

The use of language learning as a non-invasive strategy in preventing neurodegenerative diseases in old age: A case study

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Life expectancy is lengthening almost linearly in most developed countries, with no sign of deceleration. The number of elderly people is also increasing at an alarming rate, highlighting this rate in the developed countries. In fact, the number of aging population will double in the following fifty years. Consequently, the rate of diseases related to aging population will increase, and we should pay attention especially to neurodegenerative diseases as they can be prevented by non-invasive strategies such as language learning. Due to the fact that the rate of elderly people is worryingly increasing, we should try to look for solutions to the problems that it can arise. One of them is the rate of neurodegenerative diseases and both the social and economic costs that they can cost the society and its components. Our proposal, the language learning as a non-invasive strategy, can be a key solution in their prevention. The main goal of the current investigation is to know the potential and the pedagogic and didactic possibilities of the language teaching and learning in the processes of prevention of the neurodegenerative diseases with the aim of achieving a much-needed lowering rate in the society. For the achievement of this purpose, the following specific aims are getting to know the educational and neural implications of teaching and learning languages in individuals (cognitive, social and attitudinal development, and their relation with cognitive reserve); identifying the advantages, disadvantages and difficulties derived from the use of the language learning as a non-invasive

strategy in preventing neurodegenerative diseases; and promoting the analysis, the reflection and the critical thought concerning the utilization of this educational tool in the clinical practice. At very short notice, the current investigation cannot be classified into a single method as we have used the combination of methods, what leads us to a combination of methods called "data triangulation". The idea of the use of these methods is shared by Harley.

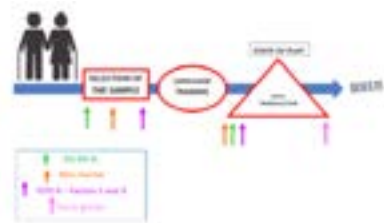


Figure 1. Experimental protocol used to measure the effects of the use of language learning as a non-invasive strategy in preventing neurodegenerative diseases.

Recent Publications

1. Berger J (2011) The age of biomedicine: current trends in traditional subjects. *Journal of Applied Biomedicine*. 9(2):57-61.
2. Christensen K, Doblhammer G, Rau R and Vaupel J W (2009) Ageing populations: the challenges ahead. *The Lancet* 374(9696):1196.

- Hartley J (2004) Case study research. En C. Cassell & G. Symon, Essential guide to qualitative methods in organizational research (1st ed.) 323-333. London, United Kingdom: Sage**

Biography

Katrina Espinar has her expertise in evaluation and passion in the potential effects that learning a second language may have in our brain. She has taken part in the European H2020 project ActivAge, the one that

has created the first large-scale active and healthy ageing IoT based ecosystem. Since then, her research is aimed at active and healthy ageing with the aim of being able to contribute to the sustainability of the health and care systems and the improvement of the quality of life and autonomy of elder adults in the form of independent living. Her evaluation model supposes a different way of focusing as it is data triangulation based because of the fact that she considers both qualitative and quantitative data can provide relevant information.

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