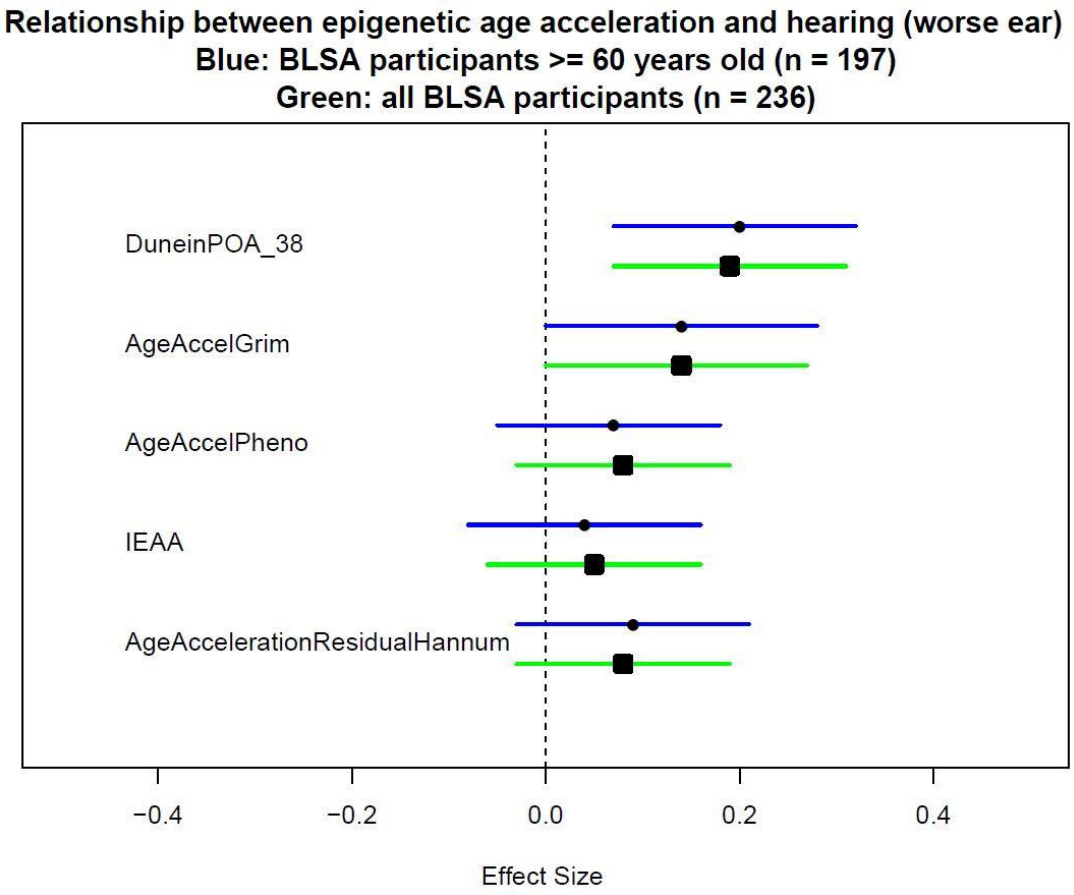
Supplemental Table 1. Association between summarized epigenetic measurements and hearing among those aged 60 years and above

| | | Model 4 | |
|---|---|---|---|
| Epigenetic Measurement [a] | Estimates [b] | 95% CI | p-value |
| AgeAccelerationResidualHannum | 0.08 | -0.04 – 0.21 | 0.172 |
| IEAA | 0.07 | -0.05 – 0.18 | 0.277 |
| AgeAccelPheno | 0.05 | -0.07 – 0.18 | 0.385 |
| AgeAccelGrim | 0.18 | 0.04 – 0.33 | **0.011** |
| DunedinPoAm | 0.20 | 0.07 – 0.33 | **0.003** |

Linear regression was used for calculating the association between epigenetic measurements and hearing. Speech-frequency pure tone average at better ear was used for hearing measurement, and treated as the dependent variable in the linear regression.
Model 4: adjusted for sex, black, age, time difference between epigenetic and hearing measurements, hypertension, diabetes, congestive heart failure, peripheral arterial disease, and smoke (pack-years)

[a] To measure epigenetic age acceleration, the chronological age-adjusted version was used. AgeAccelerationResidualHannum is the chronological age-adjusted version for the epigenetic clock proposed by Hannum et al. IEAA is the chronological age-adjusted version for the epigenetic clock proposed by Horvath et al. AgeAccelPheno is the chronological age-adjusted version for the epigenetic clock proposed by Levine et al. AgeAccelGrim is the chronological age-adjusted version for the epigenetic clock proposed by Lu et al. DunedinPoAm is the epigenetic score proposed by Belsky et al., which did not need additional adjustment for chronological age.
[b] Estimates referred to the estimate of effect size.

Supplemental Figure 1. Effect sizes of epigenetic measurements on hearing using worse ear




For this sensitivity analysis, the dependent variable is speech-frequency PTA at the worse ear instead of better ear. To measure epigenetic age acceleration, the chronological age-adjusted version was used. AgeAccelerationResidualHannum is the chronological age-adjusted version for the epigenetic clock proposed by Hannum et al. IEAA is the chronological age-adjusted version for the epigenetic clock proposed by Horvath et al. AgeAccelPheno is the chronological age-adjusted version for the epigenetic clock proposed by Levine et al. AgeAccelGrim is the chronological age-adjusted version for the epigenetic clock proposed by Lu et al. DunedinPoAm is the epigenetic score proposed by Belsky et al., which did not need additional adjustment for chronological age.