**REBECCA L.**

**Further at baseline is associated with poorer prospective cognitive performance.**

**However, no significant differences were observed in the subgroup analysis.**

**To the extent that these auditory deficits precede MCI/AD diagnosis, they may be a risk factor for the development of cognitive decline and incident dementia.**

**Conclusively, the protracted disease course of AD highlights the importance of identifying early risk factors that may increase the likelihood of developing impairments later in life.**

**METHODS**

- **Participants:**
  - N = 783 cognitively healthy, late-middle-aged adults enrolled in the Wisconsin Registry for Alzheimer’s Prevention (WRAP), see Table 1.
  - At baseline, participants reported whether they had ever been diagnosed with hearing loss as part of a thorough medical history questionnaire.

**Clinical and Neuropsychological Assessment**

- **Diagnosis of MCI rendered via multidisciplinary consensus conference.**
- **Cognitive tests of interest:**
  - Trail Making Tests A and B
  - Digit Symbol Substitution Test (SDST)
  - Mini-Mental State Exam (MMSE)

**Statistical Analyses**

- **Frequency distribution to assess prevalence of self-reported dHHL at baseline.**
- **Linear regression to assess relationship between baseline hearing status and cognitive performance at baseline and follow-up visits.**
- **Logistic regression to estimate risk of incident MCI as a function of baseline hearing status.**
- **Both regressions were adjusted for age, sex, education, and baseline/follow-up interval.**

**RESULTS & DISCUSSION**

- **Prevalence of self-reported diagnosed hearing loss (dHHL) at baseline was 9.2% (Table 1).**
  - Concentrately lower than hearing loss prevalence (~40% reported previously) for this age group.
  - Likely due to self-report method.
  - Suggests observed effects may be underestimated and highlights the importance of obtaining objective auditory measures in this population in the future.

**CONCLUSIONS**

- **Hearing loss among cognitively healthy, late-middle-aged adults was prospectively associated with poorer cognitive performance and more double the risk of developing MCI over 5 years.**
- **Results add to growing body of evidence that hearing loss may be a risk factor for MCI and thus identifying and treating hearing loss may help reduce the burden of AD.**
- **Further studies, using objective auditory measures and biomarkers of AD pathology, will be necessary to clarify the nature of these associations.**

**REFERENCES & ACKNOWLEDGEMENTS**


WRAP’s support is made possible in part by grants R13AG27161 (Wisconsin Registry for Alzheimer’s Prevention: Biomarkers of Preclinical AD), Helen Hay Whitney Foundation, National Institute on Aging, LaPenta-Vanderland Fund, and National Institute on Aging and the Clinical and Translational Science Award (5G128400002). This work was also supported by NIA grants R13AG27161 (Wisconsin Registry for Alzheimer’s Prevention: Biomarkers of Preclinical AD), Helen Hay Whitney Foundation, National Institute on Aging, LaPenta-Vanderland Fund, and National Institute on Aging and the Clinical and Translational Science Award (5G128400002).