The Health of Parents and Their Children: A Two-Generation Inquiry
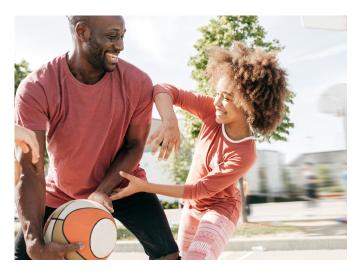
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Health is a fundamental component of well-being. Children's health affects their ability to succeed in school and engage in other learning opportunities within the contexts of their family, neighborhood, and community. This brief examines the relationship between the health of children and that of their parents, and between the availability of emotional support for parenting and children's health, based on a large national sample. We use parent self-reports of health, which prior research has determined are valid measures of health status for both parents and their children. We find that, controlling for demographic and household characteristics, children's health is strongly associated with the health of their parents, suggesting that approaches addressing two-generation health may be beneficial. However, the availability of emotional support for parenting is not significantly associated with children's health.

Key Findings

- Most children in the United States—nearly 9 in 10—are in very good or excellent health, according to their parents. Most parents (about two thirds) also report that their own health is very good or excellent. However, for both groups, health varied by race/ethnicity, family income, and parents' education level.

- The proportions of children and parents in very good or excellent health vary substantially across the states: For children, percentages range from 85 percent to 94 percent; for parents, 54 percent to 74 percent.

- Controlling for a host of demographic factors yields data showing a strong, positive association between parent health and child health.

- Availability of emotional support for parenting, though important in other contexts, is not significantly associated with children's health.

- The interconnectedness of parent and child health offers the potential for children to benefit from interventions that improve the health of parents.

Background on child and parent health

A two-generation model of health influences. Interventions that aim to improve children's well-being have traditionally focused only on the needs of the child. In contrast, two-generation strategies are premised on the idea that positive outcomes are more likely, particularly for families facing various kinds of disadvantage, when strategies address the needs of parents as well as children.[1,2] Two-generation strategies are prominent in early care and education,[3,4] as well as workforce development and other economic support programs.[5,6,7,8] They have also long been a hallmark of home visiting and other programs, such as Head Start.[9] Given parents' primary role in their children's development, improvements in parents' well-being are likely to benefit their children as well. Mutually reinforcing effects may also work in the opposite direction, with parents benefiting when children's well-being is enhanced.[10] However, relatively few studies have examined the connections between parents' and children's health.[11,12]

Health (encompassing both mental and physical health) is a fundamental component of well-being for children and parents.[13] Health is influenced by a myriad of factors, including those described as "social determinants."[14] These include access to healthy food and a quality education, experiences of discrimination or violence, access to stable and safe housing, and social support and interactions.[15,16] Poor health can be exacerbated by these and other determinants, and can influence opportunities throughout life.[17]

Three potential kinds of pathways may account for the relationship between parent and child health: bio-genetic, environmental, and social. The bio-genetic pathway includes factors that have biological and/or genetic origins, such as the inheritance of disease or shared infectious conditions, as well as genetic alterations related to trauma.

The environmental pathway includes factors that are external to, but shared by, parents and children. These include pollutants (e.g., lead exposure or second-hand smoke) in air, water, or households; toxic exposures in-utero[18,19]; and obstacles to accessing health care. Interventions that focus on parents' needs with respect to these factors often benefit their children. For example, when low-income parents gain health insurance coverage for themselves, their uninsured children are much more likely to become enrolled in health insurance as well.[20] This is vitally important, as children whose parents are uninsured have poorer health (higher risk for asthma, ADHD, developmental delays, and learning and mental disabilities)[21] and fewer preventive health care visits[22] than children with insured parents.

Social pathways are also numerous, encompassing, for example, the mutual influences (through modeling or imitation) that parents and children may have on one another's health.[23,24,25] This pathway includes family-stress models, such as when one member's poor health causes stress that negatively affects social interactions, leading in turn to heightened stress levels and worsened health among other family members.[26]

Parental depression is a well-established risk factor for children's health and well-being. Here, the evidence supports both the social-transactional and bio-genetic pathways as potential mechanisms. In a 30-year study that examined the risk of major depression in families over three generations,[27] researchers found that, compared to children with nondepressed parents, biological children of depressed parents had twice the risk for major depressive disorder (MDD) and other mental health issues, and that children with both a depressed parent and grandparent were at highest risk for MDD. The authors suggested using family history as part of childhood screening for early mental health needs.

