Reciprocal Relations between Parental Employment Experiences and Child, Mother, and Father Health

Numerous studies have examined the associations between individuals' employment experiences and their health. Researchers now agree that the relationship between the two is bi-directional: employment status or shocks, such as unemployment or job loss, could diminish physical and mental health at the same time that poor physical and mental health are risk factors for unemployment or job separation. Studies that actually consider these reciprocal relationships, however, are rare, in part because of demanding data requirements; namely, longitudinal data with repeated measures of both health and employment characteristics. Moreover, many studies in this vein consider only the relationship between health and employment for the same individual. Within a family, however, it is easy to imagine that the health status of other family members, such as one's spouse or children, affect, and are affected by, one's own employment. In this study, we assess physical health-based selection into unemployment and job loss, as well as the effect of these circumstances on physical health, focusing on health changes and changes in employment circumstances over a two-year period. Our study, however, considers the health of fathers, mothers, and children and examines the employment circumstances of fathers and mothers in a nationally representative sample of two-parent married families. Doing so allows us to pose the question of whether, for example, mothers' (or children's) health affects fathers' employment circumstances (and whether the converse is also true) and, further, whether the health consequences of job loss extend beyond the job loser him or herself. Further, we examine a wider array of employment circumstances than has been studied in previous research (including persistent unemployment, voluntary and

involuntary job separations, and underemployment), and we also assess differences for low versus high-income families.

Data for this paper are drawn from the 1996 panel of the Survey of Income and Program Participation (SIPP). The SIPP, which is conducted by the Census Bureau, is a nationally representative sample of households whose (non-institutionalized) members are interviewed at 4-month intervals over a four-year period (each interview is considered a survey wave). Employment information is collected from each person in the household over the age of 15, thus allowing identification of maternal and paternal employment circumstances in two-parent households. At each interview, data are collected on economic conditions, including income and employment, as well as household composition, for the preceding four months. This allows measurement of within-year patterns of employment as well as economic resources (i.e., income level and source). Topical modules collecting information on health status and utilization of health care services are included in Waves 3, 6, 9 and 12 of the panel. This paper examines the interval between Waves 6 and 12, a time period of two years, and includes information on 5,577 children residing in 2,942 two-parent families; but will be expanded in subsequent analyses to include Wave 3 and measure a time period of three years.

Parental employment patterns are classified based on several labor force characteristics associated with the two-year interval between survey waves. The employment pattern variables are based on monthly labor force participation from the 24-month period between Wave 7 and Wave 12 of the SIPP. Mothers' and fathers' employment patterns are assigned to five mutually exclusive groups: (1) continually employed; (2) continually not working; (3) underemployed or downwardly mobile (i.e., an involuntary reduction in work hours); (4) at least one gap in

employment, all gaps are voluntary; and (5) at least one gap in employment, majority are involuntary.

Health status for children, mothers, and fathers are collected in the health topical module in both Waves 6 and 12. Mothers, fathers, and children over the age of 15 report their own current health status, and mothers report the health status for children under the age of 15. Specifically, respondents characterize their health in general as excellent, very good, good, fair, or poor (with respective scores ranging from 1 to 5). Multivariate regression analyses control for child (age, sex, and race), and household characteristics (mother age, father age, highest level of parental education, number of children residing in the household, number of adults residing in the household, whether the home is owned, log monthly income, and whether anyone in the household received SSI during the study period).

Table 1 presents the weighted descriptive statistics for all of the families in the sample, as well as these descriptive statistics for high and low income families. Twenty-five percent of the families are classified as low-income (monthly income less than 200% of the poverty threshold for a family of its size); 30 percent of the children reside in low-income families.

Table 2 presents the coefficients for a multinomial logistic regression predicting the job categories for both the mother and the father, where the base category for comparison (omitted) is "continually employed" over the two-year period, controlling for child, mother, and father health status simultaneously. A positive coefficient thus illustrates a positive association between the independent variable and being in the corresponding category relative to the omitted group (parent continually employed). For example, in Table 2, among the results for mothers' employment in the full sample, the coefficient suggests that a mother being in poorer health is

associated with a greater likelihood of her continually not working relative to being continually employed.

The examination of high and low income families separately is supported by a Chow test (F-test = 2.62). Looking first at mothers, among high-income families, only mothers' health status is significantly associated with her employment. However, among low-income families, in addition to the significance of mothers' own health, fathers' being in poorer health is significantly associated with increased likelihood of mothers' experiencing involuntary job losses. In no case does children's health affect mothers' employment.

The results for fathers differ somewhat. Among high-income families, in addition to the consistent associations between fathers' own health and his employment experiences, mothers' poorer health is associated with a decreased likelihood of fathers' continually not working and with fathers' experiencing involuntary job losses. Among low-income families, we do not see these associations between mothers' health and fathers' work; however, children's poorer health is associated with a decreased likelihood of fathers' continually not working.

