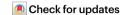
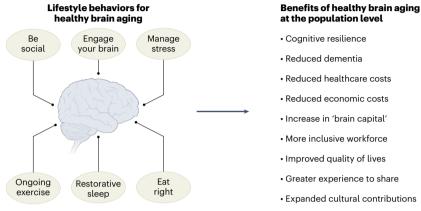
# The benefits of brain health to our economies



hen we consider the value of good brain health in aging, it is only natural that we think of what it means for individuals who wish to live their most fulfilling lives. But an often-overlooked benefit of brain health is what it can mean for an entire society when its older population is more cognitively resilient — specifically, the positive effect that a mentally sharp workforce brings to the larger economy (Fig. 1).

Cognitive resilience refers to our brain's ability to respond more adaptively to stress as we age<sup>1-3</sup>. The latest report from the Global Council on Brain Health<sup>4</sup>, an international collaborative convened by AARP that I direct, details how individuals can influence the trajectory of cognitive aging through a long-term commitment to healthy living. As previously detailed in 12 Global Council reports issued since 2016, ongoing exercise, stress management, engaging the brain, social interaction, a wholesome diet and adequate sleep all can help us to reduce ageor disease-related risks to our cognitive function and stay as sharp as possible through the course of life. Making long-lasting lifestyle changes to support brain health is not always easy. It requires three key elements to implement and sustain; knowledge, motivation and confidence. Through a review of the current state of evidence and a consensus process, the latest Global Council report makes recommendations for how people can be influenced to act in ways that could benefit their brain health over their lifespans. Essential to making these healthy habits sustainable is for communities to realize that supporting cognitive resilience will help employers, healthcare systems and governments to achieve their own goals, simultaneously bolstering our economy and societies as well.

When we think of brain health and the economy, the most pressing concern for many is undoubtedly the rising prevalence of dementia and its associated costs. The World Health Organization predicts that the number of people with dementia could triple to 152 million people worldwide by the middle of this century. In the USA alone, the annual cost of dementia in 2020 was estimated at US \$305 billion and is projected to soar to



**Fig. 1** | **Six pillars of brain health and the economic and societal benefits.** AARP created the six pillars to describe key recommendations for individuals from the Global Council on Brain Health on modifiable lifestyle factors that can affect brain health as people age. On the right are key benefits to be obtained for our communities and economies if we foster individuals' ability to adopt and sustain these healthy lifestyle behaviors across their lifespans. ©AARP, under exclusive licence to Springer Nature America, Inc., 2023.

\$1.5 trillion by 2050 (ref. 5). Numbers such as this help to explain why there is an economic interest in promoting better brain health for individuals.

Yet, the economic issue is not only about dementia, which will affect a relatively small proportion of the population compared to all people living with an aging brain. Maintaining good brain health, including cognitive skills and resilience, is also an important part of the equation as the Organisation for Economic Cooperation and Development (OECD) estimates that impaired brain health may be costing the global economy as much as \$8.5 trillion a year in lost productivity.

Cognitive skills refer to mental traits such as self-control, emotional intelligence, creativity and systems thinking. A report by OECD describes these cognitive skills as 'brain capital' that helps to fuel business activity and enables workers to be resilient, and suggests these are vital for the modern, high-tech economy. And these are exactly the kinds of brain skills that engaged, older workers often bring to the table – yet for which they are frequently unappreciated<sup>6</sup>.

As the fallout of the COVID-19 pandemic and the current economic downturn continues to evolve, employers in many countries are scrambling to fill vacancies. In the USA, the Bureau of Labor Statistics reported there were

11.2 million jobs available as of July 2022. Over the course of the pandemic, millions of older workers — including a great many women — either lost jobs or chose to retire earlier than planned. Economists are now sorting out how many of those individuals may return to the workplace and how this churn in brain capital is affecting economic growth, but hiring and retaining older workers may be a good answer.

Whatever happens in the next few years, there is no dispute that a healthy, vital workforce influences prosperity over the long term and encouraging brain-healthy behaviors can be a strategy to build a more prosperous, inclusive economy.

As the Global Council's report 'How to Sustain Brain Healthy Behaviors' points out, "individual choices are made in a larger social and environmental context", which calls for a multifaceted approach to encourage healthy lifestyles<sup>4</sup>. The report highlights society's vast, untapped potential to help individuals to maintain their cognitive well-being. Employers in particular have a self-interest in keeping their workers healthy and productive, and filling their openings with capable employees. Workers seek jobs that pay decent wages, provide purpose and offer the chance to grow, and employers need workers who can keep up with skill requirements in a world of rapid technological change.

# Correspondence

Employers can reap rewards right now by creating environments that support brainhealthy lifestyles. Initiatives such as providing access to fitness programs and specialists such as exercise physiologists, nutritionists and psychologists can help to foster a healthier, more productive workforce with real pay-offs for their investment now becoming apparent. One study found that overall medical costs dropped by more than \$3 for every \$1 that companies spent on wellness programs<sup>8</sup>.

The efforts of employers should also be supported by wider societal changes that encourage healthy lifestyles and promote cognitive well-being. This may include publichealth awareness campaigns, as well as policy changes that improve access to life-long learning, wholesome food, good healthcare, built environments and recreational activities that stimulate the mind and keep the body active at all ages.

Achieving better brain health has implications that go far beyond individual wellness, and the idea of optimizing brain capital holds meaning not only right now but also for tomorrow and beyond. The current evidence tells us that efforts to promote better brain health can help to drive the engine of our modern, knowledge-based economy<sup>9,10</sup>. This is just one more reason to embrace policies and strategies that encourage healthy brain behaviors.

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### References

- Global Council on Brain Health. Engage Your Brain: GCBH Recommendations on Cognitively Stimulating Activities (AARP. 2017).
- 2. Stern, Y. et al. Alzheimers Dement. 16, 1305-1311 (2020).
- Aiello Bowles, E. J. et al. J. Alzheimers Dis. 68, 1071–1083 (2019).
- 4. Global Council on Brain Health. How to Sustain Brain Healthy Behaviors: Applying Lessons of Public Health and

- Science to Drive Change, https://www.aarp.org/content/dam/aarp/health/brain\_health/2022-03/gcbh-behavior-change-report-english.doi.10.26419-2Fpia.00106.001.pdf (AARP, 15 March 2022).
- National Academy of Sciences. Reducing the Impact of Dementia in America: A Decadal Survey of the Behavioral and Social Sciences (National Academies Press, 2021).
- Stam, C. Knowledge and the ageing employee: a research agenda. In European Conference on Intellectual Capital 435–441 (Hogeschool Inholland. 2009).
- Goda, G. S. et al. J. Popul. Econ. https://doi.org/10.1007/ s00148-022-00915-z (2022).
- Baicker, K., Cutler, D. & Zirui, S. Health Aff. 29, 304–311 (2010).
- WHO. Optimizing Brain Health across the Life Course: WHO Position Paper (WHO, 2022).
- 10. Smith, E. et al. Mol. Psychiatry 26, 3-22 (2021).

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#### **Competing interests**

The author declares no competing interests.