

HEALTH TRENDS OF THE CHINESE ELDERLY

Based on the publication in The Lancet

by QISHI FENG

In his recent publication in The Lancet, Dr Qishi Feng, a CFPR Steering Committee member and faculty member of the NUS Department of Sociology, found that while there was a decrease in mortality rate for the Chinese oldest old, their cognitive capacity and physical abilities have also declined. Dr Feng explains these contrasting trends and their policy implications in this issue of the Research Update.



Our world is currently experiencing an unprecedented population aging, due to the continuously prolonged life expectancy and declined fertility. Policymakers are increasingly concerned about the shortage of working-age population, affordability of pensions, accessibility of healthcare resources, and sustainability of family support systems. One central theme amongst these issues is the need to investigate the health trends of the elderly, particularly the disability trend, which is the primary indicator of eldercare needs.

Models on Elderly Health Trends

Several theoretical models on elderly health trends have been proposed in literature. Some scholars foresee a compression of morbidity in the elderly population, in which improved socioeconomic conditions, new medical technologies, and better nutrition and health behaviours all help delay the onset of disability and diseases in old age.

However, other researchers who predict an expansion of morbidity, have critiqued this view for being too optimistic. They reason that macro social and medical advancement could reduce elderly mortality, "saving" elderly who may die otherwise, and thus ultimately increase the prevalence of morbidity among elderly individuals. These two models are respectively called "success of success" and "failure of success", which represent opposing predictions on the trends of elderly morbidity ("success" for compression and "failure" for expansion) under the "success" of the prolonged life expectation.

Scholars have been trying to reconcile these two models. Some propose a dynamic equilibrium may exist, in which chronic diseases may be more prevalent among the elderly but with less severity, while others think the counteraction of related factors could result in multiple stages of morbidity changes in the elderly

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population. Empirical studies to date, mostly coming from the West, demonstrate a mixed pattern in which directions of disability trends vary across societies during a similar period of time, or change at different time points within one nation.

