

# Dementia and the protective role of cognitive reserve

## Demência e o efeito protetivo da reserva cognitiva

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### Conflict of interest:

There is no conflict of interest to declare.

### Support:

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**C**ognitive reserve is a complex concept. In short, it states that in the presence of neural ailments, the more there is a continued mental activity across the lifespan, the more flexible will be the brain to face them. Cognitive reserve is attained by developing several behavioral and cognitive repertoires<sup>1</sup>.

It is now well established that a combination of previous intelligence level, duration of formal education, amount of leisure, of mental, and of physical activities affect the brain reserve. Therefore, cognitive reserve also influences the risk of incident dementia and the evolution of clinical stages of neurodegenerative and vascular dementias<sup>2</sup>. Not only duration of formal education, but also the quality of performance throughout the years may have an influence on cognitive reserve and on how the person reacts to having dementia in clinical terms. School performance and grades, specially in language and mathematics skills in childhood seem to be protective of dementia risk. A small study by our group has shown that higher school performance and years of education decreased the chance of dementia by 79% (OR = 0.21; CI 0.08-0.58) and 21% (OR = 0.79; CI 0.69-0.91), respectively<sup>3</sup>. These facts raise the issue that education in early life should be viewed as a health issue to prevent and better manage diseases over the life course. Enhancing cognitive reserve over the life cycle may have direct economic, clinical, and therapeutic impacts on dementia management in the elderly.

The study published in this issue by Sobral, Pestana and Paúl<sup>4</sup> adds further confirmation to the available data on how cognitive reserve may influence the outcome of Alzheimer's disease patients. The simple and straightforward methodology applied is of clinical and practical use. It also has the quality of providing an update on the subject, drawing attention to what can be done to enhance the protective measures to deal with the devastating stages of Alzheimer's disease, still with no foreseeable cure in the near future.

## References

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