

Jeroen Spijker & John MacInnes, "Flexible ageing: new ways to measure the diverse experience of population ageing in Scotland, using the Scottish Longitudinal Study" [SLS Project 2013_003]

Research Summary

Population ageing has become a core policy concern because of the supposed implications of current and projected population age structures for future economic performance and the viability of pension, health and social care systems. However the debate has usually been based on definitions of 'old age' that use fixed age categories (e.g. taking the current male retirement age of 65 as a cut-off point) or that underestimate the continuous improvements in mortality and morbidity at older ages. An 'average' 60 year old, for example, enjoys longer life expectancy than their equivalent of only one decade ago. Up until now, "population ageing" has often been considered as something negative, but these claims are false, in part because the indicators of population ageing that are used to make these claims are poor. In this context, however, it is important to recognise the diversity of the ageing experience, as we showed for Scotland.

Underpinning Research

Population ageing is a change in the distribution of ages that was initially caused by fewer births and later also by longer lives at older ages. However, the way the burden of population ageing is often measured is outdated as measures such as the Old Age Dependency Ratio (OADR) count neither the number of dependent older people (elderly health has improved a lot over the last decades) nor the number who sustain them (many people of working age don't work). It merely takes a cut-off point and assigns adults to the two sides of the ratio accordingly. We therefore proposed several alternative measures of population ageing that provide a more accurate picture.

One measure we formulated was the Real Elderly Dependency Ratio (REDR), which

Key findings

Although population has become a core policy concern, the debate is often flawed by poor definitions of 'old age'. The Scottish Longitudinal Study was used to test a new measure of ageing, the Real Elderly Dependency Ratio (REDR) on various demographic groups. 'Elderly' was defined as those with remaining life expectancy of less than 15 years instead of 65+ and rather than taking those of working age as the population who sustain them, only actual workers were classed as such.

By taking into account the changing patterns of employment and old-age mortality, results showed that the REDR defines the burden of an ageing population more accurately than existing measures.

Following publication in the BMJ, the results were widely disseminated internationally. This led to opportunities to speak directly to both Westminster and Scottish Governments, think tanks and other public and third-sector organisations.

remedies weaknesses of the OADR by considering 'elderly' men and women at ages where life expectancy equals 15 years or less, and counting actual workers rather than everyone of working age. Results showed that this indicator moves in the opposite direction to the conventional OADR since the early 1980s as the ratio of 'elderly' to the employed declined rather than increased.

Using data from the Scottish Longitudinal Study we then looked to see if similar diverging trends are observed for certain census characteristics. We kept the denominator constant (as, e.g., the divorced work not only for the divorced) and considered "elderly" as being the population

in age groups with a remaining life expectancy of 15 years or less.

Compared to 1991 results showed that in 2001 there were, per 100 workers:

- fewer 'never married', 'married', 'divorced' (women only) and 'widowed' (women only) elderly but slightly more 'remarried' elderly;
- fewer Scottish-born elderly;
- fewer elderly with less than higher education;
- fewer elderly renters and those with a mortgage;
- fewer elderly without a car;
- fewer elderly residents in the most deprived areas of Scotland;
- more elderly men in single-person households, although the proportion declined for women in all household categories.

Impact

We paid particular attention to the dissemination of our results and emphasised their implications for policy to non-academic audiences, including the actuarial profession, policy and decision makers in health and social care, public, private and third sector organisations concerned with older people, and of course the general public.

We published key results in the British Medical Journal, chosen not only because of its health care system readership, but because publication here would bring attention from news organisations and transmit our message to both the general public and relevant policy makers.

Publication on the front page, and our preparation of a press release and podcast meant our piece, received widespread worldwide publicity, television interviews, press coverage - including an item by the BBC Home Affairs editor - tweets, retweets and blog commentaries around the world in several languages.

On publication we were approached by the Parliamentary University Group at Westminster to explain the importance of measuring population ageing accurately and why we believe traditional ways of measuring are no longer fit for purpose. We were also contacted by the Scottish Government, other UK public, private and third sector organisations and international think-tanks like Political Observatory and Project Syndicate to discuss our research. We published in Scottish Affairs, because its readership comprises academic and policy and decision makers. We have given lectures based on our BMJ article at both the University of Edinburgh and Imperial College London.

Further Information

SLS Project 2013_003: "Flexible ageing: new ways to measure the diverse experience of population aging in Scotland, using the Scottish Longitudinal Study" John MacInnes (University of Edinburgh) and Jeroen Spijker (currently Centre for Demographic Studies, Barcelona, Spain).

Main results published as:
[SLS Working Paper 11](#)

Other key publications:
Spijker, J, MacInnes J. 2013. [Population ageing: the timebomb that isn't?](#) BMJ 347:f6598
Spijker, J, MacInnes J. 2013. [Population ageing in Scotland: Time for a re-think?](#) Scottish Affairs 85:53-74

The "Flexible ageing" project was financed by the ESRC (Grant Reference ES/K004611/1).
email: jspijker@ced.uab.es
twitter: [@popageing](https://twitter.com/popageing)

web: sls.ac.uk
email: sls@lscs.ac.uk