

Educational differences in mortality after hospitalization for Cardiovascular diseases and stroke

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Study background

Disparities in health and mortality across educational groups are striking and pervasive. While there has been progress in unraveling the direction of causality, much less attention has been devoted to understanding the mechanisms through which the higher educated achieve their health advantage. If high educated people are better in processing health information this would imply that after hospitalization for cardiovascular diseases (CVD) or stroke they have a lower mortality than low educated admitted for the same reason. An important issue is that education attainment, hospitalization and mortality may all depend on the same observed and unobserved individual factors. Such confounding factors render education and hospitalization endogenous in the mortality analysis.

Research question

Do high educated have a lower mortality than low educated after hospitalization for CVD or stroke? If so, how important is selection in explaining this difference?

Data and methods

We use Swedish Military Conscription Data (1951-1960) linked to administrative Swedish registers. Information on hospitalization for Cardiovascular Diseases and strokes (timing of admittance and discharge) are derived from the Inpatient register. To obtain the causal impact of education on mortality after hospitalization we account for both the selection into hospitalization, by using a correlated multistate model for the hospitalization processes (both admittance and discharge) and mortality and, for the selection into education, by using a re-weighting technique (inverse propensity weighting) based on the probability to attain higher education.

Results

Without account for endogeneity we find large educational differences in the survival one year after hospitalization for CVD or stroke. These large differences shrike substantially when we control for endogeneity.

Main conclusions

The survival difference after hospitalization for CVD or stroke between high and low educated are mainly due to selection, factors that influence educational attainment also influence this mortality.