Health and the Academic Achievement and Educational Attainment of Adolescents: Evidence from the NLSY97

Steven A. Haas[1] and Nathan Edward Fosse[2]
Harvard University

Previous research has demonstrated that those who experience childhoods marked by poor health and illness not only continue to have poorer health throughout their lives, but also have significantly diminished educational attainment in adulthood (Haas 2004; Conley and Bennett 2001; Wadsworth 1986). In addition, poor health early on in life has been linked to a number of factors that play important roles in the process of educational attainment. For example, poor early life health status has been linked to childhood cognitive development and achievement (Boardman et al. 2002; Edwards and Grossman 1979; Lichtenstein et al. 1993; Matte et al. 2001; O'Brien Caughy 1996; Sorensen et al. 2000; Wadsworth 1986). Similarly, using height as a proxy for childhood health and nutrition, Douglas et al. (1968) find that those children who were high academic achievers also tended to be taller than non-high achievers. Having shown the importance of childhood health in determining later life educational outcomes, the question that follows is: by what mechanisms do these effects manifest themselves? What is it about poor childhood health that leads to lowered educational outcomes? That is the question that this analysis seeks to answer.

Disentangling the specific mechanisms by which childhood health impacts educational attainment is difficult. Work by Meijer et al. (2000) hints at social functioning as a possible mechanism. They find that chronically ill children are more submissive and have their social activities restricted relative to their healthy peers. In

[1] Department of Society, Human Development, and Health.
[2] Department of Sociology

addition, chronically ill children may have altered developmental trajectories. Illness may be associated with increased periodic and/or prolonged school absences. A second explanation is that chronic poor health in childhood may alter individual preferences for educational achievement and attainment. Thus they may have diminished educational aspirations, and subsequently be enrolled in educational tracks less conducive to higher educational attainment.

The immediate aims of this project will be to investigate if and how poor health affects high school completion and the mechanisms underlying this relationship. Research questions addressed by this project include: Does health alter educational aspirations and expectations? Is health associated with academic aptitude and achievement? Are those in poor health less likely to be enrolled in a college preparatory track? Are they less likely to take or score higher on college entrance and advanced placement exams?

This analysis uses data from the National Longitudinal Survey of Youth 1997 (NLSY97) cohort. The NLSY97 is an ongoing cohort study of 9,000 youths born in the years 1980-1984 and was designed precisely to study the transition out of high school and into postsecondary education and, ultimately, into the labor force. Information on these youths was collected from their parents, their school transcripts, and from the youths themselves. A potential problem involves disentangling the effect of childhood health from other observed and unobserved family characteristics that may be both correlated with child health and educational attainment. Because the NLSY97 includes numerous sibling pairs, it allows the use of fixed-effects models to control for such potential

confounding. Any observed differences between siblings reflect differences in individual level characteristics and not shared family and environmental characteristics.

Preliminary results confirm the previously found association between childhood health and educational attainment. Controlling for demographic background and family socioeconomic status, adolescents who report better health are less likely to repeat a grade and are more likely to receive a high school diploma over a 5 year period. Adolescent health is also associated with academic achievement. Healthy adolescents spend more time studying, and have higher grade point averages. Healthy adolescents also obtain higher scores on the Math Piat test. However, they do not appear to score differently on the Armed Services Vocational Aptitude Battery (ASVAB). Health also appears to influence the peer and social relationships of adolescents. For example, adolescents who report poorer health are significantly more likely to be the victims of bullying and are more likely to be involved in physical altercations. The results provide some of the first longitudinal analyses confirming what previous researchers have largely speculated: health influences academic attainment in adolescent, and it does so by influencing students' performance and their social connections in school. In addition, we will expand this research by more explicitly focusing on the latter mechanism, that is, how health in adolescent influences their social participation in school.

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