Evidence on the Relationship between Low Income and Poor Health: Is the Government Doing Enough?

MICHAELA BENZEVAL, JAYNE TAYLOR and KEN JUDGE

Abstract

The government’s report, Opportunity for All: Tackling Poverty and Social Exclusion (Department of Social Security, 1999), identified poor health as one of the major problems associated with low income. However, much of the available evidence on the relationship between income and health is of little help in forming policies to reduce health inequalities, as it has tended to be based on cross-section surveys and is therefore unable to shed much light on causal effects. Here, we make use of two British longitudinal datasets to examine the longer-term influences of income on health within a life-course perspective. We then use the results of our analysis to provide a brief critical assessment of the likely success of the government’s anti-poverty strategy in reducing health inequalities. A more detailed assessment of government policy in this respect can be found in Benzeval et al. (forthcoming).

JEL classification: I1, I3.

© Institute for Fiscal Studies, 2000
I. INTRODUCTION

While it is widely recognised that poverty, or low income, is associated with poor health, even in rich societies, the nature of the relationship between income and health status is not clearly understood. A degree of confusion is often created by the use of occupational class as a proxy for income and by the failure to take account of the fact that poor health can lead to low income as well as vice versa. There is also growing support for the idea that poverty should be viewed as a dynamic concept, not a static one. From this perspective, cross-section studies of income and health, which abound in the literature, are not particularly helpful. For example, Ellwood (1998) argues that it is vital to understand the dynamics of people’s experiences in order to design effective policies:

... dynamic analysis gets us closer to treating causes, where static analysis often leads us towards treating symptoms. ... If, for example, we ask who are the poor today ... The obvious static solution ... is to give the poor more money. If instead, we ask what leads people into poverty, we are drawn to events and structures, and our focus shifts to looking for ways to ensure people escape poverty.

Ellwood, 1998, p. 49

Following the logic of this perspective, there is a growing literature on poverty and income dynamics that looks not so much at who is poor but why they are. At the same time, social policies in both Britain and the US are beginning to focus on changing people’s life-course trajectories, by emphasising the role of education and promoting work opportunities as a means of tackling poverty (Ellwood, 1998; Blair, 1999; Department of Health, 1999b). The purpose of this article is to extend this approach to the debate about health inequalities. First, we briefly review the evidence on the relationship between income and health over the life course. In Section III, we present results of an analysis of income and health over time based on data from two British datasets. Section IV briefly assesses the extent to which government policy is addressing some of the key causes of health inequalities and considers how successful its strategy might be in the light of the evidence we find.

II. BACKGROUND

A recent review of the literature has identified a range of studies that examine the relationship between adult health and income over time (Benzeval and Judge, forthcoming). These studies employ a range of different ways of measuring income over time, which can be roughly grouped into three categories:

- income levels over a number of years;
- income change over time;
- duration of poverty experience.
All of the studies identified that include measures of income *levels* over time find a significant correlation with health outcomes. One study that incorporates both long-term and current income finds that the former has a much more powerful impact on health than the latter (Mullis, 1992). However, McDonough et al. (1997) find little difference in the association between mortality and income measured at different points in time.

Most of the studies that include measures of income *change* also find significant results. Income loss appears to have a much stronger effect on health than increases in income (Hirdes et al., 1986). In general, people whose income falls over time have poorer health outcomes than those whose income remains stable or increases (Duncan, 1996). In the majority of studies that contain both income level and income change variables, the former appears to be more significant.

Finally, and of particular interest to us here, a number of studies focus specifically on measures of very low income, or poverty. They find that persistent poverty appears to be most damaging for health. Those people who are persistently poor have worse health outcomes than those who experience poverty only occasionally or not at all (Smith and Zick, 1994; Menchik, 1993).

While all of these studies do contain a longitudinal element — and most take into account the dynamic nature of income, the possibility of health selection and a range of other confounders — only one of them considers the role of life-course influences (Elder and Liker, 1982). Moreover, none of the studies deals with the issue of indirect selection, i.e. the fact that income and health might be jointly determined by the same prior experiences or characteristics. In order to explore these relationships, one needs to look to an individual’s circumstances in childhood as well as their adult-life experiences, and this breadth of information is rarely available in a single survey.

A range of studies have demonstrated the significance of childhood factors for adult health (Peck and Vagero, 1989; Kaplan and Salonen, 1990; Power, Manor and Fox, 1990; Lundberg, 1993; Power and Matthews, 1997; Kuh et al., 1997). In particular, Lundberg (1993) found that economic hardship in childhood resulted in significantly higher risk of ill health in adulthood. Two broad mechanisms or pathways have been put forward to explain such associations (Lundberg, 1993; Kuh et al., 1997):

- the *biological* pathway: disadvantaged socio-economic circumstances during gestation, infancy and childhood result in ‘biological’ changes in the child, including poor health, that later lead to ill health in adulthood;
- the *social* pathway: disadvantaged socio-economic circumstances in childhood lead to poor educational and other learning experiences that result in poor socio-economic circumstances in adulthood and consequent ill health.
Through these two pathways, individuals enter adulthood with an accumulated risk profile in various domains of their lives that will affect their future socio-economic circumstances and health (Kuh et al., 1997). Here, we are concerned with two key dimensions that we define as ‘income potential’ and ‘health capital’. Income potential is the accumulation of abilities, skills and educational experiences in childhood that are important determinants of adult employability and income capacity. Education is seen as the key mediator in this association (Kuh et al., 1997), being strongly influenced by family circumstances in childhood and a central determinant of an individual’s income in adulthood. Health capital is the accumulation of health resources, both physical and psychosocial, ‘inherited and acquired during the early stages of life which determine current health and future health potential’ (Kuh et al., 1997, p. 173). We can think of income potential and accumulated health resources as key components of an individual’s general human capital development. Figure 1 illustrates the role that these resources play in determining adult health within a life-course perspective.

In childhood, we are particularly interested in the effect of parental financial resources (or living standards) on the development of children’s health capital and income potential. Other characteristics of the parents — for example, their education and health — reflect their personal resources which are also likely to be important. In addition, family composition and relationships, in particular whether or not parents stay together, have all been shown to be significant for child development.
The process of transition from childhood to adulthood, via the accumulation of risk profiles with respect to health and income potential, is described above. We focus on the role of health status and educational qualifications on moving into adulthood as key determinants of later adult health and living standards. Finally, in adult life an individual’s living standards and health are determined partly by their life-course experience up to that point and partly by the social roles — in terms of marital status, employment and parenthood — that they assume.¹

Underlying all of these various interrelationships, an individual has certain characteristics that are generally unchangeable by the individual, such as age, gender and ethnicity, which may also affect their health and socio-economic status throughout their life. Whilst age, unlike gender and ethnicity, is not ‘fixed’ in the true sense of the word, we group all of these factors together in our empirical analysis and refer to them collectively as ‘fixed factors’. In addition, an individual may have ‘unobservable’ characteristics that are genetic or inherited at birth which may influence a range of outcomes. If these effects are not taken into account, then the observed association between income and health might not reflect the true relationship. However, it is generally very difficult to find appropriate measures to act as proxies for such characteristics, as discussed below in relation to our two datasets. Finally, resources in the broader community and neighbourhood characteristics will also have an influence on the childhood and adulthood relationships identified in Figure 1.

Using this framework, the next section presents an analysis of the link between income and health over the life course, using data from two British longitudinal surveys.