Parental Education and Child Wellbeing:

A Prospective Longitudinal Study

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Abstract

Parental education is associated with a wide range of child outcomes indicative of health and well-being. Taking a life course perspective, we address potential selectivity based on parents' earlier experiences, which could drive both their educational attainments and their children's well-being. Youth Development Study data were obtained from 265 parents (G2), from their parents (G1), and from their 422 children (G3, mean age 16). We find that G2 parental education is negatively related to G3 child depressed mood and delinquency, and positively related to child self-esteem, mastery and achievement, when controlling the same well-being indicators measured during the G2 parents' adolescence, the education and income of G1 families, G2 marital and teen birth status at the time of the G3 child's birth, and G3 age and sex. We conclude that the association between parental education and child well-being is highly robust, and will examine potential mediators in the coming months.

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Recent research has clearly shown that adults in the United States with higher levels of education lead healthier lives, both physically and psychologically, and they live significantly longer (Baker et al., 2011; Institute of Medicine, 2012; Pampel, Krueger, & Denney, 2010; Woolf & Aron, 2013). Education may be considered a fundamental cause of health and mortality, through the creation of hierarchies of social, psychological, informational, and material resources (Link & Phelan, 1995). Moreover, there is mounting evidence that the benefits of education extend intergenerationally, as parental education is positively related to children's physical health, academic success, and emotional well-being (Carneiro, Meghir, & Parey, 2013; Chen & Li, 2009; Currie & Moretti, 2002; Desai & Alva, 1998; Magnuson, 2007; Oreopoulous, Page, & Stevens, 2006).

However, key gaps remain in our understanding of the relationship between parental education and child outcomes (Desai & Alva, 1998). The lack of prospective information from parents (Carneiro et al., 2013; Crosnoe & Cavanaugh, 2013) is of concern because attributes and experiences early in the life course are likely to shape parental educational attainment, parental well-being, and children's outcomes. For example, advantages in childhood have long-term effects on both education and adult health (Ross & Mirowsky, 2011); in some studies controlling for these factors has substantially reduced the magnitude of education's effects (Behrman et al., 2011; Fujiwara & Kawachi, 2009). Similarly, causal processes underlying the relationship between parents' education and child outcomes are not well understood (Baker et al., 2011). Much research has focused on children rather than adolescents (e.g., Maguson, 2007). Finally, given historical changes in educational attainments, a reliance on data from past cohorts may not be relevant to the experiences of the current generation of parents and children (e.g., Currie & Moretti, 2002; Desai & Alva, 1998).

These gaps in the literature point to a need for more research that employs intergenerational data to examine how early life socioeconomic advantages and other attributes of parents might account for the association between parental educational attainment and the wellbeing and achievement of their adolescent children. Most important from the perspective of this paper, higher educational attainment on the part of parents and positive adjustment and better health on the part of their children may both stem from factors that predate either one.

Identifying the benefits of parental educational attainment for offspring well-being is especially important as postsecondary educational credentials are increasingly needed to secure a "good" job in the contemporary economy capable of providing family economic security. Importantly, demographers have identified "diverging destinies" in family life for those with and without college degrees (McLanahan, 2004), with the latter more likely to experience union dissolution and family instability. College degrees (particularly four-year college degrees) are becoming increasingly tied to experiences and behaviors in adulthood that are theorized as potential mediators of the influence of educational attainment on adult health, and these mediators likely influence child health and well-being as well. For instance, the employment and earnings gap between those who earn four-year degrees and those who obtain less education is substantial and growing (Day & Newburger, 2002; Goldin & Katz, 2008; Grusky, Western, & Wimer 2011). Diverging pathways with respect to education, income, economic stressors, and family instability are found to have considerable importance for the next generation of children (Amato &

Cheadle, 2005; Bornstein & Bradley, 2014; Conger, Shofield, Neppl, & Conger, 2010; Costello, Compton, Keeler, Angold, 2003; Reid, Patterson, & Synder, 2002).

In the present study, we take a life course perspective by examining the relationship between parental educational attainment and adolescent mental health, achievement, and delinquency. We use intergenerational data derived from longitudinal surveys of 422 children and 265 parents. As we describe in more detail below, the parents in this project have completed surveys since they were adolescents (first surveyed nearly 25 years ago), describing their mental health, achievement, and delinquency before completing their schooling. By controlling for these early life precursors of eventual educational attainment, we can better assess whether their education itself has implications for the well-being of their children. The intergenerational component of this study is contemporary and the parents are primarily female and relatively disadvantaged, allowing us to see how education impacts health and well-being among demographic groups whose children are potentially at risk.

The data were obtained from the Youth Development Study, which has followed a cohort of more than a thousand youth from mid-adolescence to the late 30's. The study began in 1988 with a sample of 1,139 ninth graders selected randomly from the St. Paul Minnesota Public Schools. During the initial four years, survey data were obtained in schools from the students (G2); thereafter we surveyed the youth yearly or biannually to the age of 37-38 (in 2011). Approximately two-thirds of the panel have been retained in recent waves. In 2009, we began recruiting their children (G3), targeting those age 11 and over. By 2011, 67% of the parents of eligible children had given their consent for the children's participation, and 422 children filled out surveys.

