

Parents' Health and Children's Future Employment Status

-Working Paper-

HwaJung Choi

Ann Ferris

University of Michigan

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Abstract

This paper examines whether poor parental health during parents' prime working ages impacts children's resource constraints and hence their labor force decisions in young adulthood. The economic burden of poor health may play a significant role in reshaping children's labor market choices and constraints. This effect may be larger for lower-income families, as their resources are more limited. We use two representative, longitudinal studies with detailed information on parents' health and children's labor outcomes: the Panel Study of Income Dynamics (PSID), and the Health and Retirement Study (HRS). Preliminary results suggest that parents' poor health reduces their children's subsequent working probability. Initial results also suggest that daughters whose parents were in poor health when they were 18 to 29 years old, are more likely to be searching for work ten years later than similar women with healthier parents. To understand the full mechanism of poor parental health on children's subsequent working status, it is necessary to examine pathways such as an educational attainment, marriage outcomes and transfer behaviors.

1 Introduction

This paper explores parental health impacts on adult children's labor force participation. We use the Panel Study of Income Dynamics (PSID) and the Health and Retirement Study (HRS) to estimate these impacts. Health status has been recognized as an important component of human capital that influences labor market productivity, hence labor income (Grossman, 1972). Adverse health events, particularly health problems occurring at prime working ages, can have significant, long-term impacts on family member's economic behaviors due to greater income loss. Despite such plausible spillover impacts from parents' health to child's labor outcomes, this issue has been under-explored in economics.

Recent studies have also suggested that the family's economic network can be an important source of income among lower-income populations (Haider and McGarry 2005; Sloan, Zhang, and Wang 2002) and young adult populations (Schoeni, 1997) in the United States. Focusing on intergenerational relationships, this paper also attempts to address how important a role informal transfers play in the link between parents' health and children's labor outcomes. Note that with parental health problems, both monetary and time transfers enter importantly in family members' choice sets. Therefore, consequent labor outcomes, particularly for children through young adulthood, will vary depending on various aspects such as initial economic condition, geographic proximity, social network availability and so on.

In this paper we examine whether poor parental health during parents' prime working ages impacts children's resource constraints and hence their labor force decisions in young adulthood. This paper also attempts to find channels through which parental health impacts play significant roles.

2 Conceptual Model

Parental health impacts on a child's subsequent employment status can be different depending on various conditions — initial family economic levels and/or number and gender of children in the family. Especially during young-adulthood, there are important pathways, such as education and marriage, which can play significant roles in the long-term link between parents' health problems and children's employment status. Bearing in mind such channels, this paper attempts to understand the long term consequences of children's economic responses to parental health problems.

To understand the full mechanism of parental health impacts on a child's subsequent employment status, we consider a time allocation model of individual utility maximization (e.g. Becker 1965) incorporating family economic linkages. With health problems of parents, a child's consumption (or production) possibility declines due to lower family resources available. The child, as a young adult, reallocates his or her time to maximize utility under the new resource constraint. In the process of time reallocation, educational attainment might be disrupted, marriage choices can be altered, and early job choices can be also affected by parental health problems.

Note that time transfer is also likely to emerge importantly as a child provides care-giving to the unhealthy parents. Increase in such time transfer is likely to be associated with lower labor force participation while increase in money transfer is associated with higher labor force participation. Such mutually contradicting situation can be relaxed by specialization among family members (e.g., among siblings).

To understand a child's long-term employment status, first, we will examine time allocations by solving a child's maximization problem under new constraints with parental health problems. Second, we will incorporate family economic linkage such as family transfers and family labor divisions.

3 Data and Sample

To understand parental health implications regarding children's future employment status, we explore two longitudinal studies in the United States: the Panel Study of Income Dynamics (PSID) and the Health and Retirement Study (HRS). First, we examine whether there is a long term relationship between parents' poor health and a child's employment status.

We use self reported health status in both the PSID and HRS as a measure of parental health. There are five possible categories for self-reported health: "Excellent", "Very Good", "Good", "Fair" or "Poor". We define poor health, for the parent, as either "Fair" or "Poor".