Parents' health can, in turn, be impacted by their children's well-being and circumstances. For example, parents of children with special health care needs experience greater parenting stress,[28] lower sleep quality,[29] more cognitive challenges, and poorer general health compared to parents of typically developing children.[30] Also, parents of children who have difficulties at school may have to take time off from work,[31] thus increasing the parents' stress and exacerbating health challenges they may already face.

A large body of research documents the effects of adverse childhood experiences (ACEs) on children's life trajectories. ACEs are:

> … potentially traumatic experiences and events, ranging from abuse and neglect to living with an adult with a mental illness. They can have negative, lasting effects on health and well-being in childhood or later in life. However, more important than exposure to any specific event of this type is the accumulation of multiple adversities during childhood, which is associated with especially deleterious effects on development.[32]

Emerging evidence suggests that negative health effects associated with ACEs can be passed down (either through genetic transmission, or through behaviors that reflect the parent's earlier experience of toxic stress) from one generation to the next. In other words, children whose parents experienced several ACEs during childhood are more likely to be in poorer health than children whose parents experienced fewer or no ACEs.[33,34,35]

The potential role of social-emotional support for parenting in a two-generation approach. Parents benefit from having strong social connections and support systems to help them through the challenges inherent in parenting. Social support takes many forms—financial, childcare, emotional— and may come from the child's other parent, extended family, friends, and neighbors. Parents' social support is also linked to children's well-being. Mothers' receipt of social support during pregnancy is linked with improved infant birth weight;[36] children of mothers who receive emotional support during childrearing are less likely to be retained in grade;[37] and parenting stress, ineffective parenting, and child behavioral problems are reduced when parents have greater levels of social support.[38] Moreover, parents' perception of available social support is beneficial, whether or not they access support.[39] However, there is little research on the relationship between the support that parents perceive and their children's overall health.

Data

The data used in this brief come from the 2016 National Survey of Children's Health (NSCH). This survey was conducted in all 50 states and the District of Columbia by the U.S. Census Bureau, with funding from the Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services. Invitations to participate in the NSCH were mailed to households deemed likely to have children, based on administrative data, and households that reported having children were selected to participate. Surveys were completed by parents using a secure web-based platform or a mailed, paper version.

Sample

Focal child

For each household in the NSCH, a child aged 0 to 17 years was randomly selected to be the focal child; children ages 0 to 5 were oversampled. For these analyses, our sample consists of up to 50,060 children.[a] Our analyses are weighted to be statistically representative of children at the national and state levels.

Parent respondents and other adults in the household

The NSCH instructions state, "The survey should be completed by an adult who is familiar with this child's health and health care." In the 2016 NSCH, mothers completed the survey in 61.6 percent of households, fathers in 28.9 percent, and a non-parental adult in 9.4 percent of households. Respondents were asked to report on a number of topics, including the focal child's overall health, their own physical and mental health, and the health of any second adult in the household. In 48.5 percent of households, the second adult was the child's father; in 28.5 percent, this was the child's mother; and in 23.0 percent, there was either no second adult in the household or the adult was not the child's parent.

It is important to note that the NSCH was designed to yield data representative of the population of children in the United States, and in each state. It was not designed to yield data representative of parents. Nevertheless, at the national level, the sample is sufficiently large to be a reasonable estimate of the parent population; greater caution is warranted in interpreting the state-level data, where samples are smaller, or interpreting the data for mothers and fathers separately.

Measures

Overall health

In the NSCH, overall child health was assessed with a single item, "In general, how would you describe [the child]'s health?" and five response options: poor, fair, good, very good, and excellent. However, for adults, the NSCH measured physical and mental health with two separate items ("In general, how is your physical health?" and "In general, how is your mental or emotional health?"), so we measure overall health by combining them.

