

Material Hardship in U.S. Families Raising Children With Disabilities

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ABSTRACT: *Researchers analyzed the 2002 wave of the National Survey of America's Families, conducted by the Urban Institute and Child Trends, and examined material hardship in families raising children with disabilities. Measures of hardship included food insecurity, housing instability, health care access, and telephone disconnection. The research indicated that families of children with disabilities experienced significantly greater hardship than did other families. As family income rose above the federal poverty level, hardship declined sharply for families of children without disabilities but not for families raising children with disabilities. Thus, the U.S. federal poverty level was found to be a particularly poor predictor of hardship for families raising children with disabilities. Finally, among families of children with disabilities, single-mother and cohabiting-partner families particularly were at risk for experiencing severe hardship. This article also discusses policy and advocacy implications.*

In the United States, children with disabilities are significantly more likely to live in families that are considered to be poor. Fujiura and Yamaki (2000) found that 28% of U.S. children with disabilities lived below the federal poverty threshold, as contrasted with 16% of children without disabilities. The federal poverty level used in the United States, however, is an absolute income

measure that does not account for actual consumption, elevated health care needs, or receipt of noncash benefits. This article examines the pervasiveness of material hardship among children with disabilities and their families and the extent to which the federal poverty level accurately describes material hardship in families raising children with disabilities.

LITERATURE REVIEW

FEDERAL POVERTY LEVEL

The United States uses an absolute income-based poverty threshold that was devised in the early 1960s using data that set the poverty level at three times the annual cost of a basic food budget. The items in this basic-needs “basket” essentially have remained unchanged for more than 25 years (Glennester, 2002), although this measure is adjusted annually for inflation. The assumption underlying the adoption of this poverty threshold was that families spent one-third of their total budget on food. Families with pretax income below this threshold are designated by the federal government as living in poverty.

The federal poverty level is controversial, because the formula for calculating the threshold has not changed despite the fact that housing, child care, and health-care costs in the United States have far outpaced food-cost inflation. Thus, today’s families spend a smaller proportion of income on food and a greater proportion on housing, health care, and other necessities (Citro & Michael, 1995; Porter, 1999). Furthermore, the U.S. poverty threshold fails to account for regional differences in the cost of living, the receipt of noncash benefits, and the costs of necessities such as child care and transportation. Therefore, the ability of this guideline to adequately identify those individuals whose basic needs are unmet is widely disputed (Beverly, 2001; Boushey, Brocht, Gundersen, & Bernstein, 2001; Renwick & Bergmann, 1993). In one early study of the validity of the federal poverty level, Mayer and Jencks (1989) found that a family’s income relative to the federal poverty level explained less than 25% of the variance in their reported levels of material hardship. Recent research not only supports this early evidence but also suggests that variation in the association between income poverty and forms of material hardship demonstrates that factors other than cash income influence experiences of material hardship (Iceland & Bauman, 2004).

Researchers caution against using these measurement tools in isolation because of the increasing evidence that measures of income poverty and material hardship capture different aspects of family well-being. Instead, a strong campaign now supports the use of a comprehensive ap-

proach utilizing an array of measures to determine a family’s ability to meet basic needs (Bauman, 1999; Beverly, 2001; Iceland & Bauman, 2004; Mayer & Jencks, 1989; Short, 2003). Toward this end, the National Academy of Sciences (NAS) Panel on Poverty and Family Assistance proposed strengthening the official poverty measure by including in-kind benefits and allotments for everyday expenditures; such changes would allow for updates in the standard of living over time (Citro & Michael, 1995). Although the U.S. Census Bureau is evaluating alternative measures, none have yet replaced the existing federal poverty threshold, and the recommendations of the NAS have not been implemented (Short).

Mounting evidence indicates that the traditional income poverty thresholds alone—whether relative or absolute—do not provide a complete picture of family well-being. Scholars recently have considered alternative measures, such as asset poverty (Grinstein-Weiss & Sherraden, 2006) and indicators of material hardship or deprivation, to understand families’ true ability to function within society and to maintain an acceptable standard of living (Beresford, 1996; Beverly, 2001; Boushey et al., 2001; Mayer & Jencks, 1989; Renwick & Bergmann, 1993; Short, 2003). Hardship research examines access to housing and health insurance, adequacy of the food supply, transportation, child care, and the ability to purchase other necessary items such as personal-care products and diapers.

These findings suggest that current poverty measures are inadequate to truly define minimum living standards. Rather than a singular measure of pretax income, alternative measures that include material hardship could more accurately describe those families that are forgoing necessities.

CHILDHOOD DISABILITY AND POVERTY

When compared to families of children without disabilities, families of children with disabilities face additional financial burdens, such as increased therapy costs, specialized day care, and adapting the home environment (Newacheck & Kim, 2005; Parish & Cloud, 2006). Although limited, research assessing the impact of raising children with disabilities on a family’s economic well-being is critically important. This is the case

not only because living in poverty increases the likelihood of a child having a disability (Fujiura & Yamaki, 2000), but also because the U.S. poverty level is used by both state and federal governments to determine eligibility for an array of social-welfare programs. Furthermore, a bidirectional relationship likely exists between poverty and disability: Poverty—through exposure to environmental hazards—leads to disability, and disability—by way of increased financial burdens—leads to poverty (Emerson, 2007).

In trying to understand the extent of deprivation in families raising children with disabilities, researchers have considered variables such as the increased financial costs of care needs for children with disabilities as well as reduced parental employment, particularly for mothers. A British study found that families of children with intellectual disabilities were significantly more disadvantaged than other families when compared on economic measures such as living in poverty, living in socially deprived locales, and rates of homeownership (Emerson, 2003). In the United States, families of children who have increased personal-care, medical, and therapeutic-service needs were found to have increased financial concerns as well as problems with work and sleep (Neely-Barnes & Marcenko, 2004). Another study found that, in the United States, families of children with disabilities had out-of-pocket health-care expenditures that were twice that of other families (\$352 versus \$174; Newacheck & Kim, 2005). Moreover, there is consistent evidence that U.S. public health insurance and other social-services programs (e.g., Medicaid, State Children's Health Insurance Program) do not cover all of the families' impairment-related expenses (General Accounting Office, 1999, 2000). In the United States, families largely bear the high costs of children's disabilities.

Raising children with disabilities also impacts family finances. Frequently, mothers reduce the number of hours they work or quit work altogether to stay at home and provide care for their children with disabilities (Emerson, 2004; Parish, Seltzer, Greenberg, & Floyd, 2004; Porterfield, 2002). This, in turn, reduces families' income and savings over time (Parish et al., 2004).

Two research teams have found compelling links between childhood impairment and measures of socioeconomic risk. Hogan and his col-

leagues (1997) found that, as compared to the families of children without disabilities, the families of children with disabilities were more likely to have their telephones disconnected and to live in mobile homes (which typically decrease in value rather than build equity). Children living in families at high socioeconomic risk—calculated using race, family structure, parental education, and three economic measures—were nearly three times more likely to have a serious functional limitation than were other children. Similarly, Fujiura and Yamaki (2000) found high rates of childhood disability among impoverished families.

The number of single-parent and cohabiting households increased substantially in the United States between 1990 and 2000 (Hobbs, 2005). Families headed by single mothers and those with cohabiting partners consistently have been found to be at increased risk for experiencing poverty and hardship as compared with families headed by married partners (Boushey et al., 2001; Manning & Lichter, 1996). Families headed by single mothers compose half of all poor U.S. households despite representing only one-fifth of total U.S. families (Gunn, 2003). Families comprised of cohabiting partners might have an economic advantage over single-parent families when the cohabiting partner's income is combined with family resources. Official poverty measures, however, typically do not reflect the inclusion of the cohabiting partner's income, and considerable debate exists over the extent to which an unmarried mother has access to the resources of her cohabiting partner (Lichter & Crowley, 2004; Manning & Lichter).

