

Addressing social inequalities for longevity and living in good health



Deaths resulting from population ageing have steadily declined, as people live longer with conditions which were historically fatal.¹ However, even in countries with good social circumstances, social inequalities exist that can shorten life expectancy.² Whether social inequality will reflect the extent to which longevity can be extended with a lower burden of age-related health problems is uncertain.

In *The Lancet Public Health*, Aline Dugravot and colleagues³ evaluate whether social inequalities in mortality among people living in a high-income country are related to social patterns in the onset of health problems. They analysed the UK Whitehall II longitudinal cohort (with a median follow-up period of 23.6 years) to study whether social inequalities in education, occupational position, and health literacy were related to developing multimorbidity, disability, and frailty, and consequent death in 6425 healthy adults who were 50 years old at the start of follow-up.

As might be expected, multimorbidity (HR 4.12 [95% CI 3.41–4.98]), physical frailty (HR 2.38 [95% CI 1.93–2.93]), and disability in at least two activities of daily living (HR 1.73 [95% CI 1.34–2.22]) increased the risk of mortality. However, three findings from the analysis by Dugravot and colleagues stand out. First, people at the lowest level of occupation, such as clerical or support grades, were more likely to develop multimorbidity (HR 1.54 [95% CI 1.37–1.73]), frailty (HR 2.08 [95% CI 1.85–2.33]), or disability (HR 1.44 [95% CI 1.18–1.74]) at the highest level of occupation (eg, administrative grades). Low education or literacy level also increased the risk of transitioning to a worse health state (except education for transitioning from healthy to frail), but to a lesser extent than occupational status. Second, social inequalities only increased mortality risk in people who died before their health state worsened. Lastly, when individuals did develop one of the three worse health states, social inequalities did not modify mortality risk.

The study by Dugravot and colleagues³ demonstrates the need for public health initiatives to respond to social inequalities, even in high-income countries, before individuals develop health problems of ageing. Aligning potential strategies that overlap in addressing social

inequalities, including smoking, low income, and high bodyweight, with global strategies to reduce mortality risk, such as the WHO 25 × 25 initiative to address seven risk factors for non-communicable disease (tobacco use, physical inactivity, harmful alcohol consumption, elevated blood pressure, sodium intake, diabetes, and obesity), would be of great interest.^{2,4}

Dubravot and colleagues³ also show that the number of adverse health states present are important in ageing. They compared groups of people who had one, two, or three adverse health states (multimorbidity, frailty, and disability); although they found no evidence of a stronger effect of social inequality on mortality with a higher number of adverse health conditions, the cumulative effect of adverse health conditions on mortality was notable. Compared with healthy individuals, those with one (HR 2.38 [95% CI 1.93–2.93]), two (HR 1.73 [95% CI 1.34–2.22]), or three adverse health conditions (HR 4.55 [95% CI 3.67–5.65]) had higher mortality, which illustrates the interplay and complexity of age-related health problems in longevity.

Although these conditions are important in ageing, other salient problems, whether observed or subclinical, contribute to living in good health. Health in ageing can alternatively be quantified with a frailty index,⁵ which measures susceptibility to poor health outcomes using a set of physical, psychological, and social variables, which include cognition, signs, symptoms, and biomarkers, as well as chronic diseases, physical frailty, and disability. Frailty measured as an accumulation of deficits can grade an individual's risk of death⁶ or requirement for intensive health care.⁷ Although health deficits commonly accumulate with old age, frailty remains treatable and might be reversible.⁸ However, interventions to date are scarce.⁹ More compelling evidence is required on policies or interventions that address social inequalities and health problems of ageing to prolong lifespans and reduce time spent in ill health. Initiatives are likely to be needed at all levels of health care to address the needs of the increasingly ageing population, who could experience high degrees of frailty.¹⁰

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I declare no competing interests.

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