

Energy Poverty and Subjective Health: Micro-Level Evidence from Germany

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Abstract

Energy poverty of households can make their members sick. When households experience difficulties securing an adequate, socially determined level of energy services, termed energy or fuel poverty (Boardman 1991, Bouzarovski 2014), this may lead to financial stress on the one hand and to insufficient heating (and cooling) of living quarters on the other hand. This, in turn, can cause health issues such as a higher risk of hypertension, inflammation, cardiovascular diseases, thrombosis, and respiratory illnesses (Gallerani et al. 2004, Fares 2013). Recent research finds a robust causal relationship between energy poverty and health in several high-income countries like France, Australia, and the UK (Kahouli 2020, Awaworyi Churchill and Smyth 2021, Davillas et al. 2022). Since a sizable proportion of German households faces at least temporarily a situation of energy poverty (Drescher und Janzen 2021), this is a relevant public health hazard in Germany as well. We investigate the causal link between energy poverty and health in Germany.

Using high-quality longitudinal data from the national representative German Socio-Economic Panel, we assess the relationship between energy poverty and self-rated health by estimating fixed-effects

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ordered logit regression models. Using both expenditure-based as well as subjective indicators, we find a robust negative association of energy poverty with one's general health status. This finding is especially pronounced when applying a consensual-based indicator which may better capture underconsumption of energy as a result of financial constraints: Household members that report to be unable to keep their home comfortably warm during colder months experience an increase in the odds ratio of reporting worse general health that is comparable in size to the well-established association between unemployment and health. We address concerns of potential endogeneity and assess the causality of this association by instrumenting energy poverty with administrative data on household specific energy prices.

Energy poverty is a related but distinct issue from income poverty, and so the policy implications of these findings extend beyond just social benefits and wage regimes. In addition to addressing these areas, policies aimed at improving housing conditions – such as retrofitting thermal insulation or adopting more efficient heating systems – could be crucial in both tackling energy poverty and improving health outcomes.

Literature

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