A few research teams have examined the structure of families raising children with disabilities and found that these children are less likely to live in a home comprised of two married parents than are other children (Anderson, Larson, Lakin, & Kwak, 2002; Cohen & Petrescu-Prahova, 2006; Hogan, Rogers, & Msall, 2000). Anderson and her colleagues (2002) found that 62.9% of U.S. children with disabilities who were 6 to 17 years old lived with two parents, and that 74.7% of children without disabilities who were in that same age group lived with two parents. Furthermore, Cohen and Petrescu-Prahova (2006) concluded that children with disabilities were more likely to live in homes headed by single mothers

as compared to children without disabilities. The reasons for the disparities in living arrangements between children with and without disabilities, however, are not clear.

*FAMILY STRUCTURE, DISABILITY,
AND POVERTY/HARDSHIP*

Previous research has failed to fully address the interplay of family structure and material hardship in families of children with disabilities. Fujiura and Yamaki (2000) found that, of the 28% of children with disabilities living in poverty, 38% of those children lived with married parents and 62% lived with single parents. These data stand in stark contrast to the 16% of typically developing children living in poverty, of which 50% lived in a home with married partners.

Although these statistics focus on prevalence rates and family economic indicators, they say little about comprehensive measures of poverty. On balance, few studies have examined material hardship and deprivation for families raising children with disabilities or analyzed the relationship between poverty and family structure in families raising children with disabilities. Given the dearth of research in this area, this study explored material hardship and family structure in U.S. families raising children with disabilities. Another primary aim of this study was to examine the adequacy of traditional federal poverty guidelines to satisfactorily measure the experience of these families. Specifically, the study addressed these research questions: (a) How does hardship differ for children with disabilities and children without disabilities? (b) Among children with disabilities, how does material hardship differ by family structure? and (c) How well does the U.S. federal poverty level represent those families with children with and without disabilities living with material hardship?

METHOD

DATA SOURCE

This study used data from the 2002 wave of the National Survey of America's Families (NSAF), which is a national telephone and area survey of approximately 42,000 households. Jointly con-

ducted by the Urban Institute and Child Trends, the NSAF is a cross-sectional study that is nationally representative of the civilian, noninstitutionalized population of children and adults who are less than 65 years old (Safir, Scheuren, & Wang, 2000). The NSAF had two components: Households with telephones participated in a random-digit dialed telephone survey, and households without telephones participated in an area sample (Judkins, Brick, Broene, Ferraro, & Strickler, 2001). In the area sample, respondents were loaned cell phones to complete the telephone interviews. The area sample ensured full population coverage, because an estimated 20% of poor families do not have telephones in their homes (Giesbrecht, Kulp, & Starer, 1996). Another strength of the NSAF design is that it oversampled minority populations, which are overrepresented in poverty in the United States. The NSAF collected data on an array of factors and characteristics related to health and economic and social well-being of children and adults; demographic and socioeconomic data; and information related to material hardship (Safir et al., 2000).

[T]he study addressed these research questions: (a) How does hardship differ for children with disabilities and children without disabilities? (b) Among children with disabilities, how does material hardship differ by family structure? and (c) How well does the U.S. federal poverty level represent those families with children with and without disabilities living with material hardship?

The NSAF is a large, complex survey. The development of the survey questions, the sampling methods, and the administration of the survey were completed with substantial effort to maximize reliability as well as internal and external validity. The NSAF questionnaire was modeled heavily on the instruments of survey predecessors such as the Current Population Survey, which is fielded by the U.S. Census Bureau, and the National Health Interview Survey, which

is fielded by the Centers for Disease Control and Prevention. This approach largely resulted in outcomes that are comparable to other national surveys on similar topics. Existing scales that were included in the NSAF questionnaire have good psychometric properties (Ehrle & Moore, 1997).

Furthermore, interviewers received extensive training and monitoring throughout the fielding of the surveys, and respondents were screened for potential panel effects, which were consistently found to be nonsignificant or too small to make a difference (Warren & Cunningham, 2003).

In terms of external validity, nonsampling errors could not be completely eliminated. Extensive efforts were made to compare the NSAF with other existing similar surveys for this reason and, generally, nonsampling errors in the NSAF are reasonably well controlled and produced only minor inconsistencies between the NSAF and other surveys (Abi-Habib, Safir, & Triplett, 2004).

SAMPLE

The NSAF subsample used in this study included families with children (i.e., excluded childless families). The NSAF protocol randomly selected families for inclusion in the study and, within families, randomly selected a study child from all children living in the household. Additionally, the NSAF protocol collected child data from the adult living in the household who was most knowledgeable about the child (typically the mother) and who provided responses to all questions about the child.

Children's disability status was determined from the NSAF survey question, "Does the child have a physical, learning, or mental health condition that limits his or her participation in the usual kinds of activities done by most children his/her age?" A "yes" response meant that the child was considered to have a disability; a "no" response meant that the child was deemed to not have a disability. The study sample included 28,141 households: 2,970 households had a child with disabilities, and 25,171 households had a child without disabilities. When weighted, the sample represented 7.31 million U.S. households having children with disabilities, and 65.34 million U.S. households having children without disabilities.

The sample characteristics are presented in Table 1. Notably, families raising children with disabilities were more likely to include older children, were more likely to be Black, had lower levels of maternal education, had older mothers, were less likely to have married partners, and were more likely to have income that was below the federal poverty level.

MEASURES

Outcome Measures. All NSAF indicators related to the following four categories of deprivation were analyzed: food insecurity, housing instability, telephone disconnection, and health care access. The NSAF included 11 measures across these four domains that were used to describe whether a family experienced material hardship or deprivation. Outcome measures of material hardship included four indicators of food insecurity: "worried whether food would run out," "food bought did not last," "cut/skipped meals for lack of money," and "received emergency food." "Received emergency food" was based on a question that was conditioned on the respondent family having income that was less than 200% of the federal poverty level. Two outcomes were related to housing: "unable to pay rent in past year" and "moved in with others in the past year." "Moved in with others in past year" was based on a question that was conditioned on being unable to pay rent in the prior year. One hardship measure was related to telephone disconnection: "loss of telephone service for more than one day in the past year." Four hardship outcomes were related to health care. Health-care access generally is conceptualized as including both the potential for obtaining appropriate health-care services and the actual use, or realization, of such services (Aday & Andersen, 1981, 1984). Two of the health-related outcome measures addressed potential access to health care: "having a usual source of health care" and "having health insurance." Two additional outcomes measured the child's realized access to care, or receipt of care when it was needed: "needed medical care was postponed during the past year," and "needed dental care was postponed during the past year." All of the hardship outcomes were dichotomous and all represented a negative condition, except

TABLE 1
Sample Participant Characteristics

Characteristic	Child With Disability (n = 2,970)		Child Without Disability (n = 25,171)		Chi-Square/ t-Test ^{b, c}	
	n	%	n	%	(df)	Sig.
Child's Age (Years)						
< 6	538	16.8	9,638	34.8	178.9	***
6–12	1,322	47.1	9,137	38.8	(2)	
13–17	1,110	36.1	6,396	26.4		
Child Gender						
Female	1,078	36.6	12,932	51.1	71.2	**
Male	1,892	63.4	12,239	48.9	(1)	
Mother's Race						
Black	485	19.8	3,612	17.2	10.2	**
White	2,378	76.6	20,627	77.8	(2)	
Other	107	3.6	932	5.0		
Mother's Education						
No HS Diploma	641	24.3	3,791	16.9	20.0	***
HS Diploma or Higher	2,311	75.7	21,179	83.1	(1)	
Mother's Age						
	38.1 (SD = 9.0)		36.4 (SD = 8.7)		6.6	
Family Structure						
Married Partners	1,647	59.9	16,968	69.4	42.6	***
Cohabiting Partners	247	7.4	1,659	6.2	(2)	
Mother Only	1,062	32.8	6,415	24.4		
Family Income						
0–99% FPL ^a	571	19.3	3,547	16.0	39.5	***
100–199% FPL	830	16.7	5,909	21.8	(3)	
200–299% FPL	588	20.7	4,839	19.3		
≥ 300% FPL	981	33.3	10,876	43.0		

^aThe federal poverty level (FPL) is set by the U.S. government; \$16,600 (U.S.) for a family of three, \$20,000 (U.S.) for a family of four. ^bChi-squared test of the null hypothesis of no group differences. ^cIn the case of Mother's Age, this is a *t*-test of the null hypothesis of no group differences.

p* < 0.05; *p* < 0.01; ****p* < 0.001.

