Family Structure And Children's Physical And Mental Health

Children in single-mother and grandparent-only families have poorer health than children living with two biological parents.

by Matthew D. Bramlett and Stephen J. Blumberg

ABSTRACT: Using the 2003 National Survey of Children's Health, this paper examines the physical and mental health of children by family structure. Children in step, single-mother, or grandparent-only families had poorer health than children living with two biological parents. Adjusting for demographic differences reduced observed disparities, although children living in single-mother or grandparent-only families still had poorer health than children living with two biological parents. Adjusted estimates showed that children in single-father families generally did as well as (for mental health) or better than (for physical health) children living with two biological parents. [*Health Affairs* 26, no. 2 (2007): 549–558; 10.1377/hlthaff.26.2.549]

FAMILY STRUCTURE CAN HAVE A PROFOUND IMPACT on children's experiences and life trajectories. A great deal of research has consistently shown family structure disparities in child outcomes that are related to educational attainment, the likelihood of becoming a single parent, and general well-being.[1] Although the child well-being indicators studied have often included mental health, much less research has focused on the physical health status of U.S. children in various family structures.[2] In this paper we present estimates of both physical and mental health status for children in six different family structures.

■ **Prevalence of certain family structures.** The population prevalence of certain family structures—adoptive step families (in which a nonbiological parent has adopted the child), single-father families, and families with grandparents but no parents—is low.[3] Data on these types of families are correspondingly rare. Much research on family structure disparities focuses instead on stepchildren or children in single-mother families. However, data for 2003 indicate that 5 percent of children lived with a single father and 4 percent lived with neither parent, and the population of children being raised by grandparents has been rising over time.[4] The 2003 National Survey of Children's Health (NSCH), with a large, nationally representative

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sample, includes a considerable sample of children in these subgroups, and the extensive health data permitted us to examine a broad array of physical and mental health indicators, most of which have not been examined before for these subpopulations.

■ **The demographic factor.** Roughly half of the well-being disparity between children in two-parent families and children in single-parent families is due to the lower income of single mothers.[5] Recognizing that differences in income and other characteristics among children in various family structures could be related to health status, we adjusted estimates to control for socioeconomic and demographic differences. This allowed us to make inferences about the health of children in different family structures, independent of differences in demographics.

Study Data And Methods

We present and compare estimates of the physical and mental health status of children in six mutually exclusive family structures. For the study, we compared children living with two biological parents with each of the following five groups: (1) children living with a biological parent and a stepparent (blended step families); (2) children living with a biological parent and an adoptive parent (blended adoptive families); (3) children living with a biological mother only; (4) children living with a biological father only; and (5) children living with one or more grandparents, but no biological, step, foster, or adoptive parents.

■ **Data source.** The 2003 NSCH is a random-digit-dial household telephone survey designed to produce national and state-level estimates of the health, health care access and use, insurance coverage, and well-being of U.S. children. The NSCH is sponsored by the Health Resources and Services Administration, Maternal and Child Health Bureau, and fielded as part of the State and Local Area Integrated Telephone Survey by the Centers for Disease Control and Prevention, National Center for Health Statistics. One child under age eighteen was randomly selected from each household with children to be the target of the survey; the respondent was an adult in the household who was knowledgeable about the child's health. A total of 102,353 interviews were completed from January 2003 through July 2004, in English or Spanish.[6]

■ **Family structure.** NSCH respondents were asked their relationship to the selected child. Mothers (or fathers) were then asked if they were biological, adoptive, step, or foster parents. Respondents were also asked if there were any other adults in the household who acted as parents to the child and, if so, their relationship to the child. This enabled us to identify the presence or absence of biological, step, foster, or adoptive parents or grandparents (as surrogate parents) in the household. We identified six analysis groups (Exhibit 1). We identified an additional family structure: adoptive families—children living with adoptive parent(s) but no biological parents. Approximately 2,300 families met this criterion (1.7 percent). They were not included in this analysis; we examined the health and well-being of these chil-

EXHIBIT 1
Estimates Of Household- And Child-Level Socioeconomic And Demographic Characteristics, By Child's Family Structure, 2003

