

Socioeconomic patterns in health behaviours after disease onset



Socioeconomic circumstances shape health-related behaviours beginning in childhood, contributing to inequalities in health later in life.¹ In the 1958 British birth cohort study,² behavioural and material factors in early life explained about a third of the excess risk of poor health among adults with low socioeconomic status (SES). In the Young Finns Study,³ early childhood SES established a temporal sequence that distinguished low and high SES groups across the life course: lower fruit and vegetable intake at age 6 years in low SES groups; lower physical activity and higher prevalence of smoking in adolescence; adverse biological changes, evident by early adulthood (eg, reduced insulin sensitivity and higher fasting glucose); and greater risk of chronic conditions, such as obesity, fatty liver disease, and type 2 diabetes by age 48 years. A systematic review⁴ of over 100 papers showed the significant contribution of health behaviours to the association between SES and health outcomes into old age, although results varied by geographical region and health outcome.

In *The Lancet Public Health*, Danyang Wang and colleagues⁵ present a study that expands this field of research. By asking what happens to socially-patterned health behaviours after onset of disease, the investigators shift the focus from health behaviours as risk and protective factors to factors that modify the progression of disease—ie, prognostic factors (figure). Increased research attention on those with non-communicable diseases is timely. Because of population ageing, this group of people is growing fast world-wide.

Wang and colleagues pooled data from six prospective cohort studies in the UK, Europe, North and Central America, and Asia, including 8107 individuals diagnosed with diabetes, cardiovascular disease, chronic lung disease, or cancer after baseline.⁵ Most participants (7248 [89.4%] individuals) were from three datasets from high-income countries: the Survey of Health, Ageing and Retirement in Europe; the English Longitudinal Study of Ageing; and the US Health and Retirement Study. Participants were surveyed every 2 years with assessments both before and after disease diagnosis, providing a robust longitudinal study design.

The authors observed both favourable and unfavourable changes in health behaviours after disease onset. In the total study population, the proportion of people who smoked decreased from 18% to 14% after diagnosis, but prevalence of physical inactivity increased from 18% to 24%. These changes were less favourable in low-SES than in high-SES groups. For example, among those who were physically active before disease development, a greater proportion of individuals in the lowest SES stratum became inactive compared with in the highest SES stratum. Among those who were physically inactive and smoking before diagnosis, low SES participants were more likely to continue these unhealthy behaviours compared with high SES participants. As a result, 432 (41%) of 1067 people in the lowest SES stratum but only 70 (10%) of 685 in the highest SES stratum were physically inactive after disease diagnosis.

The key message that should be taken from this study is that social patterning of health behaviours increases further after disease diagnosis. This conclusion is consistent with results from the Whitehall II study,⁶ which showed that socioeconomic disadvantage not only contributes to the transition from a disease-free stage to incident cardiometabolic disease, but also predicts progression to cardiometabolic multimorbidity. The findings by Wang and colleagues⁵ are also in agreement with the evidence on social inequalities in other outcomes affected by health behaviours and observed in individuals with pre-existing diseases, such as frailty⁷ and dementia,⁸ shorter life expectancy,⁹ and death.¹⁰

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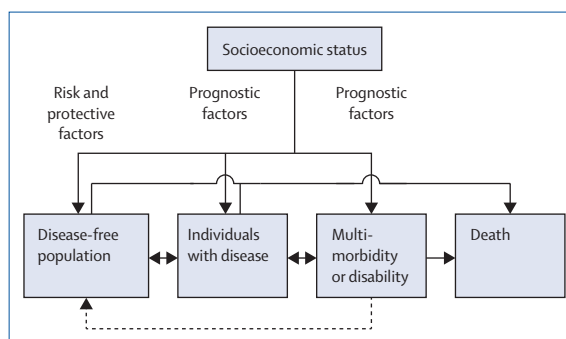


Figure: Conceptual model of the effects of socioeconomic status on health transitions via risk, protective, and prognostic factors

Wang and colleagues⁵ did not have data on all relevant health behaviours, leaving several questions remaining. For example, data on diet, alcohol consumption, weight management, and adherence to treatments were missing. The authors focus on continuing or initiating unhealthy behaviours, but not on giving up unhealthy behaviours after diagnosis, presents a partial picture. Because of a small sample size, Wang and colleagues merged people with different chronic conditions into a single study population. Larger-scale disease-specific analyses would enable better control for disease profiles patterned by SES. Further research is also needed to link behavioural changes after diagnosis to subsequent progression of the disease, which would provide a more comprehensive analysis of the interplay between SES, health behaviours, and disease processes (figure).

Despite these limitations, the evidence by Wang and colleagues informs secondary prevention of common chronic conditions. By increasing understanding of social differences in health behaviours among people with pre-existing disease, the study aids in planning interventions that seek to allocate efforts proportionately across the socioeconomic gradient.¹ The findings suggest that to improve health equity, extra support for lifestyle modification is needed for socially disadvantaged individuals living with chronic disease.

We declare no competing interests.

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