“having a usual source of health care.” All outcomes addressed the previous 12-month period.

Income Poverty Measures. The NSAF provided variables that described household income in relation to the U.S. federal poverty level. As noted, the federal poverty level is determined using a household's total income from all sources and the number of individuals living in the household. The income guidelines are constant across all the states, except for slight increases in Hawaii and Alaska (U.S. Department of Health and Human Services [DHHS], 2006). A family with total

household income below the federal poverty guideline is deemed to be poor. Further, poverty researchers and policy makers traditionally have considered families with total household incomes that are above the federal poverty guideline but below twice the guideline to be low-income or near-poor families. For the purposes of this study, families were stratified into four income groups: (1) those having income that is less than 100% of the federal poverty level (poor); (2) those having income that is 100% to 199% of the poverty level; (3) those having income that is 200% to 299% of

the poverty level; and (4) those having income that is 300% or more of the federal poverty level. For example, the 2006 federal poverty level for a family of four is \$20,000 (DHHS); therefore, a family of four having a total household income of \$30,000 would be determined to be living at 150% of the federal poverty level, and stratified into the second group.

ANALYSES

A stratified sample was analyzed, so researchers used the statistical software package SUDAAN to adjust standard errors and inferential statistic estimates. SUDAAN uses Taylor-series linearization to estimate variance with survey data derived from complex sampling designs such as the NSAF (Research Triangle Institute, 2001; Safir et al., 2000).

The proportion missing for each variable used in these analyses ranged from 0 (for 12 of the variables) to 0.03; most of the variables with missing data had 1% or 2% missing. The researchers analyzed data that were subjected to multiple imputations because of missing data on several demographic and survey item variables (Schafer, 1997). A model was developed for generating conditional probability distributions for the missing values, from which random draws were made. This process was repeated five times, which created five versions of the data, each of which was subjected to the analysis. The five sets of estimates were combined according to specific rules that account for the uncertainty of the randomly drawn values (Little & Rubin, 2002). To conduct the imputation, SAS PROC MI was used; an option in SUDAAN allows for combining the multiple parameter estimates into single-point estimates. As noted, “received emergency food” and “moved in with others in past year” were based on questions that were asked only of respondents who gave certain responses to other questions. Respondents who accordingly were not asked the question were flagged with an “I” in place of a valid response. These represent intended missing values and were not imputed.

The primary analytic strategy employed was multivariate logistic regression, which was selected because the dependent measures were binary. For ease of interpreting the results, they are

reported as odds ratios (ORs). The ORs are transformations of the coefficient estimates obtained from logistic regression models and indicate the likelihood (odds) of, for example, children with disabilities having a usual source of care relative to children without disabilities. An OR of less than 1 indicates that children with disabilities are less likely to have a usual source of care as compared to children without disabilities. An OR that is greater than 1 indicates the opposite—that children with disabilities are more likely to have a usual source of health care in contrast with children without disabilities. Indicators of statistically significant group contrasts are presented in Table 2 and Table 3.

The analyses were conducted in three stages. First, material hardship among families was compared, based on the target child’s disability status, using 11 hardship measures (Table 2). In the second stage material hardship was contrasted between families raising children with disabilities, based on the structure of their families: (a) living with married partners, (b) living with cohabiting partners, and (c) living with single mothers (Table 3). Children living with single fathers were excluded from the analysis because the sample was too small to produce reliable estimates. The study reports the ORs and 95% confidence intervals (CIs) for all variables entered into the logistic regression models.

First-stage models compared families of children with and without disabilities controlling for household income; family structure; mother’s race, age, and education; and the age of the child. In the second-stage analysis, the models compared families of children with disabilities by their structure and controlled for the child’s age and the mother’s age, race, and education. An interaction between income and family status was tested.

The final stage illustrated the percentage of families experiencing various levels of hardship in each of the four income categories relative to the federal poverty level. These hardship descriptions are presented in two types of figures. In the first type (see Figures 1–4), only families including a child with disabilities were considered; the hardships were counted by type (food, housing, telephone, and medical) and overall (ranging from 0 to 11) and stratified into four income levels. In the second type (see Figure 5) all families were

TABLE 2

Odds Ratios (95% CIs) of Reported Hardship During Past Year, Among Children With and Without Disabilities

	(1)	(2)	(3)	(4)	(5)	
	<i>Worried That Food Will Run Out</i>	<i>Food Did Not Last</i>	<i>Cut/ Skip Meals Because of Lack of Money</i>	<i>Received Emergency Food</i>	<i>Unable to Pay Rent</i>	<i>Mother's Education (HS)</i>
Intercept	0.22**	0.12**	0.05**	0.05**	0.10**	0.10
Confidence Intervals	0.16, 0.30	0.08, 0.17	0.04, 0.07	0.02, 0.09	0.07, 0.14	0.07, 0.14
Disabled Child	1.78**	1.78**	1.89**	2.34**	1.72**	1.22
Confidence Intervals	1.52, 2.08	1.52, 2.07	1.60, 2.24	1.92, 2.85	1.46, 2.04	0.83, 1.83
Income: < 100% FPL	7.24**	7.65**	7.11**	3.92**	4.27**	2.36
Confidence Intervals	6.00, 8.75	6.24, 9.37	5.67, 8.91	2.27, 6.78	3.55, 5.15	1.22, 4.51
Income: 100% to 199% of FPL	5.58**	5.64**	5.21**	2.64**	3.22**	1.22
Confidence Intervals	4.84, 6.43	4.80, 6.62	4.23, 6.40	1.51, 4.60	2.74, 3.79	0.62, 2.04
Income: 200% to 299% of FPL	2.86**	3.02**	3.36**	1.28	2.43**	1.51
Confidence Intervals	2.43, 3.37	2.52, 3.63	2.68, 4.21	0.66, 2.52	2.03, 2.90	0.83, 1.46
Cohabiting Partners	1.86**	1.73**	1.73**	1.30	2.03**	1.22
Confidence Intervals	1.48, 2.34	1.40, 2.14	1.36, 2.20	0.92, 1.83	1.62, 2.53	0.62, 2.04
Single Mothers	1.71**	1.68**	1.70**	1.34**	1.68**	1.91
Confidence Intervals	1.49, 1.97	1.47, 1.91	1.46, 1.97	1.09, 1.66	1.45, 1.93	1.11, 3.33
Mother's Race (Black)	1.28**	1.31**	0.75**	0.97	1.30**	0.83
Confidence Intervals	1.08, 1.52	1.11, 1.55	0.62, 0.90	0.77, 1.23	1.08, 1.56	0.51, 1.33
Mother's Race (Other)	1.31#	1.57**	0.99	0.77	0.77#	0.62
Confidence Intervals	0.96, 1.78	1.14, 2.16	0.64, 1.54	0.45, 1.34	0.59, 1.02	0.33, 1.02
Mother's Education (HS)	0.68**	0.67**	0.75**	0.81*	0.92	0.77
Confidence Intervals	0.58, 0.80	0.57, 0.79	0.62, 0.90	0.67, 0.98	0.78, 1.09	0.44, 1.33
Child's Age	1.02**	1.03**	1.02**	1.01	1.02**	1.00
Confidence Intervals	1.01, 1.04	1.02, 1.04	1.01, 1.04	1.00, 1.03	1.01, 1.04	0.99, 1.01
Mother's Age	0.98**	0.99**	0.99	1.01	0.99**	0.99
Confidence Intervals	0.97, 0.99	0.98, 0.99	0.99, 1.00	0.99, 1.02	0.98, 1.00	0.98, 1.00
# of Doctor Visits						
Confidence Intervals						
# of Dental Visits						
Confidence Intervals						