Our composite parent health measure has two categories:

- **Very good or excellent health**
  The respondent reported "very good" or "excellent" for both physical and mental health.

- **Poor, fair, or good health**
  The respondent reported "poor," "fair," or "good" for either physical or mental health.

Focal child's sex

The NSCH asks, "What is [focal child's] sex?" The options are "male" and "female." We use these categories in our analyses.

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[a] The 2016 NSCH includes 50,212 focal children. Our analyses exclude children whose adult respondent did not provide the focal child's health status (n = 152). Multivariate regression analyses, presented later in this brief, were conducted separately for mothers (n = 30,951) and fathers (n = 14,534).

Focal child's age

The NSCH asks, "How old is [focal child]?" Respondents selected a value from 0 to 17 years. For our analyses, we group ages into three categories: 0 to 5 years, 6 to 11 years, and 12 to 17 years.

Focal child's race and Hispanic ethnicity

Respondents were asked to identify the focal child's race and ethnicity ("Is this child of Hispanic, Latino, or Spanish origin?" and "What is this child's race?"). We use the following categories in our analyses:

- Non-Hispanic white only
- Non-Hispanic black only
- Hispanic, any race
- Non-Hispanic other race, or non-Hispanic two or more races

Highest education level in household

Respondents were asked about the highest level of schooling they and a second adult in the household (if applicable) had completed ("What is the highest grade or year of school you [or Adult 2] have completed?"). We use the highest level of education reported either by the respondent or between two adults if a second adult was included in the survey. We group the education levels as follows: no high school diploma/GED; high school diploma/GED; some college, a certificate, or a two-year degree; bachelor's degree or higher.

Household income

The NSCH collected information about the total income of each family ("Think about your total combined family income in the last calendar year for all members of the family. What is that amount before taxes?"). Using the number of household members, the ratio of household income to the federal poverty level (FPL) was calculated. For our analyses, we use three categories for household income: 100 percent of the FPL or less, more than 100 percent of the FPL to 200 percent of the FPL, and more than 200 percent of the FPL.

Family structure

Respondents were asked to describe the primary caretakers' relationship to the focal child ("How are you related to this child?" and "How is Adult 2 related to this child?"). In our analyses, children are considered to be part of a two-parent household if the response to both these questions was "Biological or Adoptive Parent." They are considered to be part of a household with one or with no parent if different responses were provided for one or both questions.

Emotional support for parenting

Respondents were asked, "During the past 12 months, was there someone that you could turn to for day-to-day emotional support with parenting or raising children?" They responded either "yes" or "no", and we include these responses in our analyses.

Examining child and parent health

We first present, for the nation, and for each state and the District of Columbia, the percentage of children whose parents reported their child's health, and their own health, as very good or excellent (as defined above), and the percentage who reported availability of emotional support for parenting.

Next, we present results of multivariate logistic regression analyses that show associations among parent health, parenting support, and child health. We control for known correlates of health: household income; highest education level; family structure (two-parent versus one or no parent); and child sex, race/Hispanic ethnicity, and age are used as covariates in the analyses. All analyses are conducted using Stata 13.1[40]; additional findings from sensitivity analyses are included in Appendix A.

Children in very good or excellent health

According to data from the 2016 NSCH, most parents in the United States consider their children to be in "very good" or "excellent" health, although there are some substantial subgroup differences. Overall, the great majority of children—89.7 percent—are reported to be in very good or excellent health. Female and male children are equally likely to be in very good or excellent health (90.4 and 89.0 percent, respectively). The proportion of children in very good or excellent health declines slightly with increasing age (92.8 percent of children ages 0 to 5, compared to 88.8 percent at ages 6 to 11, and 87.6 percent at ages 12 to 17).[b] Non-Hispanic white children are most likely to have very good or excellent health (93.0 percent); in comparison, 84.8 percent of Hispanic children, 85.5 percent of non-Hispanic black children, and 90.1 percent of children of another race/ethnicity or two or more races have the same level of health.