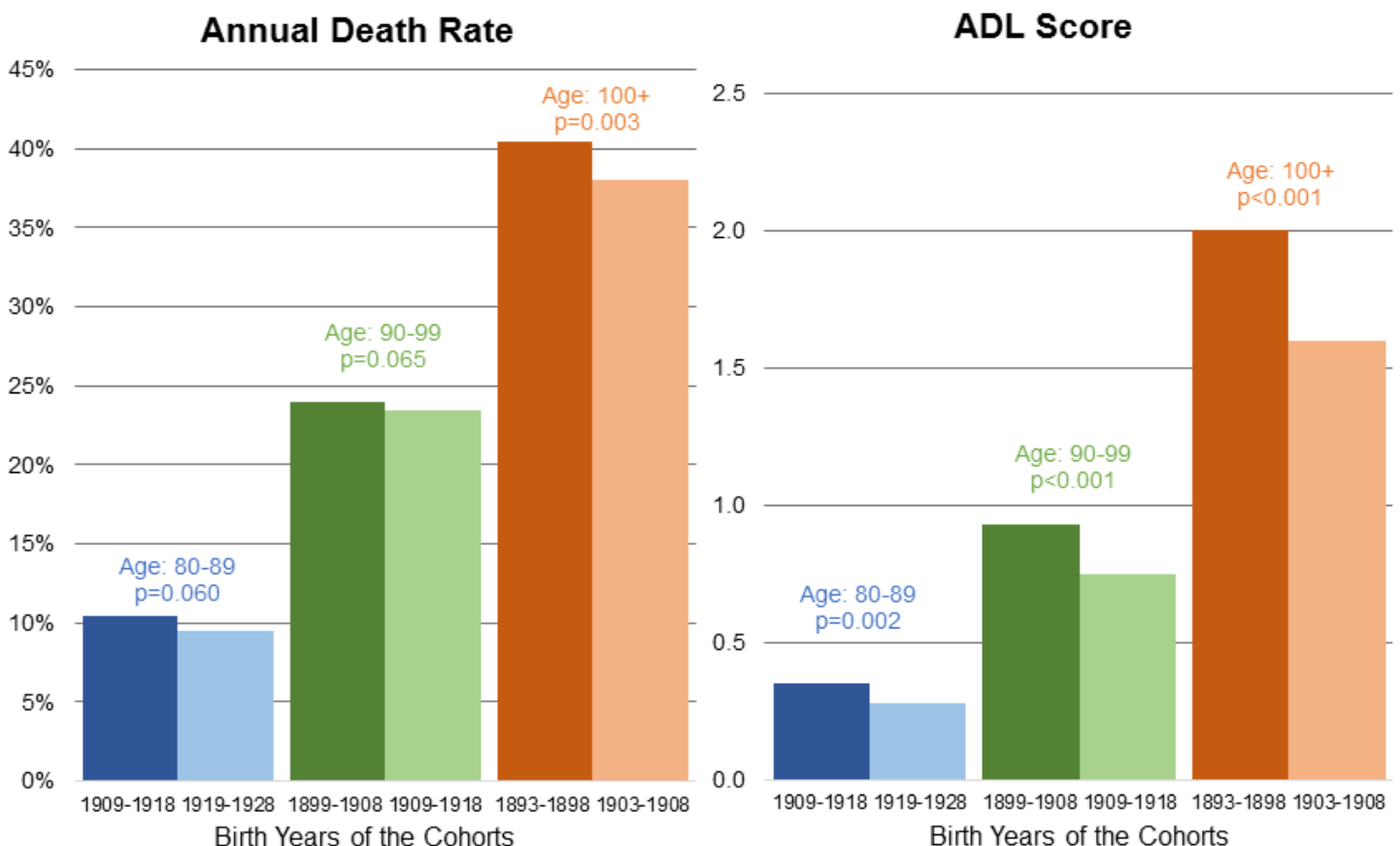
ADL & IADL Disability in Shanghai

My colleagues and I have closely studied China, a country which will hold the world’s largest elderly population in the foreseeable future. One of our early studies investigates the case of Shanghai, which currently holds the highest proportion of older adults in China. Using longitudinal data, we examined the trends of the activities of daily living (ADL) and instrumental ADL (IADL) disability from

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1998 to 2008, among the Shanghai elderly. ADL is a disability index, asking about difficulties in carrying out fundamental daily activities such as self-feeding, dressing, indoor transferring and bathing, whereas IADL looks at less severe disabilities such as difficulties in cooking, laundering, shopping and neighbour-visiting.

Interestingly, this study reveals that both ADL and IADL of the Shanghai elderly had improved from 1998 to 2008, and the



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improvement in IADL is more consistent and substantial than that of ADL. IADL disability is generally more sensitive than ADL disability to contextual changes such as improved accessibility, wheeled walkers, ready-made meals, and microwave ovens. This suggests contextual factors, rather than intrinsic improvement of functional health, may be the major driver of the disability improvements among Shanghai elderly. Furthermore, the rapid economic boom started from the 1990s may be responsible for such favourable contextual changes.

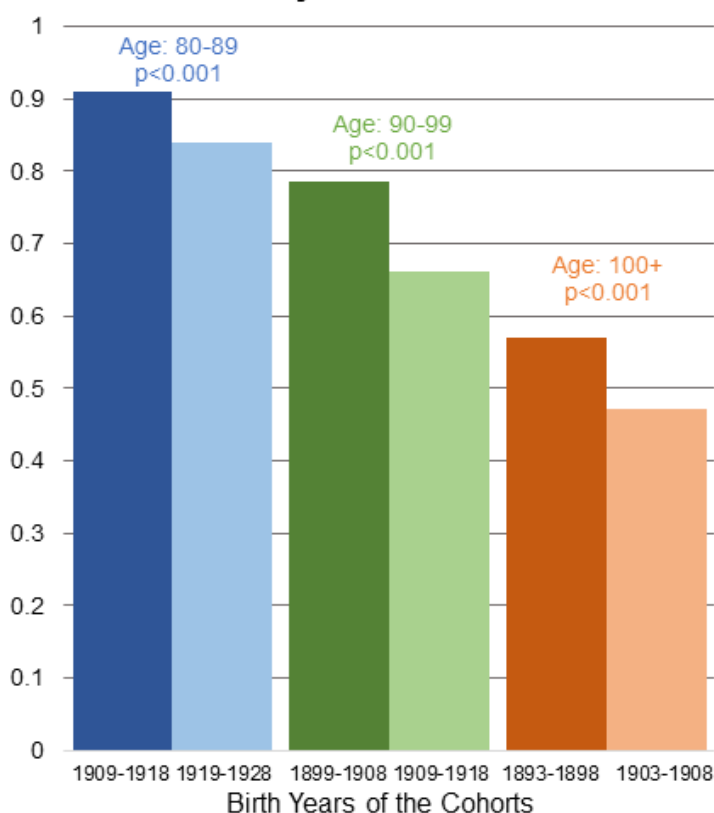
“ [B]oth "Success of Success" and "Failure of Success" may coexist in the health trends among the Chinese oldest olds.