(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>able to Rent</i>	<i>Moved In With Others</i>	<i>No Phone for More Than One Day</i>	<i>Has Usual Source of Health Care</i>	<i>Uninsured at Any Time</i>	<i>Medical Care Postponed</i>	<i>Dental Care Postponed</i>
*	0.18**	0.06**	24.24**	0.19**	0.05**	0.16**
0.14	0.07, 0.47	0.04, 0.09	14.18, 41.46	0.13, 0.28	0.03, 0.07	0.12, 0.21
*	1.24	1.81**	1.36*	0.63**	1.61**	1.83**
2.04	0.80, 1.93	1.42, 2.30	1.03, 1.81	0.51, 0.77	1.33, 1.94	1.58, 2.11
*	2.36*	7.38**	0.26**	3.42**	1.72**	1.56**
5.15	1.21, 4.61	5.61, 9.69	0.18, 0.36	2.67, 4.37	1.33, 2.24	1.27, 1.91
*	1.26	5.06**	0.35**	4.09**	1.52**	1.83**
3.79	0.64, 2.47	3.96, 6.48	0.26, 0.46	3.36, 4.98	1.25, 1.86	1.56, 2.13
*	1.55	2.95**	0.58**	2.31**	1.51**	1.62**
2.90	0.81, 2.96	2.27, 3.84	0.42, 0.80	1.88, 2.84	1.24, 1.84	1.39, 1.89
*	1.23	1.66*	0.86	1.31*	1.18	1.26*
2.53	0.63, 2.39	1.12, 2.48	0.63, 1.17	1.03, 1.67	0.90, 1.55	1.01, 1.57
*	1.97*	1.64**	0.84	0.85*	1.54**	1.20*
1.93	1.12, 3.49	1.33, 2.02	0.67, 1.06	0.72, 1.00	1.31, 1.82	1.03, 1.40
*	0.82	1.56**	0.78#	0.89	0.65**	0.75**
1.56	0.52, 1.29	1.22, 1.99	0.59, 1.02	0.73, 1.08	0.52, 0.82	0.62, 0.91
	0.68	0.62*	0.48**	1.01	0.81	0.93
1.02	0.30, 1.53	0.42, 0.93	0.32, 0.71	0.72, 1.41	0.59, 1.11	0.71, 1.22
	0.71#	0.84	2.00**	0.43**	1.19#	1.15
1.09	0.47, 1.07	0.68, 1.03	1.63, 2.45	0.34, 0.54	0.97, 1.46	0.97, 1.36
*	1.00	1.03*	0.92**	1.04**	1.03**	1.01
1.04	0.96, 1.05	1.01, 1.05	0.90, 0.94	1.02, 1.06	1.02, 1.05	0.99, 1.02
*	0.97**	0.97**	1.02**	0.99**	0.99	0.99
1.00	0.94, 0.99	0.96, 0.98	1.01, 1.03	0.98, 0.99	0.98, 1.00	0.99, 1.00
					1.09**	
					1.07, 1.11	
						1.00
						0.96, 1.04

Note. Reference groups: Children without disabilities, married-partner families; household income of > 299% FPL; White mothers; mothers with less than a HS education. FPL = Federal poverty level.
n = 2,970 families of children with disabilities; *n* = 28,141 families of children without disabilities.
 ***p* < 0.01; * 0.01 ≤ *p* < 0.05; # 0.05 ≤ *p* < 0.10.

TABLE 3

Odds Ratios (95% CIs) of Reported Hardship During Past Year, Among Children With Disabilities, by Family Structure

	(1)	(2)	(3)	(4)	(5)	
	<i>Worried That Food Will Run Out</i>	<i>Food Did Not Last</i>	<i>Cut/Skip Meals Because of Lack of Money</i>	<i>Did Get Emergency Food</i>	<i>Unable to Pay Rent</i>	<i>M Wit</i>
Intercept	0.40*	0.21**	0.09**	0.13**	0.11**	1.0
Confidence Intervals	0.18, 0.89	0.08, 0.52	0.03, 0.23	0.04, 0.42	0.05, 0.26	0.1
Cohabiting Partners	2.10*	1.56	2.01*	0.99	2.40**	1.7
Confidence Intervals	1.17, 3.78	0.84, 2.88	1.04, 3.87	0.49, 2.01	1.31, 4.39	0.4
Single Mothers	1.41*	1.42*	1.83**	1.20	1.60**	7.0
Confidence Intervals	1.02, 1.95	1.01, 2.00	1.26, 2.65	0.76, 1.90	1.16, 2.22	2.4
Income: < 100% FPL	4.80**	5.16**	4.00**	3.82**	3.55**	0.3
Confidence Intervals	3.13, 7.37	3.27, 8.15	2.33, 6.88	1.50, 9.74	2.17, 5.80	0.1
Income: 100% to 199% of FPL	6.47**	5.66**	4.38**	3.28*	3.59**	0.2
Confidence Intervals	4.23, 9.92	3.66, 8.75	2.70, 7.12	1.31, 8.21	2.26, 5.69	0.0
Income: 200% to 299% of FPL	1.92**	1.80*	1.93*	2.19	1.77*	0.1
Confidence Intervals	1.25, 2.96	1.14, 2.86	1.08, 3.45	0.66, 7.26	1.10, 2.84	0.0
Mother's Race (Black)	1.46#	1.53*	0.72	1.06	1.44#	0.5
Confidence Intervals	0.99, 2.14	1.03, 2.28	0.48, 1.08	0.66, 1.69	0.93, 2.21	0.2
Mother's Race (Other)	1.50	1.45	0.91	0.54	1.44	0.1
Confidence Intervals	0.68, 5.30	0.71, 2.95	0.39, 2.12	0.24, 1.21	0.78, 2.64	0.0
Mother's Education (HS)	0.69*	0.70*	0.75	0.92	0.99	1.0
Confidence Intervals	0.48, 0.99	0.49, 1.00	0.50, 1.12	0.61, 1.41	0.67, 1.47	0.5
Child's Age	1.05**	1.06**	1.04*	1.03	1.05**	1.0
Confidence Intervals	1.01, 1.09	1.02, 1.10	1.00, 1.09	0.98, 1.07	1.01, 1.09	0.9
Mother's Age	0.98*	0.98	1.00	0.99	0.99	0.9
Confidence Intervals	0.96, 1.00	0.96, 1.00	0.98, 1.02	0.97, 1.02	0.97, 1.01	0.8
# of Doctors Visits						
Confidence Intervals						
# of Dental Visits						
Confidence Intervals						