Characteristic	All children	Family structure type: Two-parent	Blended step	Blended adoptive	Single mother	Single father	Grand-parent
Unweighted n	99,890	64,116	8,103	556	20,033	3,396	496
Weighted percent	100.0	61.9	8.4	0.5	22.8	3.2	0.4
Household							
Poverty level[a]							
0–49%	6.2%	3.1%	4.8%[b]	–[c]	15.1%[b]	3.9%[d]	8.1%[b]
50–99%	11.6	7.6	11.5[b]	–[c]	22.6[b]	9.7[b,d]	13.0[b]
100–199%	22.8	19.3	26.7[b]	28.0%[b]	30.1[b]	26.7[b,d]	32.2[b]
200–399%	32.6	36.1	36.7	38.9	22.1[b]	36.5[d]	33.7
400%+	26.7	34.0	20.4[b]	20.9[b]	10.2[b]	23.2[b,d]	13.0[b]
Highest education							
Less than high school	7.9	6.0	5.0	–[c]	13.5[b]	7.6[d]	7.9
High school	26.5	21.2	30.9[b]	25.2	36.4[b]	33.3[b]	38.2[b]
More than high school	65.7	72.8	64.1[b]	69.4	50.1[b]	59.1[b,d]	54.0[b]
MSA status							
In MSA, central city	31.7	28.4	30.0	22.0[b]	40.9[b]	31.0[d]	35.6[b]
In MSA, not central city	48.5	52.6	43.9[b]	41.6[b]	40.7[b]	47.2[b,d]	32.9[b]
Not in MSA	19.9	19.0	26.1[b]	36.4[b]	18.4	21.9[b,d]	31.5[b]
Primary language spoken							
English	87.3	86.6	94.2[b]	89.5	85.4	86.5	93.5[b]
Not English	12.7	13.4	5.8[b]	10.5	14.6	13.5	–[c]
Mean number of children	2.4	2.4	2.7[b]	2.6[b]	2.4	2.2[b,d]	2.1[b]
Child							
Mean age (years)	8.6	7.9	11.4[b]	10.8[b]	9.1[b]	10.0[b,d]	9.6[b]
Sex							
Male	51.1%	51.3%	52.5%	47.9%	49.9%	57.7%[b,d]	56.5%
Female	48.9	48.7	47.5	52.1	50.1	42.3[b,d]	43.5
Race/ethnicity							
Hispanic	17.6	17.0	13.0[b]	11.3[b]	21.9[b]	17.2[d]	11.5[b]
Non-Hispanic white	60.7	68.9	66.8[b]	78.3[b]	40.1[b]	59.2[b,d]	50.9[b]
Non-Hispanic black	14.4	7.3	15.2[b]	3.7[b]	29.8[b]	13.3[b,d]	31.0[b]
Non-Hispanic other	7.3	6.8	5.0[b]	6.8	8.2[b]	10.3[b]	6.7

SOURCE: National Survey of Children's Health, 2003.

NOTES: "Two-parent" is two biological parents. "Blended step" is one biological and one stepparent. "Blended adoptive" is one biological and one adoptive parent. "Single mother" is biological mother only. "Single father" is biological father only. "Grandparent" is at least one grandparent but no biological, step, foster, or adoptive parents. Exhibit does not show adoptive families (N = 2,303, 1.7 percent), which include at least one adoptive parent but no biological parents, or the "other" category (N = 887; 1.1 percent), which includes known family structure types such as same-sex two-parent families, foster families, and other family structure types. "Other" does not include children with missing data for family structure (2.4 percent of the 102,353 children in the entire sample had missing data for family structure). MSA is metropolitan statistical area.

[a] Federal poverty level, derived from income-to-household-size ratio and Federal Poverty Guidelines from the U.S. Department of Health and Human Services.

[b] Estimate is significantly different at the 0.05 level from the estimate for children living with two biological parents.

[c] Estimate does not meet National Center for Health Statistics (NCHS) standards for reliability (relative standard error > 0.3).

