

# Study finds the effects of population aging have been exaggerated

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Due to increasing life-spans and improved health many populations are 'aging' more slowly than conventional measures indicate.

In a new study, to be published in *Science*, (10 September) scientists from the International Institute for Applied Systems Analysis (IIASA) in Austria, Stony Brook University, US, (SBU), and the Vienna Institute of [Demography](#) (VID) have developed new measures of aging that take changes in disability status and longevity into account.

The results give policymakers faced with growing numbers of elderly new tools to more accurately determine the cost of an [aging population](#) and to determine more appropriate retirement ages. Currently, assessments are frequently based on United Nations aging forecasts that include the proportion of the population that is 65 years and older, and the "old age dependency ratio" (OADR), which considers the number of people dependent on others when they reach age 65.

"Those measures are based on fixed chronological ages, and this can generate misleading results," says Dr Warren Sanderson, from IIASA and SBU. "When using indicators that assume fixed chronological ages, it's assumed that there will be no progress in factors such as remaining life expectancies and in disability rates. But many age-specific characteristics have not remained fixed and are not expected to remain constant in the future."

However, many people over 65 are not in need of the care of others, and,

on the contrary, may be caregivers themselves. The authors provide a new dependency measure based on disabilities that reflect the relationship between those who need care and those who are capable of providing care, it is called the adult disability dependency ratio (ADDR). The paper shows that when aging is measured based on the ratio of those who need care to those who can give care, the speed of aging is reduced by four-fifths compared to the conventional old-age dependency ratio.

Co-author Dr Sergei Scherbov, from IIASA and the VID, states that "if we apply new measures of aging that take into account increasing life-spans and declining disability rates, then many populations are aging slower compared to what is predicted using conventional measures based purely on chronological age."

The new work looks at "disability-free life expectancies," which describe how many years of life are spent in good health. It also explores the traditional measure of old age dependency, and another measure that looks specifically at the ratio of disabilities in adults over the age of 20 in a population. Their calculations show that in the United Kingdom, for example, while the old age dependency ratio is increasing, the disability ratio is remaining constant. What that means, according to the authors, is that, "although the British population is getting older, it is also likely to be getting healthier, and these two effects offset one another."

New measures of aging that include not just changes in longevity, but accurate numbers about disability rates, "can help educate the public about the likely consequences of improvements in health and longevity," the authors say. And such measures have policy implications because, "slow and predictable changes in pension [retirement] age justified by an increased number of years of healthy life at older ages, may be more politically acceptable than large, abrupt changes justified on the basis of budget stringency."

**More information:** Reference: Sanderson W. C. and Scherbov S.  
Remeasuring Aging: Science Policy Forum. September 10 2010.

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