In the PSID, the earliest health measurement for all individuals was collected in 1986. In the baseline sample, we use parent's health in 1986 and a child's employment status in 1996 because PSID reduced the lower income sample (SEO sample) substantially from the 1997 survey year. Using the family map file in the PSID, we can identify intergenerational relationships even if they are not in the same household. The outcome variable for child's labor force status contains four categories: 1= Working/Temporarily laid off, 2=Looking for work, 3=Student and 4=Out of labor force. In sum, the baseline sample inclusion criteria using PSID core sample 1986-1996 are: (i) both biological mother and father are alive and identified in the baseline year (1986) (ii) parents are household head or wife in the baseline year (1986), (iii) parents live together in the baseline year (1986), (iv) at least one parent is alive and identified ten years later, (v) children's ages are between 18 and 29 in the baseline year (1986).

In the HRS, the first wave of interviews took place in 1992. The focus of the study is on retirement-aged individuals, so respondents in the initial sample are aged 51-61. We use information in 1992 to identify children of these respondents and their spouses, and rely on the longitudinal linking codes in the child-level HRS tracker file to follow these children to interviews 10 years later, in 2002. In sum, the sample selection criteria are: (i) mother and

father married (one spouse is a respondent), (ii) child is the biological child of both parents, and (iii) child's age is between 18 and 29, and in baseline year (1992).

Table 1 summarizes the baseline analysis sample, in both sources. Although our analysis using PSID focuses on the SRC and SEO samples, and 1986 as the base year, we also include sample summary statistics using only the SRC sample and 1992 to provide a comparison between PSID and HRS. In PSID (SRC+SEO), the mean age of mother is 51, father 54 and children 24. 21% of mothers and 26% of fathers reported poor health, as defined above, in 1986. 22% of mothers and 29% of fathers have more than a high school education. 40% of parents live in the same county as their children. Average family income is \$49,616 in 1986. In the HRS, the mean age of mothers is 52, fathers 56 and children 25. 15% of mothers and 18% of fathers report their health as "Fair" or "Poor". 34% of mothers and 40% of fathers have more than a high school education. 44% of children live within ten miles of their parents. Average family income is \$55,310 in 1992.

Figures 1 and 2 present employment status of sons and daughters in the PSID sample for 1986-1996 and in the HRS sample for 1992-2002. In both samples, almost all of the sons are working ten years later (90% in both samples), while daughters are less likely to be employed (primarily determined by marital status), but still a majority work (approximately 75% in both samples).

4 Estimates of Employment Status

We include two different sets of controls: Control I includes mother's age, mother's completed education, family income, proximity to parents, all in the baseline year. Control II includes children's own marital status and completed education ten years later. Regarding the outcome variable, we can use two categories (working or not) in HRS and three categories (working, looking for work, out of labor force) in PSID.

Table 2 summarizes results from logit regressions. These results suggest that there is a significant relationship between poor parental health when children are 18 to 29 and their working status ten years later. Using the PSID sample, having unhealthy father in 1986 is associated with a lower probability of working in 1996 for both sons and daughters. The son's predicted probability of working in 1996 is 95.6% with a relatively healthy father while only 89.0% with an unhealthy father, controlling for differences in mother's age, education family income, and whether the child lives near the parents. A daughter's predicted probability of working ten years later is 79.8% with a relatively healthy father but 72% with an unhealthy father. In the result from HRS, having an unhealthy mother in 1992 is associated with a lower working probability among sons in 2002. There is no estimated relationship for fathers, nor an impact on daughters if mothers are in poor health. The son's predicted probability of working in 2002 is 93.0% with a relatively healthy father while only 87.2% if his father was unhealthy in 1992, controlling for differences in mother's age, education family income, and whether the child lives near the parents.

Using the PSID, we can also explore unemployment status as well as working status. Table 3 summarizes results from a multinomial logit model for labor force status. Results indicate that daughters with unhealthy mothers in 1986 are more likely to be searching for work ten years later, in 1996.

5 Summary and Discussion

Using two cohort studies, this research found a significant, long term parental health impact on children's future employment status. The behavioral responses are different among mother's health, father's health, son's employment status and daughter's employment status. This suggests it is necessary to examine further how family structure, educational attainment, marriage and public policy can shape such discrepancy among family members and different time periods.

