

Copenhagen Summit *on Cognitive Reserve*



CONSENSUS STATEMENT



The Time for Global Action is Now

Population ageing along with urbanisation and migration are the great demographic definers of our time. The sheer number of older people in contemporary society commands the attention of governments from two vantage points – potential for ongoing social and economic contribution and the budgetary and human burden of short- and long-term care related to chronic disease.

While healthy life expectancy is slowly increasing, between 10 to 20% of older people experience some cognitive impairment, and 47 million people live with cognitive impairment severe enough to limit their ability to function in society. The impact on families, communities and governments is staggering, with worldwide dementia costs alone estimated at \$818 billion USD per year.

By contrast, healthy ageing is the aspirational goal of the World Health Organization's (WHO) defined as "the process of developing and maintaining the functional ability that enables older people to do what they value." Cognition is one of the major predictors of day-to-day functional ability and so new strategies for protecting against cognitive decline and impairment are necessary.

In response, the IFA Copenhagen Summit on Cognitive Reserve in October 2019 brought together over 75 delegates from 22 countries, comprising public health policy makers, international organizations focused on ageing and brain health, academics and policy advocacy experts.

A clear message from the Summit was of a **present and tangible opportunity** to make a positive impact on older people worldwide through **action on Cognitive Reserve**.

When cognitive abilities are viewed in snapshot over a broad age range the picture is stark. On average, year on year, most mental abilities including memory and problem solving appear to decline in steady fashion, whilst some such as vocabulary are preserved. However, a very different picture emerges when individuals are tracked over time. Across 10 to 20 years, cognitive abilities tend to follow at least three major trajectory patterns: no change, slight decline and steep drop. **Cognitive decline is not inevitable in later life and by extension there is a public health responsibility to help move people 'up' a trajectory class.**

Cognitive Reserve is critical to this objective and refers to a human capacity to decouple cognitive function from the accumulation of brain pathology that is so common as we age. Cognitive Reserve can be built up by voluntary and involuntary exposure to stimulatory environments throughout the lifespan. **At a policy level, Cognitive Reserve can be promoted, protected and cultivated; alternatively, if ignored then like a muscle it will wither and waste away.**

The potential for Cognitive Reserve to impact population health cannot be overvalued. In richer populations, evidence suggests that age-adjusted dementia rates may have fallen by 20-40% over the last few decades. Secular improvements in Cognitive Reserve determining factors such as schooling, higher education and occupational patterns are likely to have contributed (amongst other factors), but evolved in an unplanned way. Understanding and exploiting these

developments is critical because the greatest growth in dementia burden is yet to come and will occur in lower- and middle-income countries.

Summit delegates were therefore united and energized by the potential impact of a global, co-ordinated and evidence-informed action plan to support and boost Cognitive Reserve. Together, we call upon multiple sectors of society to:

- 1. Promote social policies that permit, enable and foster Cognitive Reserve building activities:** Address gate-keeper issues such as raising school completion, disparities in education, adult illiteracy, and better managing chronic mental health issues. Building Cognitive Reserve will require tackling many social determinants of health and a commitment to reduce inequities between and within nations. Proactive actions are also essential such as abolishing mandated retirement, supporting life-long learning, introducing retirement planning for the brain, countering loneliness and social isolation, promoting intergenerational exchange and incentivising and removing obstacles for volunteerism. All levels of governments have a key role here.
- 2. Advance a new societal narrative:** Ageing as decline, disease and disability must be replaced by a narrative of opportunity to take control, transmit knowledge, maximise function and pursue activities that give meaning to life. This begins with improved brain health literacy, a lifespan perspective and multidisciplinary and multi-sectoral engagement. Media, NGOs and popular culture have the power to make or break this objective.
- 3. Coordinate a global action plan:** The time for global action is now. Research, translation and implementation of low cost and accessible Cognitive Reserve-inspired interventions and policy are all urgently required. Critically, these need to be developed and optimised for populations beyond English-speaking and rich countries. The WHO will have a vital co-ordinating role in this respect.

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References

Blazer, D. G., Yaffe, K., and Liverman, C. T. (2015). Cognitive ageing: Progress in understanding opportunities for action. National Academies Press.

Prince, M., et al. (2015). World Alzheimer report 2015: The global impact of dementia: An analysis of prevalence, incidence, cost and trends. Alzheimer's Disease International.

World report on ageing and health. Geneva: World Health Organization; 2015

Beard JR, et al. The structure and predictive value of intrinsic capacity in a longitudinal study of ageing. *BMJ Open* 2019;9:e026119.

Marioni, R, et al. (2014) Cognitive lifestyle jointly predicts longitudinal decline and mortality risk. *European Journal of Epidemiology*. 29(3): 211-219.

Valenzuela, M. (2019) Cognitive Reserve in the Aging Brain. In *Oxford Research Encyclopedia of Psychology*. Oxford University Press.

Wu, Y., et al. (2017). The changing prevalence and incidence of dementia over time – current evidence. *Nature Reviews Neurology*. 13, 327-339.