Health disparities among children are more pronounced when broken out by the highest education level of household adults, household income, family structure, and parental nativity. In households where at least one adult holds a bachelor's degree or higher, 94.1 percent of children are in very good or excellent health. Where both adults have less than a high school education, this proportion is 76.4 percent. Differences in child health by household income follow a similar gradient: 94.0 percent of children in households with incomes greater than 200 percent of the federal poverty level (FPL) have very good or excellent health, compared to 81.3 percent in households with incomes at or below the FPL. Children in households where two parents are present are more likely to have very good or excellent health than those in households with one or no parent (92.5 percent and 83.5 percent, respectively); a similar gap exists for children whose parent respondent was born in the United States, versus outside of the country (91.0 percent and 85.1 percent, respectively).

Additional subgroup details regarding child health are included in Table 1.

Table 1. Percentage of children in very good or excellent health, by demographic and household characteristics: 2016

Characteristic	Children in very good or excellent health (%)
Overall	**89.7**
Child's sex	
Female	90.4
Male	89.0
Child's age	
0-5 years	92.8
6-11 years	88.8

[b] The percentages of children in very good or excellent health at ages 6 to 11 (88.8 percent) and 12 to 17 (87.6 percent) are not statistically different (p = 0.188).

Table 1, cont. Percentage of children in very good or excellent health, by demographic and household characteristics: 2016

Characteristic	Children in very good or excellent health (%)
12-17 years	87.6
Child's race/Hispanic ethnicity	
Non-Hispanic white	93.0
Non-Hispanic black	85.5
Hispanic	84.8
Non-Hispanic other race/Non-Hispanic two or more races	90.1
Highest education level in household	
No high school diploma/GED	76.4
High school diploma/GED	84.3
Some college or two-year degree	89.3
Bachelor's degree or higher	94.1
Household income	
100% FPL or less	81.3
Over 100% FPL to 200% FPL	87.2
Over 200% FPL	94.0
Parents in household	
One or no biological or adoptive parent	83.5
Two biological or adoptive parents	92.5
Nativity of parent respondent	
Born in the United States	91.0
Born outside the United States	85.1

Source: Child Trends' original analyses of the 2016 National Survey of Children's Health.
Notes: Data are weighted. Total N = 50,060. FPL is the federal poverty level.

Child health varies widely across the states. Maryland has the highest percentage of children reported to have very good or excellent health (93.7 percent). In comparison, Louisiana has the lowest percentage of children in very good or excellent health (84.6 percent). Of states where the smallest proportion of children have very good or excellent health, states in the South (Louisiana, Mississippi, Florida, Alabama, and Arkansas) and Southwest (Texas, Arizona, and Nevada) predominate. Child health data for all states are shown in Appendix B.

Parents in very good or excellent health

Overall, 64.0 percent of parents report being in very good or excellent health.[c] Parent health also varies by demographic and household characteristics. Parents of the youngest children are the most likely to be in very good or excellent health (68.0 percent for parents with children ages 0 to 5, compared to 63.3 percent with children ages 6 to 11, and 60.8 percent with children ages 12 to 17). Parents of Hispanic and non-Hispanic black children are less likely to be in very good or excellent health (57.8 and 59.2 percent, respectively) than parents of non-Hispanic white children (67.5 percent).

Like child health, self-reported parent health also varies by parent education, household income, and family structure. In households where at least one person has a bachelor's degree or higher, 74.3 percent are in very good or excellent health, whereas 51.9 percent of parents without a high school diploma or GED report very good or excellent health. Similarly, in households earning more than 200 percent of the FPL, 71.3 percent of parents are in very good or excellent health; in comparison, in households earning at or under the FPL, only 49.9 percent are in very good or excellent health. Parents in households with two biological or adoptive parents are more likely to report very good or excellent health than those in households where they are the only parent (68.2 and 50.0 percent, respectively).

Parents' health does not differ significantly by nativity status or their child's sex. More information on parent health, including data on mothers and fathers separately, is available in Table 2.