Taken together, these findings suggest that (1) mothers' employment experiences, in general, are a function of their own health, but low-income mothers in particular are at greater risk of involuntary job loss if their husbands are in poorer health; and (2) fathers' employment experiences, in general, are a function of their own health, but high-income fathers in particular are less likely to not work and also less likely to lose jobs if their wives are in poorer health; whereas low-income fathers in particular are less likely to not work if their children are in poorer health.

Table 3 presents the findings from the second research question; namely, what is the impact of these parental employment experiences on the physical health of fathers, mothers, and

children. The dependent variable in these OLS regressions is a continuous measure of the Wave 12 health status (where higher scores indicate worse health) for children, mothers, and fathers. The predictor variables include baseline (Wave 6) health status for the all family members (father, mother, and child); both parents' employment experiences (the reference category is continually employed), and the set of control variables.

Table 3 presents the coefficients on the job categories for each of the regressions (child, mother, and father health) for all of the families, and separately for high and low-income families. As can be seen, the parental employment patterns are never significantly associated with child health. Among high-income families, mothers have significantly worsening health when they are underemployed or experience job losses, whether these losses are voluntary or involuntary. Interestingly, mothers' health improves somewhat in response to fathers' voluntary job separations in high-income families. High-income fathers who continually do not work show worsening over time in health. Similarly, among low-income families, fathers who continually do not work show worsening health over time. In addition, low-income mothers show worsening health over time when fathers are underemployed. Subsequent analyses will examine whether controlling for prior health status is sufficient as a control in these OLS analyses by examining change score models and testing if these results are robust to different model specifications.

Table 1

Weighted Descriptive Statistics of Study Variables

	All Families		High-Income Families		Low-Income Families	
	Mean or Proportion	SD	Mean or Proportion	SD	Mean or Proportion	SD
Mother Employment Pattern						
Continually works	40%	---	46%	---	21%	---
Continually does not work	19%	---	15%	---	34%	---
Underemployed	5%	---	5%	---	5%	---
Only voluntary job gaps	19%	---	19%	---	20%	---
Only involuntary job gaps	16%	---	15%	---	19%	---
Father Employment Pattern						
Continually works	71%	---	76%	---	57%	---
Continually does not work	3%	---	2%	---	5%	---
Underemployed	8%	---	7%	---	10%	---
Only voluntary job gaps	7%	---	7%	---	9%	---
Only involuntary job gaps	11%	---	9%	---	19%	---
Child Characteristics						
Age (baseline)	7.69	4.32	7.73	4.35	7.61	4.26
Gender (Girl)	49%	---	49%	---	50%	---
White	94%	---	95%	---	91%	---
Household Characteristics						
Mother age (baseline)	36.26	6.55	36.84	6.22	34.41	7.20
Father age (baseline)	38.60	7.22	39.01	6.95	37.28	7.89
Highest parental education						
<= High school	25%	---	16%	---	52%	---
Some college	16%	---	15%	---	19%	---
Two-year degree	19%	---	20%	---	16%	---
Bachelor's degree	25%	---	30%	---	9%	---
Master's degree or more	16%	---	19%	---	4%	---
Baseline number of children	2.03	0.95	1.90	0.80	2.43	1.23

Baseline number of adults	2.15	0.44	2.13	0.41	2.23	0.52
Own home (baseline)	84%	---	90%	---	64%	---
Log income (avg w1-w6)	8.40	0.65	8.63	0.43	7.63	0.62
Average continuous income (w1-w6)	5326.47	3729.31	6266.18	3771.96	2297.16	924.5
Median continuous income (w1-w6)	4613.35	---	5420.01	---	2254.06	---
Household member receives SSI	2%	---	1%	---	6%	---
Baseline health status						
Child	1.53	0.75	1.45	0.68	1.73	0.87
Father	1.95	0.92	1.89	0.88	2.17	1.03
Mother	1.97	0.89	1.88	0.85	2.27	0.96
Follow-up health status						
Child	1.54	0.73	1.47	0.67	1.73	0.83
Father	2.02	0.91	1.95	0.86	2.25	1.03
Mother	2.03	0.88	1.94	0.84	2.31	0.96

Note: Descriptive statistics for family level characteristics are reported for 2,942 families, and the child characteristics are reported for 5,577 children.

Table 2

Multinomial Logistic Coefficients: Regression of Parental Employment Patterns on Child, Mother, and Father Health

