

## **Living and aging bilingual: An examination of the bilingual factors leading to processing advantages in young and older adults**

*(Irene de la Cruz-Pavía, Ikerbasque & UPV/EHU)*

Over half of the population in Europe speaks at least two languages, and this percentage is on the rise. Having two language systems alters irreversibly both the bilingual mind and brain, and brings a number of learning and processing advantages. Although a wealth of research has sought to determine the factors that impact bilinguals' cognitive abilities to process the non-native language in a native-like manner, these factors and their interplay are not yet fully understood.

Importantly, a growing body of research shows that having two language systems might mitigate the effects of aging in the brain, delaying the onset of symptoms of dementia in 4-5 years. Such a "bilingual protection" could greatly impact the population's wellbeing, given the steady growth of Europe's aging populations, as this demographic change is inevitably accompanied by an increase in the incidence of dementia amongst older adults. Demographic change is particularly acute in the Basque Country. The benefits derived from bilingualism could thus provide substantial relief to our society's health and social care systems. It is therefore imperative to determine which factors of the bilingual experience are at the root of these advantages, and if and how specific aspects of processing are differently affected by these factors at different stages of life.

The proposed project seeks to further our understanding of the cognitive consequences of being bilingual. To do this, I will examine young adult bilinguals (18-30 years), to systematically establish the impact of four main factors of the bilingual experience—age of acquisition, proficiency, frequency of language switch, and language distance—in a pivotal aspect of language processing, namely, speech segmentation. In parallel, I will investigate the emergence of bilingual processing advantages in this population, by disentangling the relative impact of these main bilingual factors in the cognitive processes involved in Executive Control. Finally, I will determine the interplay of these bilingual factors and Executive Control processes in older adult bilinguals (> 65 years), and thus examine potential changes in bilingual processing advantages during aging.