Table 2. Percentage of parent respondents in very good or excellent health, by parental sex, and demographic and household characteristics: 2016

Characteristic	Parents in very good or excellent health		
	Parents (%)	Mothers (%)	Fathers (%)
Overall	**64.0**	**61.7**	**69.3**
Child's sex			
Female	64.1	61.8	69.3
Male	63.9	61.6	69.3
Child's age			
0-5 years	68.0	66.1	72.6
6-11 years	63.3	61.2	68.5
12-17 years	60.8	57.9	67.1
Child's race/Hispanic ethnicity			
Non-Hispanic white	67.5	66.1	70.7
Non-Hispanic black	59.2	55.5	73.9
Hispanic	57.8	55.7	63.6
Non-Hispanic other race/ Non-Hispanic two or more races	65.4	62.1	70.5

[c] Due to the design of the survey, data on parents cannot be assumed to be representative of the population of parents at the national or state levels; however, they are likely to be a close approximation, at least at the national level. See page 5 for further details.

Table 2, cont. Percentage of parent respondents in very good or excellent health, by parental sex, and demographic and household characteristics: 2016

Characteristic	Parents in very good or excellent health		
	Parents (%)	Mothers (%)	Fathers (%)
Highest education level in household			
No high school diploma/GED	51.9	49.5	58.8
High school diploma/GED	53.7	52.6	56.7
Some college or two-year degree	58.2	56.1	65.0
Bachelor's degree or higher	74.3	73.0	76.6
Household income			
100% FPL or less	49.9	49.0	54.5
Over 100% FPL to 200% FPL	57.0	55.3	62.3
Over 200% FPL	71.3	70.1	73.4
Parents in household			
One biological or adoptive parent	50.0	49.5	53.6
Two biological or adoptive parents	68.2	66.6	71.2
Nativity of parent respondent			
Born in the United States	63.1	60.9	68.8
Born outside the United States	66.9	64.7	70.5

Source: Child Trends' original analyses of the 2016 National Survey of Children's Health.
Notes: Data are weighted. Total N = 44,985; Mother N = 30,623; Father N = 14,362. Analyses include parents of a nationally representative sample of children, though the parent sample may not be nationally representative. Samples of mothers and fathers are not nationally representative of those populations. "Health" includes both mental and physical health and is presented for the respondent parent only, not the second parent in the household. FPL is the federal poverty level.

As with child health, parent health varies widely across the states and the District of Columbia. Connecticut has the greatest proportion (73.6 percent) of parents reporting very good or excellent health, followed by New Jersey (73.5 percent) and the District of Columbia (72.3 percent). Parents in Arizona are least likely to report very good or excellent health (53.9 percent). More details regarding parent health in each state can be found in Appendix B.

Parents reporting emotional support for parenting

Seventy-six percent of parents reported having someone they could turn to for day-to-day emotional support with parenting or raising children during the past 12 months (see Table 3). Several demographic and household characteristics are associated with the likelihood of having this support. The prevalence of parenting support is highest for parents of children ages 0 to 5 (81.4 percent), compared to parents of children ages 6 to 11, or 12 to 17 (74.7 and 72.6 percent, respectively). Parents of non-Hispanic white children (86.2 percent) and parents in households with incomes above 200 percent of the FPL (82.9 percent) are more likely to have a source of emotional support, compared to parents of non-white and low-income children, respectively. Parents with a bachelor's degree or higher are nearly twice as likely to report having this support as parents with no high school diploma/GED (84.3 and 45.8 percent, respectively). Emotional support for parenting differs substantially by parental nativity: 85.4 percent of U.S.-born parents reported having support, compared to 45.1 percent for parents not born in the U.S. In contrast,

the gap between households with one parent and those with two parents is small, but statistically significant: 74.0 and 76.9 percent, respectively. Table 3 includes additional national-level information on parenting support.

