Poverty and risk factors for non-communicable diseases in developing countries: a systematic review

Dr Luke Allen

, MPH Press enter key for correspondence information
Press enter key to Email the author

,

Julianne Williams

, MPH

,

Nick Townsend

, PhD

,

Bente Mikkelsen

, MD

,

Nia Roberts

, PhD

,

Charlie Foster

, PhD

,

Kremlin Wickramasinghe

, PhD

Abstract

Background

The association between poverty and health is highly context-specific; in high-income countries, low socioeconomic status is associated with use of tobacco and alcohol, physical inactivity, and poor diet. We lack good quality epidemiological evidence from developing countries, especially from low and lower middle-income countries (LLMICs). This systematic review sought to fill this gap.

Methods

We conducted a comprehensive literature search for primary research published between Jan 1, 1990, and June 30, 2015, using 13 electronic databases, including Embase and Medline, as well as a grey literature review and hand searching of references. Two reviewers independently screened papers retrieved from 13 databases with a search devised by an experienced medical librarian combining MeSH terms and synonyms for non-communicable diseases, behavioural risk factors, poverty, and the 84 LLMICs defined by the World Bank. We included studies from LLMICs that presented data on multiple measures of socioeconomic status and tobacco use, alcohol use, diet, and physical activity. We performed narrative data synthesis.

Findings
After review of 4242 records, 75 studies met our inclusion criteria, representing 2 135 314 individuals aged more than 10 years from 39 LLMICs. Most studies found that, compared with high socioeconomic groups, lower status groups had a high prevalence of tobacco and alcohol use (odds ratios up to 18·8 and 3·5, respectively). Most studies also found that lower socioeconomic groups consumed less fruit, vegetables, fish, and fibre (odds ratios negligible to 12·9, depending on context). Higher socioeconomic groups were up to 4·4 times less physically active and consumed more fats, salt, and processed food; however, these dietary studies tended to be smaller with wide confidence intervals.

Interpretation
Despite variation in exposure and outcome measures, there is clear evidence that the burden of behavioural risk factors is affected by socioeconomic position within LLMICs. Governments seeking to meet Sustainable Development Goal 3.4—reducing premature mortality from non-communicable diseases by a third by 2030—should leverage their development budgets to address the poverty–health nexus in these settings. Our findings are also important for health workers serving these populations, and for policymakers tasked with preventing and controlling the rise of non-communicable diseases.

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