

The Impact of Family Socioeconomic Status on Children's Height and Adult Earnings

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Abstract: We employ three decades (1971-2000) of National Health and Nutrition Examination Survey (NHANES) data to estimate the relationship between socioeconomic status (SES) and health in the United States by ethno-racial and income group. Specifically, we first estimate the influence of parental income on child height controlling for parental height and childhood illness; and then whether family SES (proxied by adult height) influences adult earnings controlling for adult educational attainment, health, and other human capital characteristics. Having estimated the proportion of height that is explained by parental SES, and adequately instrumented adult height to control for factors that may influence both adult height and earnings (e.g., childhood diet), we accomplish two things. First, we estimate whether a SES-height gradient exists in the United States. And second, we estimate the relative contributions of childhood environment, adult educational attainment, current health, and other human capital on adult earnings.

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1. Introduction

Despite suspicion among social scientists that income poorly reflects well-being dating back to the development of national income accounting in the 1930s (Bennett, 1937; Kuznets, 1941; Nordhaus & Tobin, 1973; Scitovsky, 1992 [1976]); research produced by economic (Fogel, 1994; Steckel, 1995) and medical (Porter, 1997) historians as well as auxiological epidemiologists (Tanner, 1978 [1990]) intimating that height (or stature) aptly summarizes genetic heredity and environmental influences on early childhood development; and recent evidence linking height with economic, marital and political success – we are aware of no study employing recent data that has investigated the biological and environmental determinants of height in the United States and how height and income are related.

Absolute income, immigration, and climate are generally thought to be unlikely explanations for between-population differences in height, but various environmental and social factors such as child care, geographic altitude, degree of urbanization, religion, sleeping patterns, dietary context, and income inequality are thought to be more credible (Bilger, 2004). In light of recent scholarly work (Smith, 1999; Steckel, 1995) and popular press coverage (Bilger, 2004) suggesting a strong direct relationship between various anthropometric measures of human growth and being married, securing higher earnings, and employment promotions, it is surprising that there has been little effort to understand the relationship(s) between income and height.¹ Indeed, this recent work confirms evidence of a socioeconomic status-height gradient in industrialized nations produced in the mid-1970s but largely ignored (Eveleth & Tanner, 1976).

In this paper we employ four (1971-2000) cross-sectional National Health and Nutrition Examination Survey (NHANES) data to estimate the relationship between socioeconomic status

¹ An exception (Case, 2001), finds that the additional money provided by a pensioner in one's household resulted in a five centimeter increase in child's height for age after controlling for sex, household size, number of children in household, and a complete set of quarter-since-birth indicator variables to control for the effect of age on height through schooling.

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