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Briefing Report

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Background

To update previous work on this topic,^{1,2} this review aimed to summarise evidence on trends in healthy life expectancy¹ and disability-free life expectancy² in the UK and other high-income Organisation for Economic and Co-operative Development (OECD) countries covering North America, Europe, Asian and Oceania. Comparison of UK trends to other OECD countries was important to include those where life expectancy had previously stalled (the Netherlands), or is currently lower (the US), or higher (for example France, Sweden) than the UK. We also report evidence on whether inequalities in healthy or disability-free life expectancy had narrowed or widened.

We aimed to assess whether:

1. gains in life expectancy were greater (expansion) or smaller (compression) than the gains in healthy or disability-free life expectancy in the UK;
2. trends in healthy and disability-free life expectancy in the UK were similar for men and women, at all ages (birth, age 65), and between socio-economic groups;
3. non-UK countries were seeing similar or divergent trends to the UK.

Methods

Electronic searches were carried out in Medline, Embase, Health Management Information Consortium and Scopus, in October 2019. The Office for National Statistics website was also hand searched for relevant statistical releases. Studies were eligible if published after 2016 and examined trends in healthy life expectancy, active life expectancy or disability-free life expectancy in the UK or another OECD high income country, including both observed past trends and forecasted trends. Studies reporting only one time point, or trends in life expectancy only, were excluded. Included studies were assessed for quality and bias on four criteria: study design; population coverage; comparability of interview methods between time points; and quality of outcome measure.

Results

Studies

Twenty-eight publications met the review criteria. Eleven studies reported trends in the UK; four of these reported forecasted trends. The remaining studies reported trends in Belgium, Canada, Denmark, France, Japan, the Netherlands, Norway, Republic of Korea, Sweden, Switzerland, and the US. Three also reported trends across multiple countries. Observed trend periods ranged from six to 40 years, between 1970 and 2017.

Four studies were rated good, seven were rated fair, one was rated good *and* fair (because it used two outcome measures that each received a different quality rating), and three were rated poor. Thirteen studies were rated unclear due to a lack of information required to assess

¹ Healthy life expectancy is an estimate of how many years a person might be expected to live in a 'healthy' state (usually based on self-reported or self-perceived health).

² Disability-free life expectancy is an estimate of how many years a person might be expected to live without disability.

quality. As the majority of studies received a summary rating of unclear, the synthesis did not prioritise evidence with a higher quality rating.

Trends in health life expectancy and disability-free life expectancy

Evidence from this review identified three broad findings from UK studies:

- Although healthy and disability-free life expectancy have increased, the gains are smaller than the gains in life expectancy, and the proportion of life spent without disability has declined. This suggests an expansion of ill-health and disability in later life, congruent with the evidence of an increase in disability prevalence;
- There was clear evidence of differences between men and women in trends with gains in healthy and disability-free life expectancy being greater for men, whilst women were living with longer periods of disability;
- Growing inequalities in healthy life expectancy between those living in the most and least deprived areas were evident for men in England and Wales.

In non-UK studies:

- For most countries the gains in healthy and disability-free life expectancy were again smaller than the gains in life expectancy, with two exceptions: there were greater gains in healthy life expectancy in Korea and for women's disability-free life expectancy in Sweden;
- Gains in healthy and disability-free expectancies were typically greater for men as observed in the UK, but not consistently so;
- Where studies reported trends by level of educational attainment, there was no consistent pattern, the educational gap in disability-free life expectancy narrowing in Denmark but widening in Belgium and Norway.

Full details of the individual studies and results in tabular and graphical form are provided in the [full report](#).

Conclusion

Analytical differences (e.g. trend periods, stratification) limited a detailed comparison of trends between studies. However, evidence from the UK suggested an expansion of disability in later life, a conclusion confirmed by the majority of non-UK studies.

Implications and future research

The greater gains in life expectancy than disability-free life expectancy and healthy life expectancy, and the increase in the prevalence of disability has implications for the adequate provision of care services as older populations live longer. That countries with higher life expectancy than the UK are still seeing gains in life expectancy suggests that the recent stalling of UK life expectancy is due to external factors rather than approaching any natural limit. Countries such as Korea, that have seen a compression in health life expectancy, are worthy of further investigation, as is Sweden where compression of disability has been

observed for women. The contribution of increasing inequalities to the expansion of disability is, as yet, unknown, specifically whether expansion is being observed across all levels of deprivation.

References

1. Jagger C. Trends in life expectancy and healthy life expectancy: Foresight, Government Office for Science, 2015.
2. Kingston A, Wohland P, Wittenberg R, et al. Is late-life dependency increasing or not? A comparison of the Cognitive Function and Ageing Studies (CFAS). *Lancet* 2017; **390**(10103): 1676-84.

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