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Trends in Older Adults' Health in 21st-Century England: Findings from the English Longitudinal Study of Ageing

Jiawei Wu[*1], Karen Glaser[2], Debora Price[3], Giorgio Di Gessa[4]

[1]Shanghai University,[*]presenting author [2]King's College London, [3]University of Manchester, [4]University College London

Introduction

This paper investigates whether successive cohorts of older adults in England are experiencing better or worse health at the same ages — a question central to understanding "generational health drift" and the prospects for healthy ageing. Using data from waves 2 (2004/05), 6 (2012/13), and 11 (2023/24) of the English Longitudinal Study of Ageing (ELSA), we provide the first comprehensive within-country assessment of cohort changes across multiple domains of health (self-reported conditions, functioning, pain, mental health, and biomarkers) for England in the 21st century. Our analysis directly compares older adults of the same age in three time points to reveal whether their health is improving, stabilising, or deteriorating over time.

Understanding how health has changed across older cohorts is vital for policies related to healthy ageing, labour market participation, extending working lives and long-term care. For decades, studies reported significant increases in life expectancy without evidence of levelling off (Oeppen & Vaupel, 2002), but life expectancy gains have slowed or stalled in several high-income countries since the early 2010s, and the COVID-19 pandemic produced sharp, uneven declines that have only partially bounced back (Aburto et al., 2021). Moreover, improvements in survival coexist with the increasing prevalence of chronic diseases and shorter or stalling healthy LE, particularly at older ages (McKee et al., 2021; Spiers et al., 2021). Evidence on whether successive cohorts of older people are healthier remains mixed depending on which domains of health are examined (physical health, mental health, functioning, and disease, including self-reports and biomarkers) and the countries/contexts (Gimeno et al., 2024; Gondek et al., 2019).

Recent findings suggest adverse cohort replacement in cardio-metabolic risks (e.g., obesity, diabetes, inflammation) and cardiovascular diseases (e.g., stroke, heart disease), with post-WW2 cohorts reporting worse outcomes than earlier cohorts, especially in the United States versus Europe (Gimeno et al., 2024). This emerging phenomenon of worsening health across cohorts at the same age has been described as the 'generational health drift' (Gimeno et al., 2025). Yet, findings on other health and well-being measures are less consistent, with functional limitations and disability showing mixed trends across age groups, countries, and socioeconomic status. For example, using Swedish registry data, Wennberg et al. (2022) find that the age-specific prevalence of frailty increased with each successive cohort. Conversely, Choi et al. (2022), comparing the US and England from 2002 to 2016, find that disability in England and (to a lesser extent) in the US declined among those aged 75 and older. For those aged 55-75, the authors find small and socially patterned changes in disability, with cohorts in lower socioeconomic groups faring worse and contributing to widening within-country health inequalities. Cross-cohort evidence on mental health at older ages is limited, with recent studies showing that mental health outcomes (such as anxiety and depression symptoms) worsened during the COVID-19 pandemic, with younger cohorts in early old age reaching or exceeding historical peaks of psychological distress (Gondek et al., 2022; Moreno-Agostino et al., 2023).

Our study extends current knowledge by directly comparing the health of older adults in England at the same ages across three time points spanning nearly 20 years (2004/05, 2012/13, and 2023/24). We exclude the COVID-19 period as this was a short-term shock that may be mistaken for cohort differences. By comparing people of the same age at three different time points, we minimise the risk of under-representing less healthy individuals due to attrition, and the risk of overestimating the prevalence of ill health because of improved survival across birth cohorts. Drawing on the consistent design and repeated health and biomarker collection in ELSA, we examine a broad set of health outcomes, including self-reported measures of physical health, disability, pain, the prevalence of current doctor-diagnosed conditions (such as cardiovascular and respiratory diseases, hypertension, and arthritis), mental health and well-being indicators (like depressive symptoms and quality of life), as well as biomarkers (including diabetes, blood pressure, and cholesterol levels). Data are drawn from the English Longitudinal Study of Ageing (ELSA), a nationally representative survey of older adults that has consistently collected health information using the same methods (face-to-face and self-completion questionnaires, and nurse visits) and question wording, minimising issues of measurement

heterogeneity and harmonisation that often arise in cross-national comparisons. By focusing on one country, it is likely that its population across all ages will have been exposed at each time to comparable health systems and contextual factors. Altogether, leveraging ELSA and comparing same-age cohorts (e.g., 50–59, 60–69, 70-79, and 80 and older), we aim to provide robust evidence of whether generational health drift is occurring in England, including both physical and mental health indicators alongside biomarkers, and if so, in which domains of health this is evident.