(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>able to Rent</i>	<i>Moved in With Others</i>	<i>No Phone for More Than One Day</i>	<i>Has Usual Source of Health Care</i>	<i>Uninsured at Any Time</i>	<i>Medical Care Postponed</i>	<i>Dental Care Postponed</i>
*	1.07	0.10**	21.58**	0.13**	0.07**	0.27**
0.26	0.15, 7.40	0.03, 0.32	5.35, 87.04	0.05, 0.32	0.03, 0.19	0.13, 0.59
*	1.72	1.80	0.55	1.18	1.31	1.90*
4.39	0.40, 7.36	0.68, 4.75	0.24, 1.26	0.60, 2.32	0.71, 2.42	1.08, 3.34
*	7.04**	1.74*	0.57#	0.67#	1.25	1.28
2.22	2.44, 20.35	1.09, 2.78	0.32, 1.01	0.43, 1.03	0.78, 2.00	0.90, 1.81
*	0.33#	4.49**	0.32**	2.65**	2.17*	1.32
5.80	0.10, 1.09	2.24, 9.00	0.15, 0.68	1.42, 4.95	1.17, 4.05	0.80, 2.18
*	0.26*	3.89**	0.42*	3.02**	2.06**	1.71*
5.69	0.08, 0.82	2.12, 7.15	0.20, 0.86	1.69, 5.39	1.29, 3.29	1.11, 2.61
	0.12**	1.16	0.64	1.93*	1.41	1.62*
2.84	0.03, 0.45	0.51, 2.65	0.27, 1.49	1.03, 3.62	0.90, 2.20	1.10, 2.39
	0.54	1.59#	0.86	0.76	0.65	0.54**
2.21	0.22, 1.36	0.96, 2.63	0.44, 1.68	0.47, 1.22	0.38, 1.12	0.36, 0.81
	0.11*	0.36#	1.08	1.35	0.87	0.69
2.64	0.02, 0.62	0.11, 1.21	0.29, 4.07	0.56, 3.28	0.39, 1.96	0.29, 1.66
	1.05	1.04	2.16**	0.72	1.44#	0.91
1.47	0.51, 2.17	0.58, 1.84	1.29, 3.60	0.46, 1.12	0.95, 2.19	0.61, 1.34
*	1.08	1.04	0.90**	1.00	1.07**	1.04#
1.09	0.97, 1.21	0.99, 1.10	0.83, 0.97	0.95, 1.04	1.02, 1.12	1.00, 1.08
	0.92**	0.97#	1.04*	1.00	0.98	1.00
1.01	0.87, 0.96	0.95, 1.00	1.00, 1.08	0.97, 1.02	0.96, 1.00	0.98, 1.02
					1.08**	
					1.04, 1.12	
						0.94
						0.86, 1.02

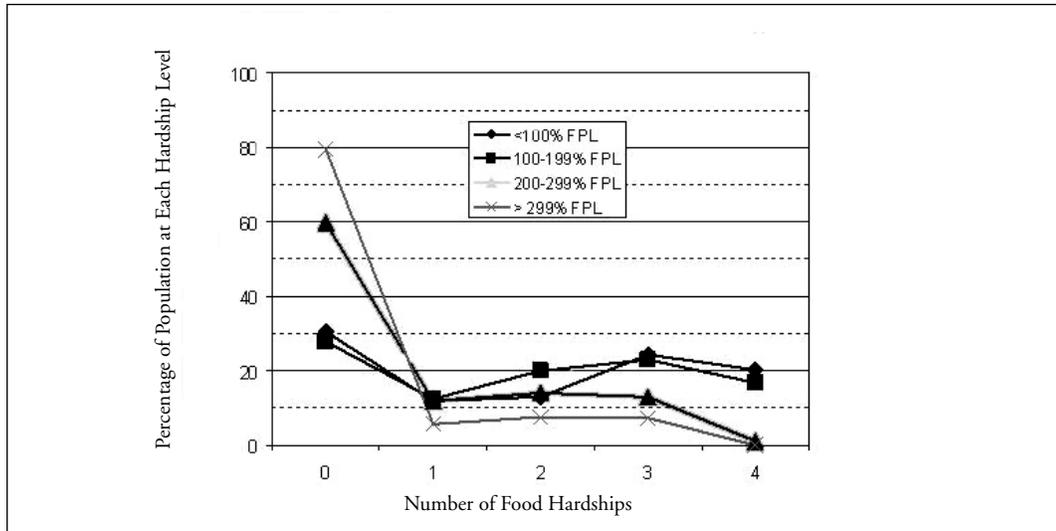
Note. Reference groups: Married partner families; household income > 299% FPL; White mothers; mothers with less than a HS education. FPL = Federal poverty level.

n = 1,655 married-partner families; *n* = 1,068 single-mother families; *n* = 247 cohabiting-partner families.

***p* < 0.01; * 0.01 ≤ *p* < 0.05; # 0.05 ≤ *p* < 0.10.

FIGURE 1

Number of Food Hardships by Level of Income for Families With Children With Disabilities



considered, with the child's disability status and household income as stratifying variables. To reduce the number of categories for ease of interpretation, families were stratified into two income groups: those with income of less than 200% of the federal poverty level and those with income at or greater than 200% of the federal poverty level. Chi-square tests were conducted for each figure to determine whether there was an association between the number of hardships and income level.

Data and the results presented here are weighted to reflect undercoverage and non-response; each respondent's probability of selection; as well as the age, sex, and ethnic or racial distribution of the U.S. Census Bureau estimates for the respondent. These results can be generalized to the noninstitutionalized U.S. population of single-mother, married-partner, and cohabiting-partner families that were raising children with

FIGURE 2

Number of Housing Hardships by Level of Income for Families With Children With Disabilities

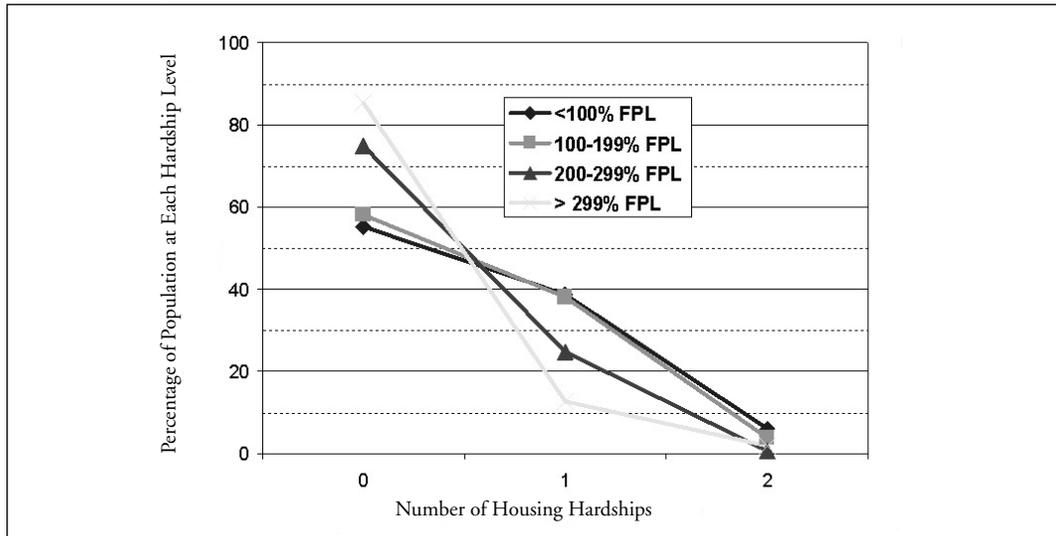
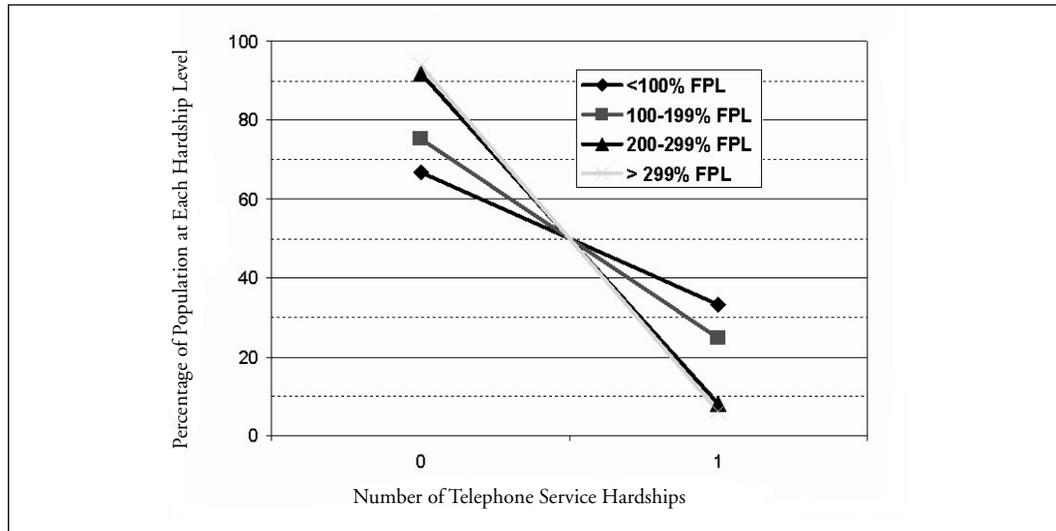


FIGURE 3

Number of Telephone Service Hardships by Level of Income for Families With Children With Disabilities



disabilities and children without disabilities in 2002.

