

Lifespan inequalities and mortality risk across social determinants of health

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Abstract

Identifying individuals at high risk of mortality is vital for guiding public health policy and reducing lifespan inequalities. However, multiple factors influence health and mortality in various manners, making it difficult to identify at-risk individuals. This article aims to understand inequalities across multiple social determinants of health – how they act in tandem with one another – and to identify individuals at high risk of mortality more accurately using a scoring system. Using data from the U.S., we found that not all social determinants of health have the same degree of influence on lifespan and mortality, e.g., education often has a greater impact on lifespan differentials than race. But being low-educated was not sufficient to be considered at high risk of mortality. The subpopulations with the highest mortality risk are those with multiple detrimental social determinants of health. The suggested scoring system helps navigate through the complex interaction between multiple social determinants of health and to identify when individuals can be considered at high mortality risk. A similar scoring system by cause of death was also created to identify which groups of the population could be considered at high risk of mortality from specific causes. Even if subgroups of the population have similar mortality levels, they are often subject to different cause-specific mortality risk.