References

- Grossman, Michael (1972), "On the Concept of Health Capital and the Demand for Health," *Journal of Political Economy*, Vol. 80(2)
- Haider, Steven J. and McGarry, Kathleen (2005), "Recent Trends in Resource Sharing Among the Poor," NBER Working Paper. 11612
- McGarry, Kathleen and Schoeni, Robert F. (1995), "Transfer Behavior in the Health and Retirement Study: Measurement and the Redistribution of Resources within the Family," *Journal of Human Resources*, Vol. 30
- Schoeni, Robert (1997), "Private Interhousehold Transfers of Money and Time: New Empirical Evidence?" *Review of Income and Wealth*, Vol. 43
- Sloan, Zhang and Wang (2002), "Upstream Intergenerational Transfers," *Southern Economic Journal*, Vol. 69

Table 1: Sample Summary (PSID and HRS)

In baseline year	PSID (SRC+SEO) 1986 (N=1422)				PSID (SRC) 1992 (N=598)				HRS 1992 (N=3744)				
	Mother	Father	Children	Children	Mother	Father	Children	Children	Mother	Father	Mother	Father	Children
Age (mean)	51	54	24	23	49	52	23	25	52	56	52	56	25
Poorer Health	21%	26%	-	-	12%	12%	-	-	15%	18%	15%	18%	-
Higher Education	22%	29%	-	-	34%	49%	-	-	34%	40%	34%	40%	-
Close Proximity*	40%	-	-	-	39%	-	-	-	44%	-	-	-	-
Family income (mean)	\$49,616	-	-	-	\$71,987	-	-	-	\$55,310	-	-	-	-
10 years later													
Married**	-	-	64%	65%	-	-	65%	63%	-	-	-	-	63%
Higher Education	-	-	47%	62%	-	-	62%	65%	-	-	-	-	65%

Note 1: *Close proximity defined as follows: In PSID, within same county and in HRS, within 10miles.** In PSID, it is an indicator of whether spouse is in the family unit

Note 2: Inclusion Criteria for Analysis Sample -

With PSID (SRC+SEO), (i) both biological mother and father are alive and identified in the baseline year (1986/1992) (ii) parents are household head or wife in the baseline year (1986 / 1992), (iii) parents live together in the baseline year (1986 / 1992), (iv) at least one parent is alive and identified ten years later, (v) children's ages are between 18 and 29 in the baseline year (1986 or 1992)

With HRS, (i) mother and father married (one spouse is a respondent), (ii) child is the biological child of both parents, and (iii) child's age is between 18 and 29, and in baseline year (1992).

Figure 1: Employment Status for 1986 - 1996 (PSID)

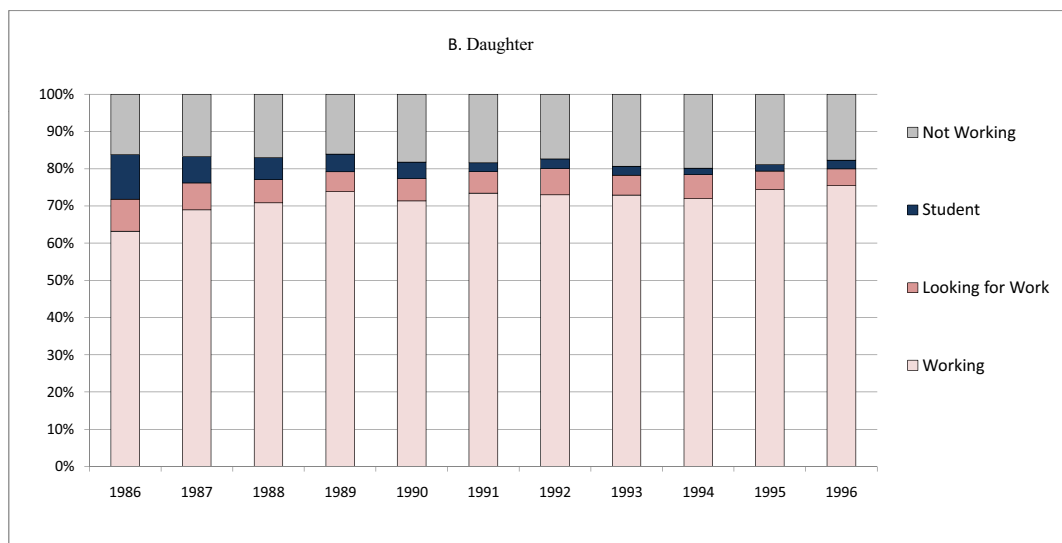
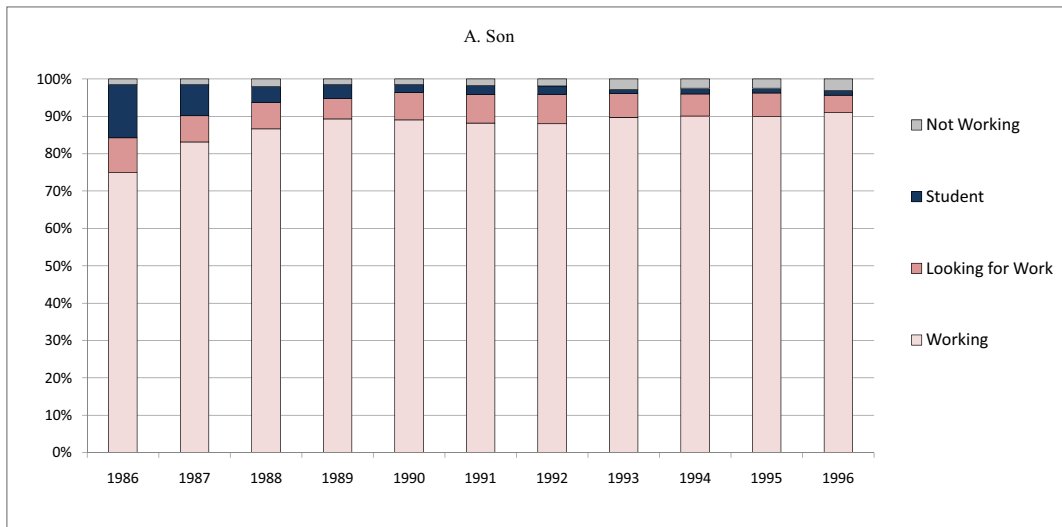