[d] Estimate is significantly different at the 0.05 level from the estimate for children living with biological mother only.

dren separately.[7]

■ **Data analysis.** We compared these groups of children on eight socioeconomic and demographic characteristics (Exhibit 1). We present unadjusted (Exhibit 2)

EXHIBIT 2
Unadjusted Estimates Of Child Health, By Family Structure, 2003

Child health indicator	All children (%)	Family structure type (%)					
		Two-parent	Blended step	Blended adoptive	Single mother	Single father	Grand-parent
Physical health							
Child overall health excellent/very good	84.1	87.3	84.6[a]	87.0	76.7[a]	86.4[b]	71.5[a]
Child overall dental health excellent/very good (ages 1–17)	68.5	73.4	62.8[a]	64.4[a]	59.9[a]	64.7[a,b]	57.7[a]
Child had injury requiring medical attention in past year (ages 0–5)	9.4	9.4	15.3[a]	–[c]	9.4	7.7	–[c]
Child missed 11+ school days due to illness in past year (ages 6–17)	5.2	4.3	5.4[a]	4.6	7.4[a]	3.2[a,b]	–[c]
Child affected by asthma-related health issues in past year	8.1	6.7	9.2[a]	8.2	10.5[a]	6.0[b]	16.7[a]
Child had respiratory allergies in past year	14.9	14.5	15.8	15.5	15.8[a]	10.9[a,b]	22.7[a]
Child had food allergies in past year	3.6	3.7	3.3	–[c]	3.7	2.4[a,b]	–[c]
Child had skin allergies in past year	9.8	9.9	9.0	8.9	10.5	5.9[a,b]	10.8
Child had frequent headaches in past year	5.6	4.3	7.2[a]	4.9	8.0[a]	4.7[b]	–[c]
Mental health							
Child has moderate/severe difficulty with emotions/concentration/behavior/getting along (ages 3–17)	9.2	5.7	14.4[a]	10.8[a]	13.2[a]	7.8[a,b]	21.5[a]
Child has emotional/developmental behavioral problem requiring ongoing treatment or counseling	5.0	2.9	8.4[a]	7.4[a]	7.2[a]	4.4[a,b]	14.8[a]
Parents ever told child has learning disability (ages 3–17)	9.7	7.3	13.9[a]	10.3	12.1[a]	10.2[a]	15.1[a]
Parents ever told child has depression/anxiety (ages 2–17)	4.2	2.4	6.6[a]	6.9[a]	6.2[a]	3.8[a,b]	11.6[a]
Parents ever told child has ADD/ADHD (ages 2–17)	6.9	4.4	12.7[a]	12.1[a]	8.5[a]	6.5[a,b]	15.1[a]
Parents ever told child has behavioral/conduct problems (ages 2–17)	5.3	2.6	9.1[a]	8.4[a]	8.1[a]	5.5[a,b]	14.9[a]
Special health care needs							
Child has special health care needs	17.6	15.0	22.4[a]	20.3[a]	20.6[a]	13.4[b]	32.2[a]

SOURCE: National Survey of Children's Health, 2003.

NOTES: For explanation of family types, see Exhibit 1. ADD is attention deficit disorder. ADHD is attention deficit hyperactivity disorder.

[a] Estimate is significantly different at the 0.05 level from the estimate for children living with two biological parents.

[b] Estimate is significantly different at the 0.05 level from the estimate for children living with biological mother only.

[c] Estimate does not meet National Center for Health Statistics (NCHS) standards for reliability (relative standard error > 0.3).

and adjusted (Exhibit 3) estimates of sixteen health indicators: nine physical health indicators, six mental health indicators, and one measure of special health care needs (which could be due to a physical or mental health problem). With two exceptions, each indicator was derived from a single question on the survey.[8] Weighted estimates were calculated in SUDAAN to account for the complex sample design.[9] The significance of differences in the unadjusted estimates was evaluated with t-tests at the 0.05 level.