Data and methods

We employ the nationally representative English Longitudinal Study of Ageing (ELSA), which collects a wealth of health and socio-economic information from community-dwelling individuals aged 50 or older residing in England. Starting in 2002-03, ELSA is an ongoing longitudinal biennial survey (except during the COVID-19 pandemic). Refreshment samples were added in waves 3, 4, 6, 7, 9, 10, and 11 to maintain its representativeness of older adults. Venous blood samples were collected from consenting respondents during nurse visits in waves 2, 4, 6, 8, 9, and 11, which were subsequently assayed for biomarkers. As our aim is to examine changes in older adults' health across cohorts at the same age, we use waves 2 (2004/05), 6 (2012/13), and 11 (2023/24). These waves were collected about 10 years apart and contain data from the nurse visit, allowing us to include both self-reported health outcomes and observer-measured biomarkers (e.g., obesity, grip strength, and blood pressure). **As data for wave 11 have yet to be fully released**, preliminary results presented in this abstract use wave 10 (2021/23) and are focused on self-reported health outcomes only.

Our analytical sample (n = 8,418 in wave 2, n = 8,598 in wave 6, and n = 5,990 in wave 10) is based on core ELSA members aged 50+, excluding proxy interviews. Our extensive range of health outcomes captures older adults' self-rated health, physical functioning (ADL limitations, IADL limitations, mobility impairments, pain, eyesight, hearing, long-standing illness, physical activity), self-reported prevalence of doctor-diagnosed chronic conditions (stroke, diabetes, hypertension, cholesterol levels, other cardiovascular diseases, osteoporosis, arthritis, asthma, and lung disease), mental/psychological health (psychiatric problems, depressive symptoms (CES-D), depressive symptomatology, and CASP-19), and cognition (memory and orientation scores). We recoded most health outcomes as binary variables (yes/no) to facilitate interpretation. Dementia, Alzheimer's disease, and Parkinson's disease were excluded due to their very low prevalence.

Depending on the nature of the outcome, we estimate either modified Poisson regression models for binary variables (Zou, 2004) or OLS regression models for continuous ones, using wave-specific cross-sectional survey weights to account for clustering and stratification on pooled data across the three waves. Therefore, we report incidence-rate ratios (IRR) for binary health outcomes and beta coefficients for continuous outcomes.

First, we regress health outcomes on time (waves 2 (ref), 6, and 10), adjusting for age group (50-59 (ref), 60-69, 70-79, and 80+), gender (men = ref), educational attainment (high (ref), medium, and low), and wealth quintiles. Thus, we can compare the health of older adults at the same age over time which is essential for investigating 'generational health drift'. As some respondents contribute multiple records to the regression models (9,414 respondents were interviewed twice, and 6,312 respondents were interviewed three times), we compute robust standard errors. Second, to understand if trends across age groups are similar over time, we investigate the interaction between age group and time, adjusting for other covariates. To aid interpretation of the interactions we show margins plots of predicted probabilities or values and formally tested differences over time generally and over time within age groups. All analyses are conducted using Stata 18.

Results (Preliminary)

Overall, we found mixed results. Over the observation period from 2004/05 to 2021/23, among those aged 50 and over, we find worsening hypertension, high cholesterol, diabetes, CVDs, arthritis, any pain (+moderate/severe pain), physical inactivity, depressive symptomatology, osteoporosis, arthritis, and quality of life. We find little change in limiting long-standing illness, ADLs/IADLs, lung disease, and cancer although we see a reduction in the prevalence of mobility impairments and improvements in memory scores (no change in orientation).

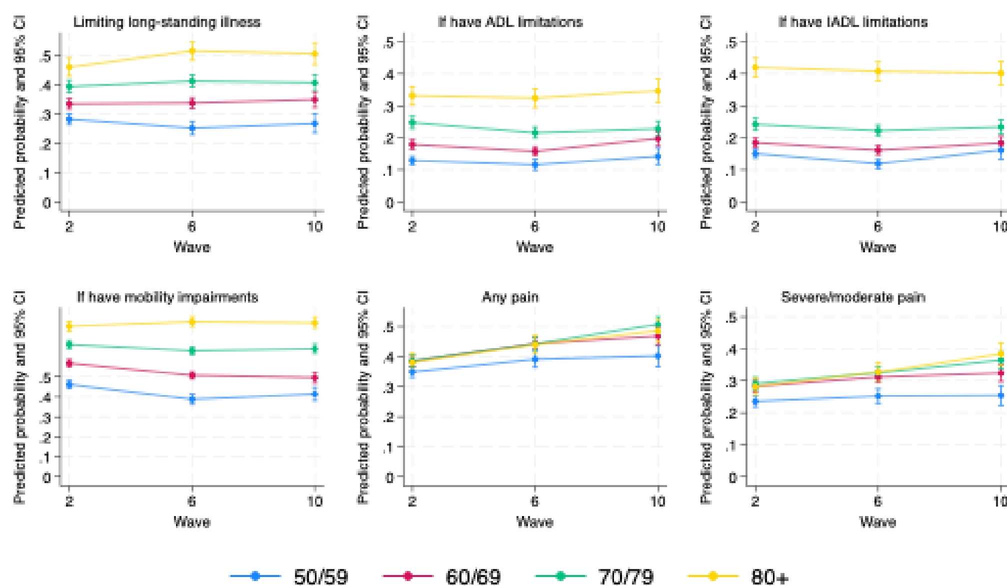

Figure 1. Changes across waves in predicted probabilities of LLSI, ADL/IADL limitations, mobility impairments, any pain and severe/moderate pain by age group