Figure 2: Employment Status for 1992 - 2002 (HRS)

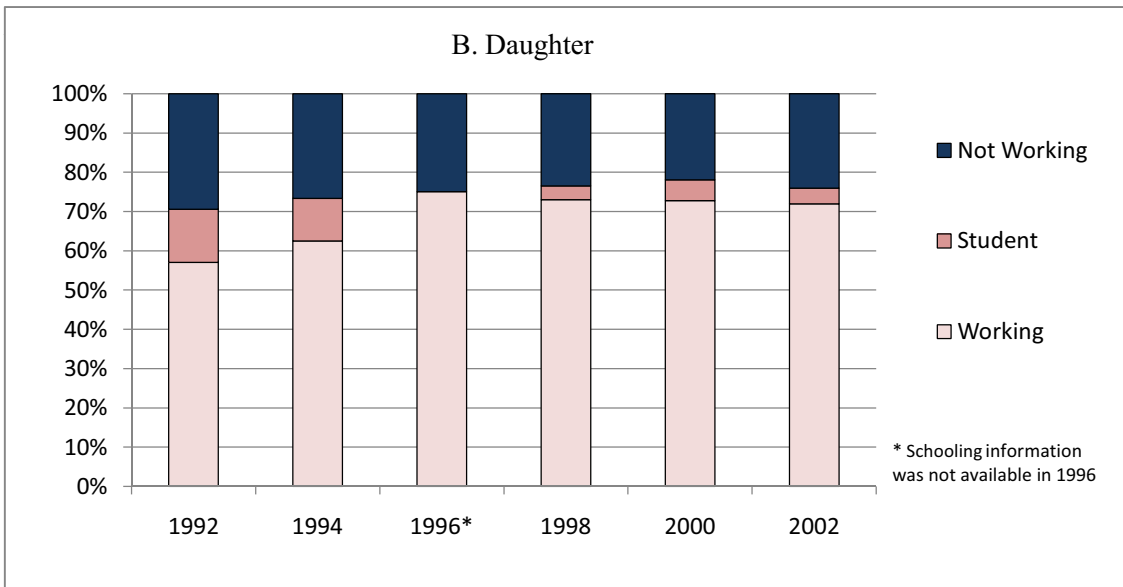
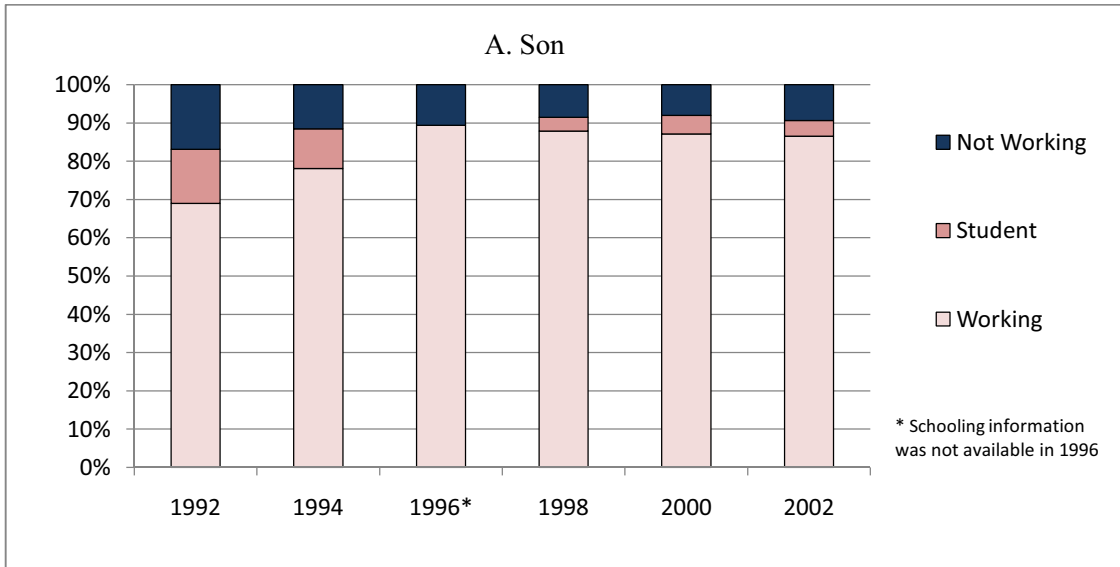