Table 3. Percentage of parents reporting emotional support for parenting, by demographic and household characteristics: 2016

Characteristic	Parent has emotional support for parenting (%)
Overall	**76.2**
Respondent type	
Mother	79.0
Father	69.5
Child's sex	
Female	75.6
Male	76.7
Child's age	
0-5 years	81.4
6-11 years	74.7
12-17 years	72.6
Child's race/Hispanic ethnicity	
Non-Hispanic white	86.2
Non-Hispanic black	73.9
Hispanic	58.7
Non-Hispanic other race/ Non-Hispanic two or more races	68.3
Highest education level in household	
No high school diploma/GED	45.8
High school diploma/GED	70.5
Some college or two-year degree	79.1
Bachelor's degree or higher	84.3
Household income	
100% FPL or less	64.0
Over 100% FPL to 200% FPL	68.9
Over 200% FPL	82.9
Parents in household	
One biological or adoptive parent	74.0
Two biological or adoptive parents	76.9
Nativity of parent respondent	
Born in the United States	85.4
Born outside the United States	45.1

Source: Child Trends' original analyses of the 2016 National Survey of Children's Health.
Notes: Data are weighted. Total N = 45,088. Analyses include parents of a nationally representative sample of children, though the parent sample may not be nationally representative. The data present availability of emotional support for the respondent parent only and do not include second parents. FPL is the federal poverty level.

At the state level, the prevalence of emotional support for parenting is highest in Maine, with 87.7 percent of parents reporting having such support. Prevalence is lowest in Texas, with just over two-thirds of parents (67.5 percent) reporting having support. More state-level information on emotional support for parenting can be found in Appendix C.

Relationship between parent and child health

According to multivariate analyses of the self-reported data, parent health is consistently and strongly associated with child health (see Table 4). Comparing children with specific demographic and household characteristics,[d] children have about three-and-a-half times the odds of having very good or excellent health if their parents have very good or excellent health themselves, with an odds ratio (OR) of 3.67.

There are also significant associations, though of smaller magnitude, between child health and several of the demographic variables. Holding constant other characteristics, children ages 6 to 11 (OR, 0.64) or 12 to 17 (OR, 0.57) have lower odds of being in very good or excellent health than children ages 0 to 5. Hispanic (OR, 0.63) and non-Hispanic black (OR, 0.71) children have lower odds of being in very good or excellent health compared to non-Hispanic white children. Children in households with incomes between 100 and 200 percent of the FPL (OR, 1.32) or more than 200 percent of the FPL (OR, 1.76) have significantly higher odds of having very good or excellent health (compared to households with incomes less than or equal to the FPL). Children in two-parent households have higher odds of being in very good or excellent health (OR, 1.38) (compared to children in one-parent households), as do children in households that include an adult with some college experience (OR, 1.89) or a two-year degree (OR, 2.08) (versus having less than a high school degree). Full results of the multivariate models, including models for mothers and fathers separately, are reported in Table 4 below.

In addition to the demographic and household controls used in these logistic regression models, we ran supplemental models that include as covariates binary indicators of child health insurance coverage and difficulty accessing health care. Results from these analyses yielded findings very similar to those of the original models, and are discussed in Appendix A.

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[d] In logistic regression, binary covariates are held constant at the values of their respective reference groups.

Table 4. Multivariate logistic regressions examining the relationship between parent health and child health, controlling for demographic and household characteristics, by sex of parent respondent

Variable		Odds ratios		
		Parents	**Mothers**	**Fathers**
Parent health (reference group: poor, fair, or good health)	Very good or excellent	**3.67*****	**4.06*****	**2.71*****
Child's sex (reference group: female)	Male	0.86	0.84	0.93
Child's age (reference group: 0-5 years)	6-11 years	**0.64*****	**0.56*****	0.95
	12-17 years	**0.57*****	**0.50*****	0.83
Child race/Hispanic ethnicity (reference group: non-Hispanic white)	Non-Hispanic black	**0.71***	0.81	**0.43****
	Hispanic	**0.63*****	**0.69****	**0.47*****
	Non-Hispanic other race/ Non-Hispanic two or more races	0.83	0.85	0.74
Highest education level in household (reference group: no HS diploma/GED)	High school diploma/GED	1.41	**1.56***	1.05
	Some college or two-year degree	**1.89*****	**1.89****	**2.18***
	Bachelor's degree or higher	**2.08*****	**2.28*****	1.65
Household income (reference group: income less than or equal to 100% FPL)	Over 100% FPL to 200% FPL	**1.32***	1.31	1.40
	Over 200% FPL	**1.76*****	**1.60****	**2.19****
Family structure (reference group: one-parent household)	Two-parent household	**1.38****	**1.32***	1.62