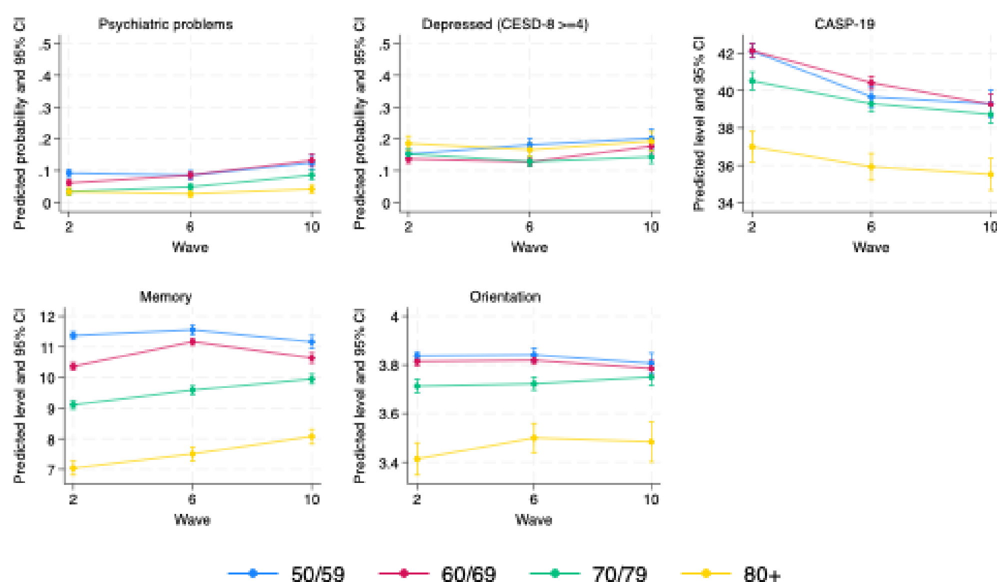

Figure 2. Changes across waves in predicted probabilities of psychological health and cognitive function by age group.

Figures 1 and 2 show changes across waves in the predicted probabilities of various health outcomes by age group. Figure 1 shows improvements for the 50-69 age groups in limiting long-standing illness, IADLs, and mobility impairments to wave 6 followed by stability to wave 10. Older age groups appear to lag on mobility, while the predicted probability of any pain increases similarly across age groups. Figure 2 focuses on changes in mental health and cognitive function. Here we see increases in the predicted probability of doctor-diagnosed psychiatric problems for 50–59-year-olds, although the probability rises more in the 60–69 age group and is lowest among those aged 80 and older. With respect to elevated depressive symptoms, we see the largest increase among 50–59-year-olds, with 60–69-year-olds showing similar rises. However, for the older age groups, there is a decrease by wave 6 followed by a plateau to wave 10, and a narrowing of the gap compared to baseline with the 80 and over age group. Quality of life declines for all age groups but falls the most for those aged 50-59. Finally, memory improves at older ages although there is no change for those aged 50-59.

Summary and Discussion

To date, our findings show that doctor-diagnosed psychiatric problems rise sharply among those aged 60–79, elevated depressive symptoms increase most in midlife, and quality of life declines across all age groups, with the largest drop among 50–59-year-olds. In contrast, we see improvements in limiting long-standing illness, IADLs, and mobility limitations among the younger-old age groups up to wave 6, followed by a plateau. Older age groups remain behind in mobility by wave 10, while pain increases at a similar rate across all age groups.

Our findings suggest that the health of England's older population has not continued to improve uniformly across cohorts. Overall, results suggest that while some physical functioning indicators improved among the younger-old to 2012/13 and then stabilised, indicators of cardio-metabolic disease, pain, and mental distress have worsened, especially among those in midlife and early old age. These findings indicate a partial generational health drift in England, with emerging disparities by age group. These trends have important implications for healthy-ageing policy and the sustainability of extended working lives. If younger cohorts entering older age have higher burdens of chronic conditions and psychological distress, health inequalities may widen, and gains in longevity may translate into longer but not healthier lives. Future work using the full 2023/24 ELSA wave, including biomarkers, will test whether these patterns persist and explore socioeconomic differentials. The study contributes to European debates on the limits of morbidity compression.

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