FINDINGS

Analytic results related to the first research question are presented in Table 2. These models controlled for the child’s age; family income; family structure; and mother’s age, race, and education.

The first research question compared families raising children with disabilities and families raising children without disabilities in terms of their likelihood of experiencing 11 measures of material hardship.

Families of children with disabilities fared worse for 8 of the 11 measures of material hardship as compared to families of children without disabilities. Controlling for all covariates, children with disabilities and their families were signifi-

FIGURE 4

Number of Medical Hardships by Level of Income for Families With Children With Disabilities

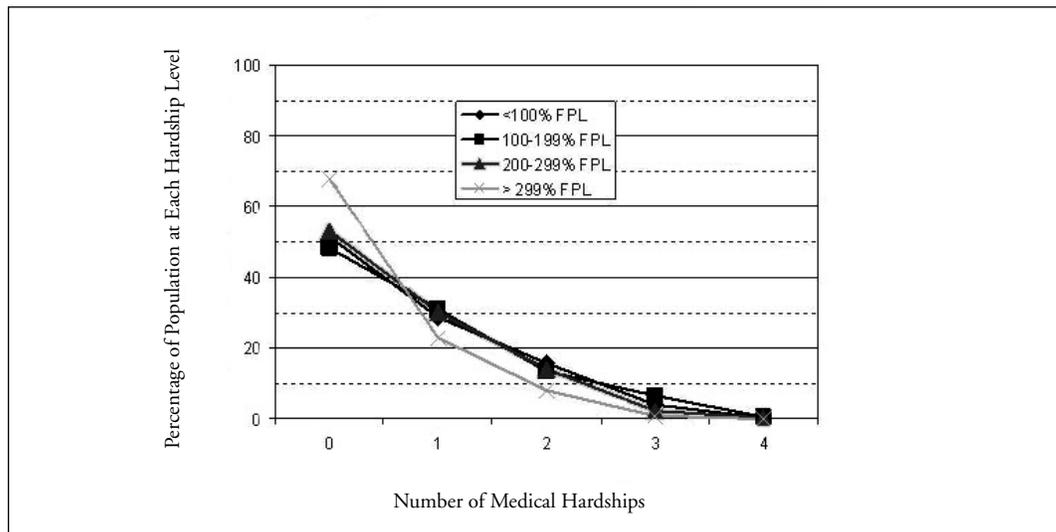
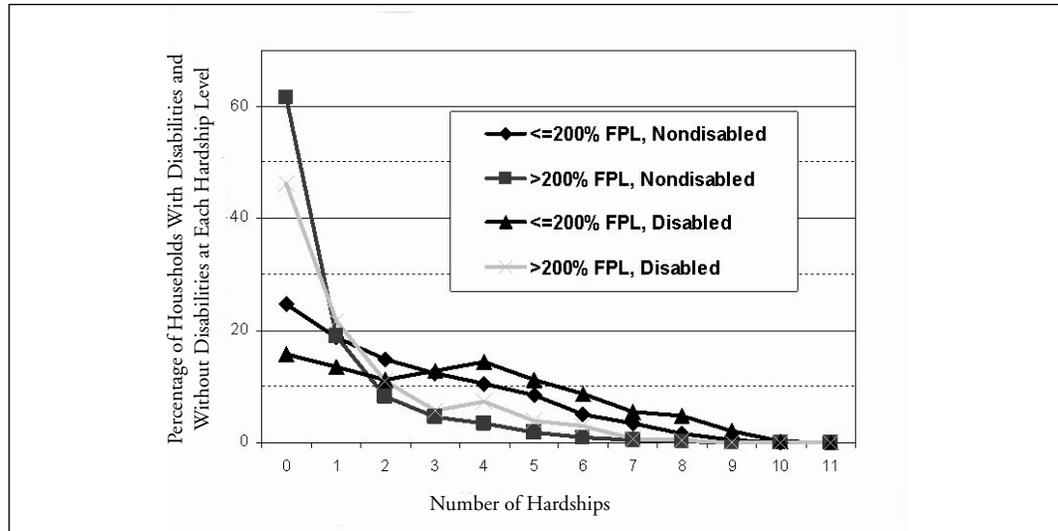


FIGURE 5

Number of All Hardships by Level of Income and Child's Disability Status



cantly more likely to have experienced food insecurity in the past year. They had a 78% greater likelihood of reporting that they had worried that food would run out (OR = 1.78, $p < 0.01$); a 78% greater likelihood of reporting that the food bought did not last (OR = 1.78, $p < 0.01$); and an 89% greater likelihood for reporting that they skipped meals because of lack of money (OR = 1.89, $p < 0.01$). Among families with incomes that were less than 200% of the federal poverty level, children with disabilities and their families were more than twice as likely to have received emergency food than were other families (OR = 2.34, $p < 0.01$). Similarly, families raising children with disabilities were 72% more likely to have been unable to pay their rent in the prior year (OR = 1.72, $p < 0.01$). Among those unable to pay their rent in the previous year, however, no statistically significant differences were found on the measure of the family having moved in with others during the past year. Further, children with disabilities and their families were 81% more likely to have had phone service disconnected for more than a day during the prior year because of nonpayment (OR = 1.81, $p < 0.01$).

Children with disabilities had better outcomes related to potential health-care access as compared to children without disabilities. Children with disabilities were 36% more likely than children without disabilities to have a usual

source of care (OR = 1.36, $p < 0.05$), and were 37% less likely to have been uninsured at any time in the prior year (OR = 0.63, $p < 0.01$). Despite having better potential access to health care, however, children with disabilities had markedly worse realized health-care access (i.e., receipt of care when it was needed). Children with disabilities were 61% more likely to have postponed necessary medical care (OR = 1.61, $p < 0.01$) and were 83% more likely to have postponed needed dental care (OR = 1.83, $p < 0.01$) than were children without disabilities.

To answer the second research question, families of children with disabilities were compared based on family structure. Table 3 delineates the findings of the odds ratios, 95% confidence intervals, and indicators of statistically significant contrasts for experiencing the 11 indicators of material hardship among families raising children with disabilities. In Table 3, families headed by cohabiting partners and single mothers are compared with married-partner families, who serve as the referents.

Among families raising a child with disabilities, those headed by unmarried adults typically fared significantly worse than married-partner families. Families with cohabiting partners and single mothers were significantly more likely to have experienced food insecurity in the past year: Cohabiting-partner families had a 110% greater

likelihood and single-mother families had a 41% greater likelihood of reporting that they had worried that food would run out (OR = 2.10 and OR = 1.41, $p < 0.05$, respectively). Single-mother families had a 42% greater likelihood of reporting that the food bought did not last (OR = 1.42, $p < 0.05$) and an 83% greater likelihood of having skipped meals because of lack of money (OR = 1.83, $p < 0.01$). Cohabiting-partner families were more than twice as likely as married-partner families to have skipped meals because of lack of money (OR = 2.01, $p < 0.05$). However, no significant differences were found for the receipt of emergency food.