The adjusted estimates accounted for socioeconomic and demographic differences and were mean predicted marginals calculated by the PREDMARG option

EXHIBIT 3
Estimates (Predicted Marginal) Of Child Health By Family Structure, Adjusted For Socioeconomic And Demographic Characteristics, 2003

Child health indicator	Family structure type (%)					
	Two-parent	Blended step	Blended adoptive	Single mother	Single father	Grand-parent
Physical health						
Child overall health excellent/very good	86.1	84.7	86.1	84.0[a]	86.9[b]	76.9[a]
Child overall dental health excellent/very good (ages 1–17)	71.0	64.7[a]	64.9[a]	68.8[a]	66.2[a]	59.9[a]
Child had injury requiring medical attention in past year (ages 0–5)	9.4	12.3	–[c]	10.9	7.4[b]	–[c]
Child missed 11+ school days due to illness in past year (ages 6–17)	4.8	5.2	4.7	6.4[a]	2.8[a,b]	–[c]
Child affected by asthma-related health issues in past year	7.4	8.5	9.2	9.2[a]	5.8[a,b]	13.4[a]
Child had respiratory allergies in past year	15.1	14.6	13.7	16.6[a]	10.5[a,b]	21.2
Child had food allergies in past year	3.6	3.7	–[c]	3.7	2.4[a,b]	–[c]
Child had skin allergies in past year	10.0	10.1	11.3	10.1	6.2[a,b]	11.2
Child had frequent headaches in past year	5.0	6.0[a]	4.7	6.8[a]	4.6[b]	–[c]
Mental health						
Child has moderate/severe difficulty with emotions/concentration/behavior/getting along (ages 3–17)	6.5	12.9[a]	10.4	11.4[a]	6.7[b]	17.3[a]
Child has emotional/developmental behavioral problem requiring ongoing treatment or counseling	3.3	6.6[a]	6.3[a]	6.5[a]	3.9[b]	13.2[a]
Parents ever told child has learning disability (ages 3–17)	8.4	11.9[a]	9.8	9.9[a]	9.8	13.0
Parents ever told child has depression/anxiety (ages 2–17)	2.7	5.2[a]	5.4	6.0[a]	3.4[b]	12.0[a]
Parents ever told child has ADD/ADHD (ages 2–17)	5.0	10.5[a]	11.1[a]	8.2[a]	6.0[b]	12.7[a]
Parents ever told child has behavioral/conduct problems (ages 2–17)	3.2	7.8[a]	8.3[a]	6.3[a]	5.1[a]	11.7[a]
Special health care needs						
Child has special health care needs	16.2	19.5[a]	19.2	20.4[a]	13.0[a,b]	29.9[a]

SOURCE: National Survey of Children's Health, 2003.

NOTES: For explanation of family types, see Exhibit 1. Estimates are adjusted for child age, sex, and race/ethnicity, and household-level characteristics: number of children, primary language spoken, highest level of education, metropolitan statistical area status, and household income relative to federal poverty level (see Exhibit 1 for categories).

[a] Estimate is significantly different at the 0.05 level from the estimate for children living with two biological parents.

[b] Estimate is significantly different at the 0.05 level from the estimate for children living with biological mother only.

[c] Adjusted estimate was not calculated because unadjusted estimate did not meet NCHS standards for reliability.

in the SUDAAN logistic regression procedure. The significance of differences was evaluated at the 0.05 level using the PRED_EFF option. These estimates allowed us to compare the health of children in different family structures as if the groups had the same demographics. Observations with missing data on any socioeconomic or demographic characteristic were omitted from the adjusted estimates.

Study Findings

■ **Family structure.** As expected, the prevalence of children living in blended adoptive families (0.5 percent), father-only families (3.2 percent), or grandparent-only families (0.4 percent) was low (Exhibit 1).

■ **Demographics.** In 2003, children living with both biological parents were more affluent than children in other family structures. They were more heavily concentrated in higher-income households and households where at least one member attended college, and they were more likely to live in the suburbs (in a metropolitan area but not in the central city). They were also younger, on average, than children in other family structures. Differences by family structure were revealed for each characteristic in Exhibit 1; our adjusted estimates controlled for all of these characteristics.

■ **Blended families.** On every health indicator except those identifying allergies, children in blended step families had poorer health than children living with two biological parents (Exhibit 2). Children in blended adoptive families did not differ on physical health status from children living with both biological parents (except on dental health) but showed many of the same disparities in mental health and special health care needs as children in step families. After adjusting for demographics (Exhibit 3), children in step families had poorer mental and dental health and a higher prevalence of headaches and special health care needs than children living with two biological parents. Children in blended adoptive families showed the same disparities for dental health and some of the mental health indicators, but other differences were not significant.[10]

■ **Single-parent families.** For most health indicators, children in single-mother families had poorer health status than children living with two biological parents (Exhibit 2); these differences were reduced, but remain significant, after we adjusted for demographics (Exhibit 3). In contrast, children in single-father families fared better on some indicators and worse on others, relative to children living with two biological parents. After demographics were adjusted for (Exhibit 3), the mental health of children in single-father families was comparable to that of children living with both biological parents, and, with the exception of dental health, the physical health of children in single-father families was better.

