

**Language learning never gets old: comparing the effects of lifelong multilingual experiences to later life language learning on the cognitive and psychosocial health of older adults.**

In 2019, we started a 5-year project at the Bilingualism and Aging Lab (BALAB) in Groningen with the aim of comparing the cognitive and psychosocial effects of lifelong multilingual experiences in aging to those induced by learning a new language in older adulthood. We set out to investigate the effects of these differential experiences in relation to other sustained life experiences that are known to impact cognitive and psychosocial health, most notably musical training.

We conducted an epidemiological study where we collected multilingual experience data from 11.000+ older individuals and related that to their cognitive functioning using Lifelines, a population-based cohort study comprising 10% of the Northern Dutch population (Sijtsma et al., 2021). We additionally conducted a randomized control trial intervention of three months where the effects of an English language course were compared to those of a guitar course and lecture series. We included healthy older adults and those with cognitive problems or past depression.

In this keynote address, I present the main findings of the project, including 1) the cumulative advantages that were found for language and music experiences in the epidemiological study; 2) the lack of significant differences in cognitive and psychosocial health following a three-month language or music intervention; 3) the different domains impacted by language versus music training, and 4) the markedly larger improvements of learning a new language in older adults with (a history) of cognitive problems or depression. I discuss the implication of these results for models relating bilingualism to cognitive flexibility and wellbeing. Since the start of the project the subfield of later life language learning has grown exponentially. I will therefore end by presenting the results of a recent meta review in our lab directly comparing the brain and cognitive reserve findings of lifelong multilingualism versus later life language learning on the basis of available studies to date.