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Socioeconomic status and the 25 × 25 risk factors as determinants of premature mortality: a multicohort study and meta-analysis of 1.7 million men and women

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ABSTRACT

BACKGROUND - In 2011, WHO member states signed up to the 25 × 25 initiative, a plan to cut mortality due to non-communicable diseases by 25% by 2025. However, socioeconomic factors influencing non-communicable diseases have not been included in the plan. In this study, we aimed to compare the contribution of socioeconomic status to mortality and years-of-life-lost with that of the 25 × 25 conventional risk factors. **METHODS** - We did a multicohort study and meta-analysis with individual-level data from 48 independent prospective cohort studies with information about socioeconomic status, indexed by occupational position, 25 × 25 risk factors (high alcohol intake, physical inactivity, current smoking, hypertension, diabetes, and obesity), and mortality, for a total population of 1 751 479 (54% women) from seven high-income WHO member countries. We estimated the association of socioeconomic status and the 25 × 25 risk factors with all-cause mortality and cause-specific mortality by calculating minimally adjusted and mutually adjusted hazard ratios [HR] and 95% CIs. We also estimated the population attributable fraction and the years of life lost due to suboptimal risk factors. **FINDINGS** - During 26.6 million person-years at risk (mean follow-up 13.3 years [SD 6.4 years]), 310 277 participants died. HR for the 25 × 25 risk factors and mortality varied between 1.04 (95% CI 0.98-1.11) for obesity in men and 2.17 (2.06-2.29) for current smoking in men. Participants with low socioeconomic status had greater mortality compared with those with high socioeconomic status (HR 1.42, 95% CI 1.38-1.45 for men; 1.34, 1.28-1.39 for women); this association remained significant in mutually adjusted models that included the 25 × 25 factors (HR 1.26, 1.21-1.32, men and women combined). The population attributable fraction was highest for smoking, followed by physical inactivity then socioeconomic status. Low socioeconomic status was associated with a 2.1-year reduction in life expectancy between ages 40 and 85 years, the corresponding years-of-life-lost were 0.5 years for high alcohol intake, 0.7 years for obesity, 3.9 years for diabetes, 1.6 years for hypertension, 2.4 years for physical inactivity, and 4.8 years for current smoking. **INTERPRETATION** - Socioeconomic circumstances, in addition to the 25 × 25 factors, should be targeted by local and global health strategies and health risk surveillance to reduce mortality.

KEYWORDS: -

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