

# Health Satisfaction and Energy Spending

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This study explores the link between energy spending and health satisfaction which has not been investigated in literature so far. The intuition of this link is twofold: higher energy spending can increase health satisfaction as it enables households to adequately heat their homes and to sustain a certain level of comfort if, for example, energy prices rise. This has direct impacts on health and therefore on health satisfaction. But on the contrary, higher energy spending could indicate lower health satisfaction as higher energy spending might be induced by making up for inefficiently insulated and therefore inadequately heated homes without higher comfort. Also, an increase in energy spending might cause substitution effects by forcing households to reduce consumption of other goods like healthy food that have an impact on health, as well. Thus, higher energy spending might also have additional indirect effects causing lower health and health satisfaction levels.

Health satisfaction is regarded as a predominant domain of overall quality of life of individuals. Until now analyses of health satisfaction have mainly focused on drivers such as income or age. Within the medical literature it has been shown that an improvement of housing conditions can lead to a better health situation of household members.

We aim to show that energy spending is a driver of health satisfaction and therefore of the overall quality of life of individuals. This has important implications for decision makers especially in the context of fuel poor and low-income households. Households with high energy spending tend to live in inefficiently insulated homes that are not heated adequately. We use a British panel household survey dataset with more than 60,000 observations covering the period 1997 to 2007 and apply a fixed effects econometric model which enables us to take unobservable heterogeneity among individuals into account. We focus on the direct link between energy spending per room and health satisfaction and control for impacts of other determinants such as



access to gas, age, income, and satisfaction levels in other domains of life such as social life or leisure. Indirect effects are assumed to be implicitly covered by the use of these control variables. Altogether, we focus on non-medical drivers of health satisfaction and therefore, illnesses or medical treatment are not explicitly taken into account.

Our estimation results show that energy spending has negative significant impacts on health satisfaction. Thus higher energy spending leads to lower levels of health satisfaction and will also have negative impacts on overall quality of life. Also households with no access to gas have a significantly lower health satisfaction while health satisfaction increases in income.

Politicians aiming at improving health satisfaction of individuals should consider energy spending and energy affordability. People having difficulties in warming their homes adequately will be less satisfied with their health. Lower levels of health satisfaction probably imply lower levels of the objective health situation of individuals and might lead to higher costs in the health sector. Given that achieving climate change objectives can lead to higher energy bills for households this can result in lower health satisfaction of some of these. Realizing energy policy objectives needs to be in line with social aspects. It is therefore necessary to undertake policy measures to protect the most vulnerable among these in order to avoid a further increase in inequality among households. Impacts of measures like fuel spending support need to be weighed against other instruments such as income support or home insulation improvement measures.

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