Further, cohabiting partner families were 2.4 times more likely than married-partner families to report being unable to pay rent (OR = 2.40, $p < 0.01$), and single-mother families were 1.6 times more likely (OR = 1.60, $p < 0.01$) to have been unable to pay their rent in the past year. Among the cohabiting-partner families who were unable to pay their rent in the previous year, no statistically significant differences were found on the measure of the family having moved in with others during the past year. In single-mother families, however, the odds of the family having moved in with others were more than 7 times that for married partner families (OR = 7.04, $p < 0.01$).

Additionally, single-mother families were 74% more likely than married-partner families to have had their phone service disconnected for more than a day in the past year because of non-payment (OR = 1.74, $p < 0.05$) and were 43% less likely to have had a usual source of health care (OR = 0.57, $p < 0.10$). However, single-mother families were 33% less likely than married-partner families to have been uninsured at any time in the prior year (OR = 0.67, $p < 0.10$). Whereas, single-mother families were 90% more likely than married-partner families to have postponed needed dental care (OR = 1.90, $p < 0.05$).

The third research question addressed how well the federal poverty level represents the hardships experienced by families raising children with and without disabilities. To answer this question, Figures 1–4 report the percentage of families experiencing various levels of hardship stratified by their income relative to the federal poverty level. The lines in each figure represent distributions within each income level. The points along each

line add up to 100%, representing all families in that income stratum. Each point along the line represents the proportion of families in that stratum, with the number of hardships identified on the horizontal axis. Each of the lines demonstrates the changing proportion in each stratum as the number of hardships is increased from zero to the maximum for each hardship type. With one exception—for food hardships—the proportion in each income stratum falls as the number of hardships of each type increases.

The relationship between these declining trends provides evidence of the adequacy of the federal poverty level (FPL) in describing those living with hardship. The two lowest strata of families by income—those earning less than 100% FPL and those earning between 100% and 199% FPL—follow the same trend on food, housing, and telephone service hardships. The tendency for these strata to be similar was confirmed by performing chi-square tests on all three hardship types. No significant differences were found between families with income of less than 100% FPL and those with income of between 100% and 199% FPL. Consequently, families having low income (100% to 199% FPL) generally are no better off than families with income below the poverty threshold.

Significant differences were found on all other comparisons between strata. Families with higher incomes were more likely to have zero hardships than were families with lower incomes and were less likely to have one or more hardships. For medical hardship, the evidence was even more compelling: All families with income less than 300% of the federal poverty level demonstrated similar trends, with no significant differences found between any pair of income levels that were less than 300% of the FPL (determined using a chi-square test). When compared to families having income of 300% of the FPL and greater, however, the three lower-income levels each showed a significantly greater chance of having more medical hardships. Chi-square tests of the differences between each income level showed that all comparisons were significant (Table 4).

Figure 5 illustrates a comparison between four types of families: (1) Families that have a child with a disability and have income that is less

TABLE 4*Differences in Hardship Among Children With Disabilities by Income Level*

<i>Income Group and Hardship Category</i>	χ^2
Comparison: Telephone Service	
Income below 100% FPL, and 100% to 199% FPL	2.16
Income below 100% FPL, and 200% to 299% FPL	23.82***
Income below 100% FPL, and > 299% FPL	36.30***
Income between 100% and 199% FPL, and 200% to 299% FPL	12.05**
Income between 100% and 199% FPL, and > 299% FPL	29.16***
Income between 200% and 299% FPL, and > 299% FPL	0.77
Comparison: Medical Hardships	
Income below 100% FPL, and 100% to 199% FPL	2.95
Income below 100% FPL, and 200% to 299% FPL	1.73
Income below 100% FPL, and > 299% FPL	19.16***
Income between 100% and 199% FPL, and 200% to 299% FPL	5.76
Income between 100% and 199% FPL, and > 299% FPL	24.94***
Income between 200% and 299% FPL, and > 299% FPL	12.85*
Comparison: Food Hardships	
Income below 100% FPL, and 100% to 199% FPL	4.58
Income below 100% FPL, and 200% to 299% FPL	52.49***
Income below 100% FPL, and > 299% FPL	130.67***
Income between 100% and 199% FPL, and 200% to 299% FPL	56.39***
Income between 100% and 199% FPL, and > 299% FPL	148.39***
Income between 200% and 299% FPL, and > 299% FPL	18.99***
Comparison: Housing Hardships	
Income below 100% FPL, and 100% to 199% FPL	0.96
Income below 100% FPL, and 200% to 299% FPL	20.07***
Income below 100% FPL, and > 299% FPL	53.93***
Income between 100% and 199% FPL, and 200% to 299% FPL	13.94***
Income between 100% and 199% FPL, and > 299% FPL	47.11***
Income between 200% and 299% FPL, and > 299% FPL	13.07**
Comparison: All Hardships	
Income below 100% FPL, and 100% to 199% FPL	76.61***
Income below 100% FPL, and 200% to 299% FPL	161.39***
Income below 100% FPL, and > 299% FPL	362.78***
Income between 100% and 199% FPL, and 200% to 299% FPL	114.04***
Income between 100% and 199% FPL, and >299% FPL	1403.20***
Income between 200% and 299% FPL, and >299% FPL	50.72***

Note. FPL = Federal Poverty Level

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

than 200% of the FPL; (2) families that have a child with a disability and have income of 200% of the FPL and greater; (3) families that do not have a child with a disability and have income that is less than 200% of the FPL; and (4) families that do not have a child with a disability and have income that is 200% of the FPL and greater. This illustration demonstrates that income level dominates the association with hardship; both families with and without children with disabilities are less likely to have more than one hardship when income was 200% of FPL or greater. In every case, however, families at each income level that had a child with a disability were more likely to have experienced more hardships than were families without a child with a disability.

LIMITATIONS

To fairly assess these findings, it is important to consider a number of key study limitations. First, this study should not be interpreted to suggest a causal relationship between children's disabilities and material hardship. It is not possible to examine the direction of the relationship between children's impairment and hardship in these cross-sectional data.

Second, it was not possible to either ascertain or analyze the impact the severity of the child's impairments had on the family's material well-being. Previous research has shown that the elevated costs associated with caring for children with disabilities are highest among children with the most severe conditions (e.g., Kuhlthau, Hill, Yucel, & Perrin, 2005). The NSAF did not collect impairment-severity data, however, therefore this issue could not be examined. Further research in this area would aid policy makers and advocates by providing a comprehensive understanding of the challenges faced by families raising children who have various levels of impairment. Additionally, because some groups of children were excluded from analysis because of small sample size (e.g., children living with single fathers, emancipated minors), the percentages calculated in this study are not an accurate estimate of the prevalence of childhood disability in the United States. Instead, these data are representative of U.S. chil-

dren living in families including married partners, single mothers, and cohabiting partners.

Among families raising children with disabilities, single mothers and cohabiting partners were found to have experienced the greatest degree of severe hardship.

The third limitation of this study is related to the definition of childhood disability, which is based on whether the child has conditions that affect the ability to perform age-appropriate activities. This definition, though broad and subject to respondent bias, is comparable to measures used in other national studies. Further research to fully understand how hardship could vary depending on children's impairments would be useful, and access to a richer set of disability-related characteristics would be important.

Finally, it is likely that the study has undercounted families of children with disabilities because the NSAF sampling procedure was to randomly select a child within each family for data collection. As such, some of the children without disabilities who were included in the sample likely had siblings with disabilities. Because families raising children with disabilities invariably experienced greater hardship, it is likely that the true extent of differences in material hardship between families with and without children with disabilities has been underestimated. An important strength of this study, however, is its reliance on a probability sample that included families without telephones—a subset of the poor population that typically is excluded from national surveys.

