

Associations Among Sensory Function, Cognitive Processing and Daily Function: A Longitudinal Study of Older Adults

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Findings will be presented from a longitudinal follow-up study of 98 older adults who provided measures of sensory processing, cognitive processing, and daily function nine years prior. The cognitive measures included the Mini Mental Status Exam (MMSE) and the full Wechsler Adult Intelligence Scale-3rd Edition (WAIS-III). Measures of sensory processing included auditory threshold (three frequencies), auditory gap-detection threshold (two frequency regions), auditory temporal-order processing for brief vowel pairs or sequences (four measures), and visual flicker fusion contrast thresholds (three frequencies). Finally, a measure of problems with daily activities, the Modified Sickness Impact Profile (M-SIP) was obtained at both measurement intervals. Paired-sample t-tests showed significant declines in most sensory measures, processing-based cognitive measures, and daily function over the 9-year period. Correlations between baseline and 9-y-post measures were high for all sensory measures ($r > 0.7$), at least moderate for all cognitive measures ($r > 0.5$), but weak to moderate for the MMSE and M-SIP ($r \approx 0.3$). Slopes for the changes in performance on sensory and cognitive measures over the 9-year span were analyzed and will be presented. In addition, rates of change in sensory and cognitive function were found to have a significant association with declines in daily function over the nine-year period.

(Work supported, in part, by a research grant from the National Institute on Aging, R01 AG008293-25.)

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I have no conflicts of interest regarding the work to be presented, other than the acknowledged source of funding (NIA).