The key predictor in this analysis is parent (G2) highest educational degree attainment at age 37-38. Given the importance of four year degrees, we distinguished parents who received a BA/BS degree or higher (18% of respondents) from those who had intermediate degrees (i.e., associate or vocational technical degrees; 29%) or no postsecondary degrees (53% had a high school degree or less). Outcome variables were derived from child (G3) responses to the most recent survey from 2009 to 2011. Depressed mood was based on four items derived from the Health Insurance Study Mental Health Battery (Ware, et al., 1979), for example, "Have you felt depressed?," "Have you felt downhearted and blue?" Positive self esteem was measured using three items from the Rosenberg self-esteem scale (e.g., "I feel I have a number of good qualities," "I take a positive attitude toward myself"); mastery with six items from the Pearlin Mastery scale (e.g., "I can do just about anything I really set my mind to do", "What happens to me in the future mostly depends on me"). Grade point average was self reported (ranging on a 12-point scale from "F" to "A"), and delinquency was based on a variety scale capturing past year involvement in theft, violence, and substance use (ranging from 0 to 9 types of delinquency).

In multivariate regressions, other contemporaneous parent (G2) predictors (besides parent educational attainment) include union status, that is single, cohabiting, or married at age 37-38, household income (logged), and parent gender (75% female). Importantly, we also include earlier indicators of parental advantage, mental health, and achievement, including the educational attainment and household income of G1 parents (describing G2's family of origin), G2 depressed mood, self-esteem, mastery, and delinquency (measured in adolescence, prior to

reaching their own eventual educational attainment). We also include circumstances at the time of the G3 child's birth (the parent's union status and teen parenthood; 29% of the G3 children were offspring of teen parents). Finally, we controlled G3 sex (53% female) and age (average age=16).

Table 1 displays estimates from multivariate regressions (OLS and negative binomial) for five child outcomes. Children whose parent attained a BA/BS degree or higher report significantly less depressed mood than those whose parents did not attain a postsecondary degree (see Table 1 col. 1). Children whose parents held an intermediate degree also had lower levels of depressed mood compared to those who had no college degree, but this difference was statistically non-significant (t-value=-.83). This intergenerational education-health association is present even after accounting for G2 household income and union status, and importantly, lagged measures of depressed mood and socioeconomic background assessed when the parent was an adolescent. The results in the first column also show girls and older youth have significantly higher levels of depressed mood than boys and younger children. The age and marital status of the parent at child's birth were not significantly associated with depressed mood. Parent educational attainment has a consistent effect on self-esteem (column 2), mastery (column 3), GPA (column 4), and delinquency (column 5). Parental BA/BS degree receipt is associated with significantly higher self-esteem, mastery, and GPA, and is negatively related to delinquency, even after including strong controls for selection influences. Interestingly, parental attainment of an intermediate vocational-technical or Associates degree confers no child benefit, with respect to these five outcomes, when compared to children of parents with no higher education.

This preliminary study suggests significant robust effects of parental educational attainment on child health and well-being. Early life course experiences, including parents' family background and their own well-being during adolescence, do not account for the benefits of having more highly educated parents. In the coming months we will examine additional mediating mechanisms, occurring after the child's birth, that may illuminate the processes through which parents' educational attainment matters for children. Taking advantage of the long-term, frequent assessments the parents have participated in since adolescence, we will examine the parent's unemployment history since the child's birth, stage-specific indicators of family economic well being (e.g., during the early years of the child's life), and job quality. We will also assess the quality of parenting, as indicated by parent-child closeness and communication, and indicators of parents' contemporaneous health and well-being.

Table 1. Effects of Parent Educational Attainment on Offspring Mental Health, Achievement, and Delinquency

	Depressed mood		Self Esteem		Mastery		GPA		Delinquency	
Parent measures (G2)	est	t-value	est	t-value	est	t-value	est	t-value	est	t-value
Parent educational attainment										
BA/BS or higher	-.340	-2.600	.178	2.570	.201	2.950	.797	2.490	-.384	-2.000
Votech or associates	-.095	-.830	.045	.730	.077	1.260	.488	1.830	-.035	-.280
No postsecondary degree (ref)										
Parent union status										
Cohabiting	.021	.140	.046	.620	-.019	-.290	.088	.240	-.004	-.020
Married	-.134	-.990	.087	1.260	.047	.700	.338	.980	-.013	-.080
Single (ref)										
Household income (log)	-.028	-1.490	.017	1.670	.009	.810	.047	.980	-.048	-1.630
Parent Male	.136	1.200	.056	.970	-.005	-.080	-.049	-.200	-.119	-.810
Parent measures in adolescence (G2)										
Depressed mood (z-score)	.030	.660								
Self-esteem (z-score)			.049	2.070						
Mastery (z-score)					.031	1.220				
GPA (z-score)							.048	.360		
Delinquency (z-score)									.034	.520
Education of G1 parents (z-score)	.031	.570	-.012	-.370	-.017	-.480	.027	.210	.002	.030
G1 parent's income (z-score)	.071	1.260	.010	.340	.000	-.020	.114	.870	-.006	-.100
Child measures (G3)										
Child age	.126	5.750	-.033	-2.250	-.011	-.860	-.212	-3.560	.082	2.840
Child male	-.267	-2.950	.150	3.040	.101	2.000	-1.060	-4.880	.249	2.380
Parent union status at birth										
Cohabiting	-.017	-.130	.030	.410	-.015	-.210	-.491	-1.490	.316	1.990
Single	-.039	-.360	.020	.290	.034	.580	-.816	-2.800	.186	1.250
Married (ref)										
Parent teenager at child's birth	-.226	-1.730	.168	2.020	.074	1.060	.505	1.400	-.117	-.730
Constant	.932	2.390	3.226	13.980	2.902	14.030	11.963	12.360	-.679	-1.250
Model type	OLS		OLS		OLS		OLS		Neg binomial	

Note. Sample size=422 children nested in 265 families. 10 imputed datasets. Adjusted for clustering of children in families