■ **Grandparent-only families.** For most health indicators, children in grandparent-only families not only differed significantly from children living with two biological parents, but also had the poorest health status of any group of children evaluated here (Exhibit 2). After demographics were adjusted for (Exhibit 3), these differences were reduced somewhat but remained significant and, in some cases, quite pronounced: These children were almost twice as likely as children living with two biological parents to have special health care needs or asthma-related health problems; more than twice as likely to have attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD) or moderate or severe difficulty with emotions, concentration, behavior, or getting along with others; and roughly

four times as likely to have behavioral/conduct problems, depression/anxiety, or an emotional/developmental/behavioral problem requiring treatment or counseling (Exhibit 3).

Discussion

Many advocacy groups, governmental officials, and nongovernmental organizations promote marriage as a way to improve the lives of children.[11] Unfortunately, the 2003 NSCH did not collect information on parents' marital status: Two parents could be married or cohabiting, and single-mother families could result from marital disruption or nonmarital childbearing. Although we could not examine the direct effects of marriage or divorce, our results confirm that overall, children are healthier in two-parent biological families and that children in some nonmarital family structures (for example, single-mother and grandparent-only) have poorer health.

■ **Marriage, divorce, and income.** Why are children in two-parent biological families healthier? The cross-sectional nature of the NSCH data precludes the investigation of causality between family structure and child health. A child's poor health might have been a contributing factor to the parents' divorce or to courts' custody decisions. Also, marital dissolution or the current living arrangements might have led to circumstances that diminish children's health. In many cases, a direct consequence of divorce is lower household income, which has been shown to account for some of the observed disparities in well-being between children in two-parent families and children in single-mother families.[12] Our findings demonstrate that socioeconomic and demographic characteristics partially account for similar disparities in child health. Yet children in single-mother families and grandparent-only families still had significantly poorer physical and mental health than children living with both biological parents.

■ **Family structure and insurance coverage.** Family structure disparities in child health might be related to differential likelihood of employer-based health insurance. Data on parental employment and benefits were not available from the NSCH, but health insurance coverage data for children show that children living with two biological parents are more likely than other children to have private health insurance. We did not statistically control for insurance coverage in our adjusted estimates because of its bidirectional relationship with children's health: Children might be in poorer health because they lack health insurance, but caregivers might be more motivated to seek health insurance coverage for children in poorer health. Researchers with longitudinal data are encouraged to examine the moderating role of employment and insurance coverage in the relationship between family structure and child health.

■ **Blended families.** Parents in blended adoptive families might be more likely than parents in blended step families to have healthy marriages.[13] That is, a stepparent's adoption of a nonbiological child could be an indication of close family rela-

tionships. If so, we might expect that health disparities observed for children in blended adoptive families would be smaller than for children in blended step families. However, our results do not show this pattern consistently. Although a few adjusted estimates do show significant differences between children living with two biological parents and stepchildren that are not significant for adopted children, the small sample size of the adopted-children group makes this determination less precise. This distinct group deserves further study.

■ **Single-father families.** Children living with single fathers had better health than children living with two biological parents for most adjusted indicators of physical health status and had better physical and mental health than children living with single mothers. Yet it would be premature to conclude that the traditional custody bias that mothers are better able to care for children than fathers is incorrect. This finding could be due to a selection effect: Fathers might be less likely to seek custody of children in poor health, or courts might be reluctant to grant custody to fathers of children in poor health.[14] Alternatively, before granting custody, courts might place a greater burden on fathers than on mothers to demonstrate the ability and willingness to provide a nurturing and supportive environment for the child. Single-father families might also be more likely than single-mother families to form as a result of widowhood rather than divorce. In this case, it would make sense that physical health might be comparable to that of children in two-parent families, while mental health might be poorer because the child's mother has died. Clearly, more research is needed to disentangle these effects. To our knowledge, there is no prior literature that examines the link between single fatherhood and children's physical health.

