

Abstract for conference: **Cognitive reserve in the dementias**

Titre: max 300 char incl spaces

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Education is associated with individual variability in recollective memory abilities in normal aging

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Healthy aging is accompanied by a decline of episodic memory. However, there is large individual variability among older adults, so that some people retain better episodic memory abilities than others. Factors contributing to creating a cognitive reserve, such as education, appear to be correlated with episodic memory performance in aging. It is not clear however which aspects of episodic memory are modulated by cognitive reserve. Finer-grain analyses of memory changes in aging revealed that age-related memory difficulties are due to a predominant decrease in the ability to recollect the encoding context of past events and a smaller decline of familiarity-based memory. The current study aimed to assess whether cognitive reserve is related to variability in recollection-based and/or familiarity-based memory performance in older participants. A sample of 118 older participants (aged 55 to 89 years old) performed recognition memory tasks in which they studied 25 pictures of objects and then had to recognize them among similar new pictures. The Remember/Know paradigm allowed to estimate the contribution of recollection and familiarity to performance. Moreover, participants completed a Cognitive Reserve Index, from which we extracted the number of years of education, a measure of occupational attainment (based on the duration and cognitive load of the longest occupation) and the frequency of intellectual, physical, social and cultural leisure activities currently performed. Compared to a sample of 70 young adults, the older group showed decreased global recognition accuracy as well as diminished recollection and familiarity. Moreover, age was negatively correlated with these 3 memory scores. In order to assess the association of cognitive reserve measures with recollection and familiarity estimates, multiple regression analyses were performed in the older group, with age, education, occupational attainment and the four current leisure frequencies as predictors. The results showed that only recollection was related to cognitive reserve factors: education and the frequency of intellectual leisure. Older people with higher education had better recollection estimates ($\beta = .25$, $p < .01$). Surprisingly, older adults who were engaged more frequently in intellectual leisure showed poorer recollection abilities ($\beta = -.17$, $p < .05$). These findings suggest that education is a protective factor that is specifically associated with the ability to recollect past events in aging. The negative association with the frequency of intellectual leisure, like reading, playing crossword or using computers, may be due to a link with an unmeasured variable, such as social isolation.