Source: Child Trends' original analyses of the 2016 National Survey of Children's Health.
Notes: *p < 0.05, **p < 0.01, ***p < 0.001. Data are weighted. Total N = 44,385; Mother N = 30,194; Father N = 14,191. Analyses include parents of a nationally representative sample of children, though the parent sample may not be nationally representative. Samples of mothers and fathers are not nationally representative of those populations. Analyses examine a composite of mental and physical health of the respondent parent only and do not include second parents. Odds ratios significantly greater than 1.0 indicate that the listed group is positively associated with very good or excellent child health when compared to the reference group; odds ratios significantly less than 1.0 indicate that the listed group is negatively associated with very good or excellent child health when compared to the reference group. FPL is the federal poverty level.

Relationship between emotional support for parenting and child health

Comparing children with specific demographic and household characteristics, emotional support for parenting is not significantly associated with child health (nor is it associated with parent health; the results of these analyses are not shown here). Other covariates have generally similar associations with child health to those in the model shown in Table 4 that examines the relationship between parent and child health. Full results of the multivariate models, including models for mothers and fathers separately, are reported in Table 5 below.

Table 5. Multivariate logistic regressions examining the relationship between emotional support for parenting and very good or excellent child health, controlling for demographic and household characteristics, by sex of parent respondent

Variable		Odds ratios		
		Parents	Mothers	Fathers
Emotional support for parenting (reference group: no source of support)	Reports source of support	1.01	0.99	1.13
Child's sex (reference group: female)	Male	0.85	0.82	0.96
Child's age (reference group: 0-5 years)	6-11 years	**0.63***	**0.55***	0.96
	12-17 years	**0.53***	**0.46***	0.81
Child race/Hispanic ethnicity (reference group: non-Hispanic white)	Non-Hispanic black	**0.72***	0.81	**0.48**
	Hispanic	**0.66**	**0.73***	**0.47**
	Non-Hispanic other race/ Non-Hispanic two or more races	0.80	0.81	0.74
Highest education level in household (reference group: no HS diploma/ GED)	High school diploma/GED	**1.48***	**1.72***	0.97
	Some college or two-year degree	**1.96***	**2.04***	**1.99***
	Bachelor's degree or higher	**2.49***	**2.86***	1.70
Household income (reference group: income less than or equal to 100% FPL)	Over 100% FPL to 200% FPL	**1.32***	1.29	1.52
	Over 200% FPL	**1.97***	**1.80***	**2.42***
Family structure (reference group: one-parent household)	Two-parent household	**1.60***	**1.52***	**1.91***

Source: Child Trends' original analyses of the 2016 National Survey of Children's Health.

Notes: *p < 0.05, **p < 0.01, ***p < 0.001. Data are weighted. Total N = 44,429; Mother N = 30,241; Father N = 14,188. Analyses include parents of a nationally representative sample of children, though the parent sample may not be nationally representative. Samples of mothers and fathers are not nationally representative of those populations. The analyses examine availability of emotional support for the respondent parent only and do not include second parents. Odds ratios significantly greater than 1.0 indicate that the listed group is positively associated with very good or excellent child health when compared to the reference group; odds ratios significantly less than 1.0 indicate that the listed group is negatively associated with very good or excellent child health when compared to the reference group. FPL is the federal poverty level.

Discussion

Health, which underpins most aspects of well-being,[41] reflects the influence of many factors—biological, environmental, and social—operating at multiple levels and differing proximity to the individual.

Where children's health is concerned, we find that parents' health may play a substantial role.[e] This is not as simple as saying, "Unhealthy parents have unhealthy children" (or vice versa). Rather, children and their parents share not only genes, but many life circumstances, including stigma or privilege; an environment that may include one or more kinds of toxic exposures; and greater or less access to health-supporting institutions, ranging from primary care to recreational facilities to social support. Moreover, parents who live with health challenges (whether temporary or chronic) may have limited resources for childrearing, which can result in increased stress within the family. Thus, stress itself can potentially contribute to the poor health of family members.