Health Trends of Oldest Old in China

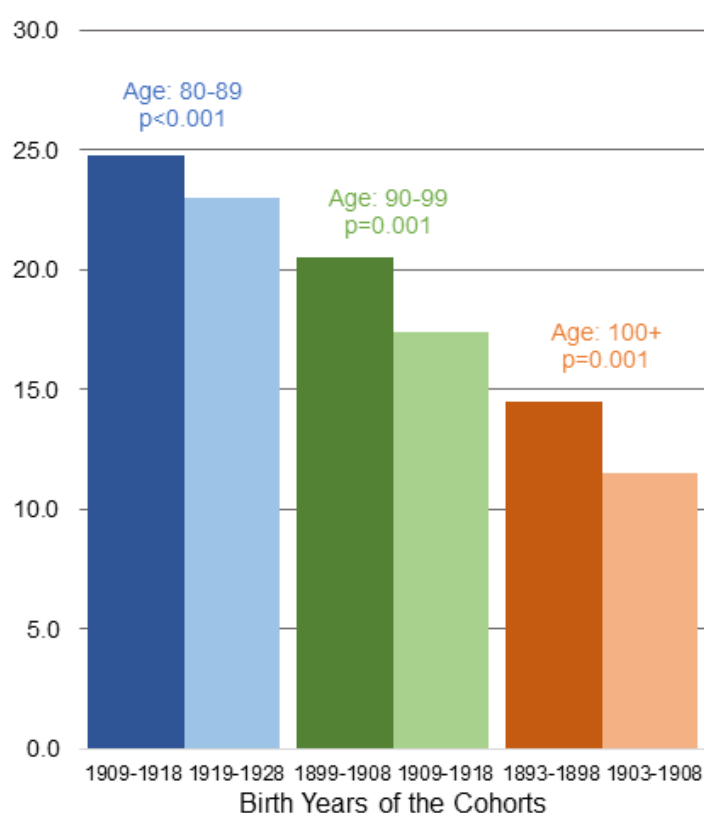
One of our recent studies on the health trends of China’s elderly has drawn much attention. We assessed the changes in mortality, ADL disability, limitations in physical performance, and cognitive functioning among the elderly Chinese. Using the ten-year longitudinal data of the Chinese Longitudinal Healthy Longevity Survey (CLHLS) from 1998 to 2008, we compared three pairs of elderly cohorts.

- Two cohorts of octogenarians (ages 80-89): one group born in 1909-1918 and interviewed in 1998, and another group born in 1919-1928 and surveyed in 2008;
- Two cohorts of nonagenarians (ages 90-99): one group born in 1899-1908

Score of Physical Performance



Score of Cognitive Capacity



and interviewed in 1998, and another group born in 1909-1918 and surveyed in 2008;

- Two cohorts of centenarians (ages 100-105): one group born in 1893-1898 and interviewed in 1998, and another group born in 1903-1908 and surveyed in 2008.

One finding was that “success of success” (compression of morbidity) is supported by the significant decline of the annual mortality rate of the Chinese oldest olds from 1998 to 2008, and the decline in prevalence of ADL disability. However, we observed opposite trends regarding the performance-based physical test and the cognitive capacity, which provide evidence for “failure of success” (expansion of morbidity). This suggests that both “success of success” and “failure of success” may coexist in the health trends among the Chinese oldest olds (see figures below).

“ [P]olicy interventions to improve the living conditions and facilities of elderlies could relieve or even reverse the worsening trends of health and disability status in the elderly population.

Implications for Policies

The contrasting trends between the ADL disabilities and physical performance we found suggest that with the declining physical capacity, improvement of ADL disability is still possible due to improvement in living facilities and environment. This implies that policy interventions to improve the living

conditions and facilities of elderlies could relieve or even reverse the worsening trends of health and disability status in the elderly population.

Moreover, the significant decline in the cognitive capacity of the Chinese oldest olds is alarming. We believe this trend in declining cognitive capacity is not only due to the mechanism of “failure of success”, but perhaps also caused by their difference in education level. The cohorts interviewed in 2008 had lower levels of education as compared to the oldest old cohorts born ten years earlier. This is possibly due to a more turbulent historical period in their childhood and educational years. This is a warning signal to policymakers to better prepare for the increasing needs related to the declining cognitive capacity amongst these elderly individuals.

SELECTED RESEARCH:

Feng, Qiushi, Zhihong Zhen, Danan Gu, Bei Wu, Pamela W. Duncan, and Jama L. Purser. 2013. “Trends of ADL and IADL Disabilities in Community-dwelling Shanghai Older Adults, 1998 to 2008.” *Journal of Gerontology: Social Sciences* 68(3): 476-485.

Zeng, Yi, Qiushi Feng, Therese Hesketh, Kaare Christensen, and James W. Vaupel. 2017. “Survival, disabilities in activities of daily living, and physical and cognitive functioning among the oldest-old in China: A cohort study.” *The Lancet* 389(10079):1619-1629.