	Mother Employment Pattern									
	Continually does not work			Underemployed			Only voluntary gaps		Only involuntary gaps	
	B		SE	B		SE	B	SE	B	SE
All Families										
Child health status	0.19		0.17	0.00		0.29	0.11	0.17	0.16	0.18
Mother health status	1.13	***	0.28	0.36		0.49	-0.48	0.43	1.18 ***	0.30
Father health status	0.43		0.28	0.81		0.41	0.12	0.32	0.51	0.28
High-Income Families										
Child health status	0.16		0.23	0.30		0.32	0.14	0.20	0.36	0.20
Mother health status	1.40	***	0.38	0.90		0.49	-1.08	0.67	1.20 ***	0.34
Father health status	0.33		0.37	0.76		0.45	-0.11	0.41	0.20	0.35
Low-Income Families										
Child health status	-0.05		0.30	-0.76		0.61	-0.10	0.30	-0.23	0.33
Mother health status	0.82		0.51	-42.71	***	0.56	-0.33	0.65	1.12 *	0.57
Father health status	0.78		0.51	1.08		0.90	0.80	0.58	1.35 *	0.52
	Father Employment Pattern									
	Continually does not work			Underemployed			Only voluntary gaps		Only involuntary gaps	
All Families										
Child health status	-0.24		0.48	0.27		0.20	0.06	0.22	0.23	0.17
Mother health status	-0.99	*	0.47	0.20		0.37	0.49	0.35	-0.03	0.29
Father health status	4.33	***	0.37	0.85	*	0.35	-0.04	0.47	0.99 ***	0.30
High-Income Families										
Child health status	0.66		0.58	0.33		0.25	-0.18	0.31	0.24	0.24
Mother health status	-2.24	**	0.84	0.12		0.45	0.55	0.46	-1.55 *	0.65
Father health status	3.91	***	0.46	-0.39		0.58	-0.03	0.59	1.16 **	0.37
Low-Income Families										
Child health status	-1.43	*	0.69	0.13		0.32	0.20	0.34	0.17	0.25
Mother health status	-0.56		0.84	0.35		0.61	0.47	0.54	0.56	0.41
Father health status	6.05	***	0.90	1.96	***	0.55	0.22	0.84	1.24 *	0.55

Note: This analysis controls for the following variables: child age, child sex, child race/ethnicity, mother age, father age, highest parental education, number of children residing in the household, number of adults residing in the household, whether the parents own the home, log monthly income, and whether anyone in the household received SSI during the study period.

Table 3

Regression Analyses: Child, Mother, and Father Health as a Function of Parental Employment Patterns

	All Families								
	Child Health		Mother Health			Father Health			
	B	SE B	B		SE B	B		SE B	
Mother Employment Pattern									
Continually does not work	-0.02	0.03	0.08		0.04	-0.04		0.04	
Underemployed	0.12	0.06	0.30	***	0.07	0.04		0.07	
Only voluntary gaps	0.00	0.03	0.03		0.04	-0.04		0.04	
Only involuntary gaps	-0.02	0.04	0.19	***	0.04	0.02		0.04	
Father Employment Pattern									
Continually does not work	0.02	0.09	0.14		0.1	0.64	***	0.11	
Underemployed	-0.04	0.05	0.10	*	0.05	0.04		0.05	
Only voluntary gaps	-0.08	0.04	-0.12	*	0.05	-0.05		0.06	
Only involuntary gaps	0.03	0.04	0.00		0.05	0.12	**	0.05	

	High-Income Families								
	Child Health		Mother Health			Father Health			
	B	SE B	B		SE B	B		SE B	
Mother Employment Pattern									
Continually does not work	-0.03	0.04	0.07		0.05	-0.04		0.05	
Underemployed	0.11	0.07	0.39	***	0.09	0.04		0.08	
Only voluntary gaps	0.04	0.03	0.08	*	0.04	0.00		0.04	
Only involuntary gaps	0.00	0.04	0.18	***	0.05	0.00		0.04	
Father Employment Pattern									
Continually does not work	0.04	0.12	0.05		0.13	0.51	***	0.15	
Underemployed	-0.01	0.05	0.03		0.06	0.05		0.06	
Only voluntary gaps	-0.06	0.05	-0.12	*	0.06	0.01		0.07	
Only involuntary gaps	-0.01	0.05	0.00		0.06	0.10		0.06	

	Low-Income Families								
	Child Health		Mother Health			Father Health			
	B	SE B	B		SE B	B		SE B	
Mother Employment Pattern									
Continually does not work	-0.07	0.07	0.06		0.08	-0.04		0.09	
Underemployed	0.10	0.16	0.01		0.15	0.06		0.18	
Only voluntary gaps	-0.16	0.08	-0.13		0.09	-0.17		0.10	
Only involuntary gaps	-0.07	0.09	0.18		0.09	0.08		0.10	
Father Employment Pattern									
Continually does not work	-0.04	0.15	0.24		0.17	0.8	***	0.16	
Underemployed	-0.08	0.10	0.25	*	0.10	-0.01		0.12	
Only voluntary gaps	-0.11	0.09	-0.11		0.11	-0.16		0.1	
Only involuntary gaps	0.09	0.08	0.03		0.09	0.17		0.09	

Note: $*p < .05$. $**p < .01$. $***p < .001$. This analysis controls for the following variables: child age, child sex, child race/ethnicity, mother age, father age, highest parental education, number of children residing in the household, number of adults residing in the household, whether the parents own the home, log monthly income, whether anyone in the household received SSI during the study period, own health at Wave 6, and other two family members' health at Wave 6.