

Title: The Impact of Family Health on Child Well-Being

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While multiple studies have examined the adverse effects of children's disability or chronic illness on family functioning and marital stability, the impact of other family members' poor health or disability on children's emotional well-being and behavior has received less attention.¹ One notable exception is a 1994 study by LeClere and Kowalewski that used data from the 1988 Child Health Supplement of the U.S. National Health Interview Survey (NHIS).² Using a 28-item child behavioral problem index in the 1988 NHIS, LeClere and Kowalewski found that "the mean number of severe and common [child] behavioral problems were significantly increased by the presence of a disabled family member."ⁱⁱⁱ We revisit this research problem using more recent, newly released data from the NHIS for 1997-2009, and we extend the analysis by using multiple outcome measures and exploring additional research questions.

Our data come from the Integrated Health Interview Series (IHIS at www.ihis.us), an integrated online version of the NHIS created by the authors and others at the University of Minnesota with funding from the National Institute of Child Health and Human Development. The NHIS is a nationally representative annual household interview survey for the civilian non-institutionalized population, covering 75,000 to 100,000 people per year and addressing a broad range of topics related to health conditions, health behaviors, and health care access. IHIS allows us to easily pool data from multiple years (as needed to create adequate sample sizes), to identify relevant variables by survey year, to combine variables present in different files (e.g., the sample child file versus the person files), and to examine relationships and characteristics across family members.

Beginning in 1997, the NHIS was redesigned to collect a limited amount of information on all family members (i.e., on demographic characteristics, socioeconomic status, insurance coverage, disability and its causes, overall health status, and access to medical care) and more extensive information on one randomly-selected adult (the "sample adult") and one randomly-selected child (the "sample child") per family. The information collected on all survey participants allows us to identify whether sample children live with others who: (a) are reported to be in less than good overall health; (b) report any activity limitation; or (c) are limited by/have specific types of health problems (alcohol and drug problems, emotional problems, cancer, etc). Information collected on all survey participants also allows us to include in our multivariate models such variables as the age, sex, race/ethnicity, and

¹ For example, see Currie J and Lin W. (2007). "Chipping Away At Health: More on the Relationship Between Income and Child Health. *Health Affairs* 26 (2) 331–344; Anderson D., Dumont S., Jacobs P., and Azzaria L. (2007). The Personal Costs of Caring for a Child with a Disability: A Review of the Literature. *Public Health Reports*. Jan–Feb; 122(1): 3–16; Loprest, P., & Davidoff, A. (2004). How children with special health care needs affect the employment decisions of low-income parents. *Maternal and Child Health Journal*, 8, 171–182; Cadman, D., et al. (1991). Children with chronic illness: Family and parent demographic characteristics and psychosocial adjustment. *Pediatrics*, 87, 884–889.

² LeClere F and Kowalewski. (1994) "Disability in the Family: The Effects on Children's Well-Being." *Journal of Marriage and the Family* 56 (2), 457-468.

health/disability status of the child, family structure, and ratio of family income to the poverty line, which other studies have found to be independent predictors of reported emotional problems in children.³ In addition, information on the use of welfare services and disability insurance can be included in the analysis to control for potential confounders.

Information collected on sample children for 1997 forward provides multiple measures of emotional and behavioral problems in children. First, in each year, respondents were asked whether sample children age 4-17 had no, minor, definite, or severe difficulties "in any of the following areas: emotions, concentration, behavior, or being able to get along with other people." Using this measure with NHIS data from 2001, 2003, and 2004, Simpson et al. found that approximately 5 percent of U.S. children had definite or severe difficulties that lasted for at least one month.⁴ Second, in the 2001, 2003, and 2004 NHIS, answers to questions based on the Child Strengths and Difficulties questionnaire developed by Dr. Robert Goodman provide symptom scores for child emotional/behavioral problems that can be treated as a continuous variable or grouped into validated categories of "normal," "borderline," and "abnormal."⁵ Third, child mental health indicator scores, based on parental responses to four age- and sex-specific questions about emotional/behavioral problems, are available for toddlers, children age 4 to 11, and children age 12 to 17 in 1997-2000, and for toddlers in every year from 1997 to 2009. Fourth, for 1997-2000, information is available on whether parents reported their children age 4-17 had been "unhappy, sad, or depressed" during the past 6 months. These diverse indicators allow us to determine whether significant relationships exist between sample children's emotional/behavioral problems and the presence of serious health problems or disability for other family members--and whether these relationships persist across survey instruments or are sensitive to the child mental health indicator selected.

Our preliminary analyses suggest, for example, that children age 4-17 whose parents (step, biological or foster) have any functional limitation are about 2.5 times as likely to have reported emotional difficulties. We intend to refine and extend our analysis to address the following questions:

³ Mark T. and Buck J. (2006). "Characteristics of U.S. Youths with Serious Emotional Disturbance: Data from the National Health Interview Survey." *Psychiatric Services*. November: 57 (11) 1573-1578; Fujiura, G. (2000). "Trends in Demography of Childhood Poverty and Disability," *Exceptional Children* 66 (2): 187-199; Stacks A. (2005). "Using an Ecological Framework for Understanding and Treating Externalizing Behavior in Early Childhood." *Early Childhood Education Journal*. 32: (4); 269-278.

⁴ Simpson GA, Cohen RA, Bloom, B, and Blumberg, SJ. (2009) "The Impact of Children's Emotional and Behavioral Difficulties on Their Lives and Their Use of Mental Health Services," *Pediatric and Perinatal Epidemiology*, 23 (4), 472-481. See also Simpson GA et al. (2005) "U.S. Children with Emotional and Behavioral Difficulties: Data from the 2001, 2002, and 2003 National Health Interview Surveys." *Advance Data from Vital and Health Statistics*, no. 360. Hyattsville, MD: National Center for Health Statistics.

⁵ For more information about the Child Strengths and Difficulties survey instrument and scoring system, see <http://www.sdqinfo.com>.

1. What is the effect of different family members' (i.e., the household head, a sibling, the mother, the father, or any family member other than the sample child) **activity limitation** on children's emotional well-being?
 2. What is the effect of different family members' **poor health** (as measured by less than good overall reported health status, or number of bed disability days in the past 12 months, or reported recent emotional problems) on children's emotional well-being?
 3. What is the effect of **multiple** family members (other than the sample child) being limited in their activities or in poor health?
 4. Does the **type of activity limitation** (e.g., inability to work, limits on the amount and type of work, difficulty with activities of daily living, or difficulties with instrumental activities of daily living) matter as a determinant of children's emotional/behavioral problems?
 5. Are there **interactions** between the child's socio-demographic characteristics (e.g., age, sex, race-ethnicity, family structure, or poverty status) and the negative effects of family members' poor health or disability? Do various forms of welfare or insurance lessen the probability of emotional difficulties?
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