DISCUSSION

This study is the first nationally representative inquiry into material hardship for U.S. families raising children with disabilities and has expanded upon the existing research focused on income poverty (e.g., Fujiura & Yamaki, 2000). This examination of another dimension of hardship among these families contributes to the comprehensive understanding of the economic and social

conditions experienced by this vulnerable population. These families have experienced significantly greater levels of material hardship than families with children who have no disabilities. Children with disabilities and their families are at substantially elevated risk for deprivation and, although this risk declines as family income increases, a substantial proportion of middle-class families raising children with disabilities experienced material hardship. Among families raising children with disabilities, single mothers and cohabiting partners were found to have experienced the greatest degree of severe hardship.

*MATERIAL HARDSHIP AND POVERTY
IN FAMILIES WITH CHILDREN WITH
DISABILITIES*

Previous research has demonstrated that children with disabilities are significantly more likely to live in households that have income below the poverty level as compared to children without disabilities (Fujiura & Yamaki, 2000). Furthermore, when measured by food and housing insecurity, realized health-care access, and telephone coverage, this study's findings offer additional evidence that children with disabilities are living with greater material hardship than are children without disabilities. Moreover, the likelihood of living with material deprivation is elevated for children with disabilities across income strata. These elevated rates of material hardship among families raising children with disabilities highlight the need for policies at the federal, state, and local levels to effectively target the support systems required by families facing complex financial challenges.

One exception to this trend was found; it appears to be related to the potential access to health care, as measured by having health insurance and having a usual source of care. One plausible explanation for this finding is that these families place a premium on maintaining health insurance as a way to avoid the high out-of-pocket medical expenses associated with medical and dental care (Newacheck & Kim, 2005). Such a possibility supports the need for current government-sponsored income and health programs to provide increased supports to these families to reduce financial barriers to their attaining needed medi-

cal and dental care. It is important to note, however, that despite having better potential for health-care access than their counterparts, children with disabilities still were significantly more likely to postpone or not obtain medical and dental care when it was needed.

*LIMITATIONS OF THE FEDERAL POVERTY
LEVEL MEASURE*

The findings of this study support the claims of previous researchers that the federal poverty level is neither an adequate measure of families' well-being nor a true proxy for material hardship (e.g., Boushey et al., 2001; Renwick & Bergmann, 1993). Consistent with earlier studies, the present results indicate that material hardship is widespread among families whose income far exceeds the traditional income poverty measure employed in the United States.

This study contributes new knowledge and offers important evidence that the FPL is particularly deficient in describing the parameters of hardship and deprivation in families raising children with disabilities. For example, there was little difference in the level of hardship experienced by poor families (those making less than 100% of the FPL) and low-income families (those making 100% to 199% of the FPL).

Moreover, the FPL is used to determine eligibility for many government programs that provide income, food, and health- and disability-related benefits. As such, the FPL clearly is not capturing the range of families who are experiencing material hardship and who could potentially benefit from these programs. At a minimum, policy makers should consider adjusting the FPL standards as they apply to families of children with disabilities. If such changes incorporated families' costs related to their caregiving responsibilities and their child's impairments, then the utility and value of a range of government benefit programs for people with disabilities would be improved.

Additionally, the results highlight the critical need for further analyses of the success of current governmental programs in assisting families having income that is less than the FPL meet basic needs. This finding begs the question of the efficacy of current cash and noncash social-welfare

programs to help families meet basic needs. Although income level makes these families the intended targets of numerous welfare programs, including Supplemental Security Income (i.e., the federal income transfer program for low-income people with disabilities) and food stamps, these families continue to experience hardship at significant and alarming rates. Policy makers and advocates should examine the gaps existing in program eligibility and participation and scrutinize program intent and outcome. Data that was not collected in the NSAF—but which might prove useful for future research—includes the level of access to and utilization of other community services by families raising children with disabilities. Receipt of services such as mental-health care, case management, and transportation might mitigate the impact of childhood disability on families' material well-being and, as such, would represent a relationship with an important role in discussions of social-welfare programs.

FAMILY STRUCTURE AND DEPRIVATION IN FAMILIES RAISING CHILDREN WITH DISABILITIES

Although there is considerable deprivation among children with disabilities who are living with married partners, by far the greatest extent of such hardship was evident in single-mother and cohabiting-partner families. This finding is consistent with previous research on the general nondisabled population in which single-mother and cohabiting-partner families were found to be at greatest risk of income poverty (e.g., Renwick & Bergmann, 1993). Single-father households were not analyzed in this study; therefore, additional research among this population is warranted.

The findings of this study suggest that current government programs are insufficient to eliminate material hardship experienced by families raising children with disabilities. The burden placed on families by this inadequacy largely falls on the children's mothers, who typically bear the brunt of responsibility for caring for children with disabilities (Cohen & Petrescu-Prahova, 2004). Targeted income-transfer programs that provide direct and meaningful levels of assistance to single and other caregiving mothers, therefore, seem warranted.

IMPLICATIONS AND CONCLUSION

The needs of low-income children with disabilities have been a longstanding concern for practitioners, administrators, and policy makers. These concerns are related to the substantial evidence of adverse health, academic, behavioral, psychological, and social outcomes for children raised in poverty (Brooks-Gunn & Duncan, 1997; Emerson, 2004; Ozawa, Joo, & Kim, 2004). *The 24th Annual Report to Congress on the Implementation of the Individuals With Disabilities Education Act* (IDEA; U.S. Department of Education, 2002) reiterated these concerns and contained extensive evidence of the worse academic, cognitive, and behavioral outcomes for low-income children who receive IDEA services.

The present study presents compelling evidence of the need for advocacy on behalf of the special education community. The elevated rates of deprivation reported here, combined with other evidence showing trends of increasing poverty among children with disabilities (Fujiura & Yamaki, 2000), are a clarion call for the type of organized efforts to change public policy that produced IDEA's original precursor, the Education for All Handicapped Children Act of 1975 (Public Law No. 94-142, 111 Stat. 796). A similar watershed likely is necessary, because deprivation among children with disabilities far exceeds the supposed boundaries of who technically is deemed to be poor. Substantial hardship is experienced by families having incomes significantly greater than the U.S. government's poverty parameters.

The widespread hardship and deprivation experienced by children with disabilities and their families should be addressed by a thoughtful and comprehensive public-policy response. Although more research is necessary to fully understand what would most help these families, researchers think that the present study results suggest that it would be useful and effective to increase the Supplemental Security Income (SSI) payment level; increase the parental income limit below which children with disabilities qualify for SSI; increase the asset limit for Medicaid and SSI, so that families could save money that might buffer hardship without losing their child's SSI and Medicaid;

provide families in need with free or low-cost cell phones, to assist them in managing and meeting their children's needs; and expand housing subsidies specifically for children with disabilities and their families.

The widespread hardship and deprivation experienced by children with disabilities and their families should be addressed by a thoughtful and comprehensive public-policy response.

Another possible approach is to expand the existing earned income tax credit (EITC) specifically for children with disabilities and their families. The EITC is a credit available to working families and is the largest anti-poverty income-transfer program in the United States. Expanding it to include children with disabilities and their families—combined with the other measures described—would offer families direct economic support and most likely would reduce the hardships they face. The special education community, which has direct knowledge of the hardships faced by poor and low-income children with disabilities and their families, is particularly well-situated to lead advocacy efforts that would achieve meaningful change for such families.

This study highlights the inadequacy of the current federal poverty threshold to capture the extent of deprivation in the United States and its particular defect as an eligibility guideline for social services provided to children with disabilities. These deficits necessitate changes not only to the measurement of poverty but also to the fundamental conceptualization of poverty within the United States, to aid families that currently are neglected by the social-support system.

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