■ **Grandparent-only families.** Children living with grandparents have poorer health than children living with both biological parents, but this could be related to the circumstances that led these children to be raised by their grandparents instead of their parents (for example, children whose parents died, abused drugs or alcohol, or were incarcerated might experience psychological distress, or there could have been child abuse/neglect in the family of origin). That is, the poorer health of these children might often be a precursor to, rather than a result of, their current living arrangements.

Much of the research on health in grandparent-only families has focused on the health of the grandparent rather than on the health of the child, and that research has demonstrated that grandparents raising grandchildren have poorer health than non-caregiving grandparents.[15] Children in these households are less likely than children in other family structures to have health insurance.[16] Both the poorer health of the caregiver and the lack of health insurance for the children could contribute to the children's poorer health.

■ **Study limitations.** The estimated prevalence of various family structures derived from the NSCH data differs from other national data sources.[17] This difference could result from the manner in which the child's relationship to other household

members was determined. Rather than identifying each person's relationship to every other person in the household, the NSCH respondent reported his or her own relationship to the child and then identified any other people who "act as parents." Thus, the assessment of family structure in the NSCH was more subjective than objective, and comparisons with other data sources may be inappropriate.

We have previously noted the limitations resulting from the cross-sectional nature of the survey and from the lack of data on policy-relevant topics (such as marital status and parental employment). We should also note that as a sample survey, the NSCH was subject to nonrandom error, including coverage bias and nonresponse bias.[18] These findings are based on parents' experiences and perceptions. In addition, information provided about health status was not verified with health care professionals.

■ **Implications for social programs.** Our results demonstrate that children in single-mother families and grandparent-only families have poorer physical and mental health than children living with two biological parents, even when socioeconomic and demographic differences are held constant. Such results will be useful to those involved in programs that promote marriage and otherwise strengthen family systems. Yet our findings are inconclusive about the health of children in blended adoptive families relative to those in blended step families, which suggests that there could be limitations in the extent to which strengthening family systems can affect children's health. The mechanisms that result in better physical health for children in single-father families should also be studied further.

Our results highlight the extent of difficulties faced by children raised by grandparents. Because grandparent-only families are rare in the population and are not the typical target for many social-support services, the health problems of grandchildren raised by grandparents can be easily overlooked. But our results confirm that these children are vulnerable. Our results support the conclusions of previous research that suggests that these families in particular might have a strong need for social-support services to help cope with the difficulties associated with raising grandchildren generally and with raising children with special health care needs specifically.[19]

NOTES

1. Regarding educational attainment, see R.A. Wojtkiewicz, "Simplicity and Complexity in the Effects of Parental Structure on High School Graduation," *Demography* 30, no. 4 (1993): 701–717; and S. McLanahan and G. Sandefur, *Growing Up with a Single Parent: What Hurts, What Helps* (Cambridge, Mass.: Harvard University Press, 1994). Regarding single parenthood, see S. McLanahan, "The Consequences of Nonmarital Childbearing for Women, Children, and Society," in *Report to Congress on Out-of-Wedlock Childbearing*, Pub. no. (PHS)95-1257-1 (Hyattsville, Md.: National Center for Health Statistics, 1995). Regarding general well-being, see P.R. Amato, "The Impact of Family Formation Change on the Cognitive, Social, and Emotional Well-Being of the Next Generation," *Future of Children* 15, no. 2 (2005): 75–96.
2. W.M. Troxel and K.A. Matthews, "What Are the Costs of Marital Conflict and Dissolution to Children's Physical Health?" *Clinical Child and Family Psychology Review* 7, no. 1 (2004): 29–57.
3. U.S. Census Bureau, *Adopted Children and Stepchildren: 2000*, Census 2000 Special Reports, CENSR-6RV (Washington: U.S. Government Printing Office, 2003); U.S. Census Bureau, *Disability and American Families:*

2000, Census 2000 Special Reports, CENSR-23 (Washington: GPO, 2005); and U.S. Census Bureau, *Examining American Household Composition: 1990 and 2000*, Census 2000 Special Reports, CENSR-24 (Washington: GPO, 2005).

