

Supplemental Material S3. Linear mixed-effects model on decline in cognitive performance.

$$\text{Cognition}_{ij} = \beta_0 + \beta_1 \text{age}_{ij} + \beta_2 \text{agegroup}_i + \beta_3 \text{occupation}_i + \beta_4 \text{musicianship}_i + \beta_5 \text{musicianship}_i * \text{age}_{ij} + \beta_6 \text{CV}_i + U_{0i} + e_{ij}$$

- Cognition_{ij} is the composite cognitive performance score [SD] of i th participant at j th occasion
- age_{ij} is the age (centered with baseline mean) of i th participant at j th occasion
- agegroup_i is the age group of i th participant at baseline (groups: 40-59; 60-69; 70+ years)
- occupation_i is the education of the i th participant at baseline
- musicianship_i is the musicianship status of i th participant at baseline
- CV_i is the vector of covariates at baseline of i th participant
- U_{0i} is the random intercept
- e_{ij} is the residual