Commentary: Trends in activity limitation

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Longer life expectancy and the increase in ageing populations has resulted in the key policy issue of whether or not extra years of life are being lived in better health, and with postponement of disability. International data are often inconsistent on the expansion, stability or compression of morbidity, and on whether we are living longer with improved, worse or the same levels of disability and health.

In this issue, van Gool et al. present data from a harmonized dataset, contained 54,847 respondents aged 55–84, excluding institutionalized populations, from five cross-sectional and longitudinal population surveys, across the Netherlands, between 1990 and 2007. Their meta-analyses provide evidence of stability in the prevalence of three self-reported limitations in activities (climbing stairs, walking and dressing). These were assessed using 12 Organisation for Economic Cooperation and Development (OECD) and SF-36 activity limitation variables in a harmonized dataset, although findings did vary by individual dataset. They report that, overall, the time trends of 10 of these 12 variables studies were stable. van Gool et al. did not present health expectancy data, such as disability-free life expectancy (DFLE) rates (i.e. life spent in a healthy state, calculated by combining longevity with disability or morbidity data). However, they did place their results in the context of an increase in life expectancy during the period analysed. Whereas harmonized datasets can overcome some of the difficulties of comparing different studies employing different measures, they are equally challenging to analyse. They require careful interpretation, given their potential sources of heterogeneity in methods of sampling, population inclusion, response rates and sample bias, question wording and question response categories, measures of severity of condition, area differences in responses to self-report questions and periods of follow-up. There is also the inevitable issue of healthy survivor effects in longitudinal datasets.

The authors argue that their findings support that body of evidence on stable trends in activity imitation, citing evidence from Canada and Australia. However, there are inconsistencies between studies. van Gool et al. cited studies conducted in the USA, Spain, Denmark, Finland and Sweden which reported a decrease in disability, including inconsistent evidence from the UK. Manton et al. projected that further declines in disability rates in the USA will compress demands for long-term care among the oldest old, and, with later retirement ages, increase economic productivity of the youngest old. In addition, trends in disability-free life expectancy rates at age 65, in 13 European countries, between 1995 and 2001, indicated strong evidence of compression of disability in only two countries, and possible (non-significant) compression in a further two. In the remaining nine countries, expansion of disability was the prevailing trend over the time period. Whereas these results showed consistent increases in life expectancy in all 13 countries between 1995 and 2001, this was not accompanied by a compression of morbidity in most countries. In this European-wide study, however, disability was inferred simply from the question ‘Are you hampered in your daily activities by any physical or mental health problem, illness or disability?’ making comparisons with van Gool et al.’s research particularly difficult, especially as the severity of disability requires careful measurement and analysis.

Inconsistencies between studies are partly due to variations between sample types and age ranges studied, survey methods, different definitions of disability, variations in self-perceptions and consequently self-reports and the use of different measures of disability and severity. van Gool et al. point out that even trends in their own harmonized indicators appeared inconsistent, probably because the SF-36 asks about limitations in activities due to health, whereas the OECD asks about difficulty in the performance ability, and both are conceptually different. van Gool et al. focused only on stair climbing, walking and dressing, although these are key indicators of disability, and more specific than the Europe-wide survey. Variations are also due to the inclusion, or not, of institutionalized populations (the frailer members of populations). van Gool et al. did not include these, and argue that the effect of including these groups would be small, as relatively few people live in institutions. Robust estimation of population trends in disability and health is essential in order to ascertain whether our additional years of life are spent with...
disabilities, and whether life expectancy is increasing faster than any reported decline of disability rates. Given inconsistent international evidence on trends in activity limitation and on DFLE rates, generalizations and conclusions remain difficult.

There is no consensus at present on directions of trends in disability, and estimates can conflict even within countries. One example is the UK,6–8 although UK data have also indicated more complex trends, reflecting increased years of life spent in mild disability and decreased years spent in severe disability.9 Measures in the UK vary widely, however, from difficulties performing specific physical activities in individual surveys, to the government’s single-item General Household Survey question about limiting, longstanding illness.8 van Gool et al. conclude that a stable or increasing age-specific prevalence of activity limitations, alongside increasing life expectancy, will result in an expansion of activity limitations. In other words, if morbidity is not compressed to a greater extent than the increase in life expectancy, then individuals will spend more years, and a longer proportion of their life, with a disability. However, cross-national or cross-time period studies are not necessarily measuring the same thing if based on self-report data, as indicated earlier.

The fact remains that research can still be found to support either morbidity compression, stability or increase. Trends vary by population characteristics, including gender and level of education,10 an indicator of long-term social economic status in older populations. It is likely that a fairly large decline in the incidence of disability is required to offset increases in prevalence resulting from reduced mortality. In many countries, the growth in obesity and associated health conditions [musculoskeletal conditions (arthritis), circulatory diseases (stroke) and coronary heart disease] have become a major public health concern,11 with the potential risk for individuals of spending more years, and a longer proportion of their lives, with a disability.12 Indeed, common chronic diseases associated with disability are circulatory and musculoskeletal disorders, as well as anxiety/depression and diabetes.13–15 A review of recent trends in the USA16 concluded that declining mortality has slowed down, especially for women, disease prevalence has increased and mobility functioning has deteriorated; length of life with disease and mobility functioning loss increased between 1998 and 2008. There was no support for recent compression of morbidity when morbidity is defined as major disease and loss of mobility functioning. Ultimately, the impact of ageing populations on health systems is dependent on the health and functional ability of older people. Amid lack of consistency on trends, and the documented complexity of preparation of aggregated datasets,17 one of the most promising policy options to address this challenge is inevitably the promotion of healthy ageing.18

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References

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