4. W.P. O'Hare, *Trends in the Well-Being of America's Children* (New York and Washington: Russell Sage Foundation and Population Reference Bureau, 2004); and M. Minkler and E. Fuller-Thomson, "The Health of Grandparents Raising Children: Results of a National Study," *American Journal of Public Health* 89, no. 9 (1999): 1384–1389.
5. McLanahan and Sandefur, *Growing Up with a Single Parent.*
6. S.J. Blumberg et al., *Design and Operation of the National Survey of Children's Health, 2003*, Vital and Health Statistics Series 1, no. 43 (Hyattsville, Md.: NCHS, 2005).
7. M.D. Bramlett, L.F. Radel, and S.J. Blumberg, "The Health and Well-being of Adopted Children," *Pediatrics* 119, no. 51 (2007): S54–S60.
8. The two exceptions are (1) asthma-related health issues, defined as having asthma and at least one of the following issues during the previous twelve months: use of asthma medication, significant health difficulties due to asthma, asthma attacks, or hospitalizations for asthma; and (2) special health care needs, assessed by the Children with Special Health Care Needs Screener. See C.D. Bethell et al., "Identifying Children with Special Health Care Needs: Development and Evaluation of a Short Screening Instrument," *Ambulatory Pediatrics* 2, no. 1 (2002): 38–48. See also Blumberg et al., *Design and Operation.*
9. Research Triangle Institute, *SUDAAN Language Manual, Release 9.0* (Research Triangle Park, N.C.: RTI, 2004).
10. The sample size for children in blended adoptive families was considerably smaller than for children in blended step families. Estimates for these children were therefore less precise than estimates for children in step families, and some real differences between these children and children living with two biological parents might not have been significant as a result.
11. U.S. Department of Health and Human Services, Administration for Children and Families, *A Celebration of the Family—Observance of the Tenth Anniversary of the International Year of the Family*, October 2004, http://www.acf.dhhs.gov/programs/family_celebration.htm (accessed 3 January 2007); and S.L. Nock, "Marriage as a Public Issue," *Future of Children* 15, no. 2 (2005): 13–32.
12. McLanahan and Sandefur, *Growing Up with a Single Parent.*
13. There is evidence that it is not just the state of marriage, but the quality of that relationship, that matters most for children's outcomes; marriages with high levels of conflict between spouses might be more detrimental to child well-being than if the marriage had ended in divorce. Thus, some have emphasized the need to promote healthy marriages. See National Healthy Marriage Resource Center, "What Does Marriage Mean for Children? A Brief Review of the Research," http://www.healthymarriageinfo.org/research/?d={5AB600D8-C23A-49FD-9DD5-CE88A935DC4E} (accessed 3 January 2007); National Healthy Marriage Resource Center, "Marriage Matters: Family Structure and Child Well Being," http://www.healthymarriageinfo.org/aboutmarriage/?d={E066AD76-83F1-471B-8ADD-90AA3F02FBA9} (accessed 31 October 2006); and M.R. Dion, "Healthy Marriage Programs: Learning What Works," *Future of Children* 15, no. 2 (2005): 139–156.
14. Children in single-father families were more likely to be male than children living with two biological parents (Exhibit 1); this too might be the result of a selection effect, wherein fathers might be more likely to seek custody of sons or courts might be biased against granting custody of daughters to fathers.
15. Minkler and Fuller-Thomson, "The Health of Grandparents Raising Children"; and B. Hayslip Jr. and P.L. Kaminski, "Grandparents Raising Their Grandchildren: A Review of the Literature and Suggestions for Practice," *Gerontologist* 45, no. 2 (2005): 262–269.
16. J.B. Kirby and T. Kaneda, "Health Insurance and Family Structure: The Case of Adolescents in Skipped-Generation Families," *Medical Care Research and Review* 59, no. 2 (2002): 146–165.
17. U.S. Census Bureau, *Living Arrangements of Children: 2001*, Current Population Reports, P70-104 (Washington: GPO, 2005).
18. Item nonresponse for the family structure items was low (2.4 percent). We have no reason to suspect that item nonresponse, survey nonresponse, or coverage bias varied by family structure.
19. Hayslip and Kaminski, "Grandparents Raising Their Grandchildren."