Table 2:
Association between Parents' Health and Subsequent Child's Working Probability

	PSID				HRS			
	Baseline Year=1986 (SRC+SEO) Outcome: Working 1996		Baseline Year=1992 Outcome: Working 2002		Baseline Year=1986 (SRC+SEO) Outcome: Working 1996		Baseline Year=1992 Outcome: Working 2002	
	Son (N=567)	Daughter (N=564)	Son (N=2161)	Daughter (N=2085)	Son (N=1998)	Daughter (N=1930)	Son (N=2085)	Daughter (N=1930)
<u>Coefficients</u>								
Mother's Poor Health in baseline year	-0.285 (0.39)	-0.348 (0.26)	-0.343 (0.26)	-0.664*** (0.192)	-0.673*** (0.206)	-0.061 (0.150)	-0.007 (0.156)	
Father's Poor Health in baseline year	-0.981*** (0.38)	-0.850** (0.24)	-0.428* (0.25)	-0.180 (0.190)	-0.005 (0.205)	0.011 (0.140)	-0.040 (0.144)	
<u>Predicted Probability</u>								
Mother								
Not in Poor Health	94.8%	95.7%	78.9%	79.7%	93.0%	94.1%	77.5%	77.9%
In Poor Health	93.2%	94.4%	72.5%	73.6%	87.2%	89.0%	76.4%	77.8%
Father								
Not in Poor Health	95.6%	96.2%	79.8%	80.7%	92.6%	93.5%	77.2%	78.0%
In Poor Health	89.0%	91.6%	72.0%	72.5%	91.2%	93.5%	77.4%	77.3%
Control I	YES	YES	YES	YES	YES	YES	YES	YES
Control II	NO	YES	NO	YES	NO	YES	NO	YES

Control I includes mother's age, mother's completed education, family income in baseline year, proximity to parents in the baseline year (1986 or 1992). Control II includes children's own marital status and completed education ten years later (1996 or 2002)

Table 3:
Association between Parents' Health and Subsequent Child's Working Probability
(Multinomial Regression, Reference Outcome = Not in the Labor Force)

		Baseline Year: 1986 (PSID SRC+SEO)	
		Outcome: Working 1996	
		Son (N=567)	Daughter (N=564)
<u>Coefficients</u>			
Mother's Poor Health in baseline year		0.110 (0.53)	-0.169 (0.30)
Father's Poor Health in baseline year		-1.093** (0.48)	-0.489* (0.26)
		Outcome: Looking for Work 1996	
Mother's Poor Health in baseline year		0.696 (0.78)	0.846* (0.49)
Father's Poor Health in baseline year		-0.248 (0.75)	-0.381 (0.55)
Control I	YES	YES	YES
Control I	NO	YES	NO
Control II	YES	YES	YES
Control II	NO	YES	YES

Control I includes mother's age, mother's completed education, family income in baseline year, proximity to parents in the baseline year (1986). Control II includes children's own marital status and completed education ten years later (1996)