible link between these two conditions in older age. We analyzed data on 886 older participants (65 years+, age range: 65-92 years) in the cross-sectional population-based Salus in Apulia Study. OCT-A scan was used to measure SVD and DVD of the capillary plexi of the macula in different retinal quadrants. Peripheral ARHL was defined as >40 dB HL of PTA (0.5,1,2, and 4KHz) in the worst ear, and age-related CAPD as <50% at the SSI-ICM test in at least one ear. DVD at the whole retina and at the parafoveal quadrant were inversely associated only with age-related CAPD [OR:0.93; 95%CI: 0.88-0.96 and OR:0.94; 95 CI:0.90-0.99, respectively]. The association of retinal vascular density with age-related CAPD may bring us a further step forward in understanding the biological mechanisms underlying the links between neurodegeneration/dementia and ARHL.

ASSOCIATIONS OF CENTRAL AUDITORY PROCESSING WITH BRAIN VOLUMES

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We investigated the cross-sectional associations of speech-in-noise performance with magnetic resonance imaging brain volumes among 588 cognitively normal participants (77±4 years, 56% female) from the Aging and Cognitive Health Evaluation in Elders Study (randomized trial embedded in the Atherosclerosis Risk in Communities (ARIC) Study) baseline in 2018-19 (N=427, with hearing loss) and ARIC (N=161, normal hearing) Visit 6/7 in 2016-17/2018-19. Central auditory processing was measured by Quick Speech-in-Noise (QuickSIN) test; range: 0 to 30, lower scores=worse performance. In models adjusted for demographic and disease covariates, every 5-point decrease in QuickSIN score was associated with smaller volumes of the temporal lobe overall (-0.07SD, 95% CI:-0.13,-0.01) as well as subregions including but not limited to those important for auditory processing (amygdala:-0.13SD, 95% CI:-0.21,-0.04; middle temporal gyrus:-0.08SD, 95% CI:-0.15,-0.00; superior temporal gyrus:-0.08SD, 95% CI:-0.15,-0.01). Further research is needed to understand the mechanisms underlying these observed associations.