Socioeconomic adversity – an important barrier to healthy ageing

New study findings support renewed calls for action to address socioeconomic inequalities

Rachel Cooper

Senior Lecturer and MRC Programme Leader Track, MRC Unit for Lifelong Health and Ageing at UCL, 33 Bedford Place, London, WC1B 5JU, UK
Email: rachel.cooper@ucl.ac.uk

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As the global population ages there is concern that improvements in disability-free life expectancy may not have kept pace with the improvements in life expectancy that have driven this major demographic trend over the last century. This has important implications for individuals, families and society not least because it may prevent potential opportunities of an ageing population being realised.(1) Identifying the most effective targets for intervention to ensure that people live not only longer lives but also healthier, independent lives for longer is therefore an international research priority.(2)

It is within this context that Stringhini and colleagues, in a new research paper published in this issue of *The BMJ*,(3) have assessed the associations of low socioeconomic status and six other non-communicable disease risk factors identified by the World Health Organization (WHO) as targets in meeting the goal of reducing premature mortality from chronic diseases by 25% by 2025,(4) with walking speed. This outcome, which is a commonly used measure of physical capability that is quick and easy to assess, has two important strengths. Firstly, it can be used to detect existing mobility limitation(5); a key threat to independent living. Secondly, slower walking speed has consistently been shown to be associated with poorer health prospects including lower survival rates and higher rates of incident disability in older community-dwelling populations.(6-8)

Previous research, cited by the authors, has shown that lower socioeconomic status is associated with slower walking speed in older populations and that these associations extend back across life to childhood. By pooling results from 37 studies based in 24 different countries, these comprehensive new analyses using data on 109,107 adults aged 45-90 years are able to compare the association between low socioeconomic status (usually based on last known occupation) and walking speed with associations with the six risk factors targeted by the WHO (i.e. obesity, smoking, high alcohol intake, physical inactivity, hypertension and diabetes).

By using the data on walking speed to estimate the number of years of physical functioning lost in association with each risk factor, the authors' findings show that low socioeconomic status is at least as important as each of the six other factors. For example, in minimally adjusted models, estimated years of functioning lost by age 60 years among women were: 4.6 (95% confidence interval 3.6 to 6.2) for low socioeconomic status; 7.5 (6.1 to 9.5) for obesity; 0.7 (0.1 to 1.5) for smoking; 0.1 (-1.2 to 0.9) for high alcohol intake; 5.4 (4.3 to 7.3)

for physical inactivity; 3.0 (2.3 to 4.0) for hypertension; and 6.3 (4.9 to 8.4) for diabetes. These estimates vary markedly by sex and country; men and those from high income countries are estimated to lose more years of functioning in relation to low socioeconomic status than women and those from low and middle income countries, respectively. However, the same general trend is found in all analyses. Caution is required in interpreting the specific estimates presented: 1) there is considerable heterogeneity within and between studies; and 2) cross-sectional data are used and so observed differences in walking speed by age may also be attributable to cohort and period effects. Nevertheless, the main message of this paper is clear: socioeconomic adversity is an important target in global efforts to extend disability-free life expectancy. Furthermore, as socioeconomic status is more distal than the six other non-communicable disease risk factors studied and these and other risk factors are socioeconomically patterned, there may be greater and more far-reaching benefit in targeting socioeconomic adversity.

In another recent paper from the same research consortium,(9) compelling evidence was provided of the need to target low socioeconomic status alongside other risk factors to reduce premature mortality. Taken together these findings highlight the importance of socioeconomic adversity as a barrier to different key aspects of healthy ageing. In comparing the findings of their two sets of analyses,(3, 9) the authors estimate that low socioeconomic status is associated with a greater number of years of functioning lost than years of life lost. While this is not surprising - greater socioeconomic inequalities in disability-free life expectancy than in life expectancy have previously been documented(10) - it has important implications; it suggests that people who have experienced socioeconomic adversity not only live shorter lives but live more of their shorter lives with disability. Global increases in socioeconomic inequality(11) are a cause for concern and these new findings provide further empirical evidence in support of renewed calls for action(10, 12) to address these as a matter of urgency for the benefit of the health of our ageing global population.

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