Our findings suggest that emotional support for parenting may not be associated with child health. In fact, our measure of parenting support was unrelated even to parents' own health. We note, however, that the support measure used here is relatively imprecise—a simple yes or no regarding availability in the past year. A more nuanced measure that, for instance, includes information about the amount or quality of support received, might yield different results; such a measure merits inclusion in future research on this topic.

An additional measurement limitation is the parent's reporting of both parent and child health. Using independent clinical assessments of health for both children and parents might yield different information. However, prior research has demonstrated that self-reported health is a valid and reliable measure of health status, mainly due to its ability to predict mortality, along with other aspects of health, like functional ability and chronic health conditions.[42,43,44] Additionally, research has determined that parents' reports of their children's health represent a valid measure of child health status.[45,46] Although one study found that grouping together only respondents who indicate "poor" or "fair" health may not allow for reliable tracking of health over time at the population level, examining "excellent" health, or "very good" and "excellent" health together (as is done in the current study), provides a more consistent measure of health for the U.S. population.[47]

It is also worth noting that factors outside of those examined in this study may account for the relationship observed between parent and child health. However, we do conduct sensitivity analyses—such as running models that include as covariates child health insurance coverage and difficulty accessing health care—to account for possible confounding factors (see Appendix A).

Although we do not find an association between emotional support for parenting and child health, many other interventions are available to policymakers and practitioners looking to improve

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[e] Because these data are a snapshot in time, results are correlational only, and cannot be taken as indicating cause-and-effect.

children's health using a two-generation approach. Children's health benefits when parents obtain health insurance coverage,[48] when parents obtain additional education or training,[49] when parental depression is addressed,[50] and when parents' income rises.[51] Moreover, there may be benefits to families, other than improved child health, associated with strengthening parents' social support networks.[52]

Notwithstanding the compelling arguments for two-generation approaches, it is unrealistic to think that interventions that help parents will in every case also help their children, or that parents' well-being will invariably benefit from improving their child's health status. However, our findings imply that improving the health of parents is a powerful pathway to better child health.

Among several encouraging signs that policymakers are focusing on the connection between parent and child health are the recent Medicaid guidelines permitting states to screen for maternal depression during well-child visits,[53] as well as the emergence of paid parental leave as a popular public and private policy option. The latter gives parents time to adequately address their child's (and their own) health and other developmental needs during the critical first months of life.[54,55]

The current health crisis of opioid abuse offers an additional opportunity to use a two-generation approach. Newborns affected by in-utero exposure to opioids (or other substances) are at risk for neonatal abstinence syndrome (NAS), which can include respiratory distress, seizures, and tremors, as well as other symptoms normally aversive to parents, such as prolonged high-pitched crying, irritability, and difficulty sleeping or feeding.[56] Emerging best practices in treating NAS emphasize providing training to mothers on the importance of rooming-in with their infants and breastfeeding when possible, so as to establish positive bonds at the outset of the relationship.[57,58,59]

Another area into which existing policy could be expanded to support two-generation care is school-based health centers (SBHCs). In addition to providing health care services to students, some SBHC models offer health care services to students' family members (including their parents), which may ease barriers to health care access, particularly in rural settings, and offer opportunities for a more family-focused approach to wellness.[60]

Appendix A. Sensitivity analyses

This appendix covers sensitivity analyses that test the robustness of our findings. Results beyond those presented in the text are not included in this appendix, but are available upon request.

To assess whether relationships among child health, parent health, and sociodemographic factors differ by child age, we conducted separate multivariate logistic regression analyses that examined children ages 0 to 5, 6 to 11, and 12 to 17 (excluding age as a covariate). Results from these age-specific models are largely similar to those for all children. Across all three age groups, very good or excellent parent health is significantly associated with very good or excellent child health; this is also the case when examining mothers and fathers as separate subgroups.

To examine how the reported health of non-respondent parents (i.e., second adults who are mothers or fathers) is related to child health, we conducted additional multivariate logistic regression analyses using the same set of covariates presented in the body of this report. Results of the models using only non-respondent parents are similar to those using only respondent parents in both magnitude and direction. A child whose non-respondent parent reported very good or excellent health is also significantly more likely to have very good or excellent health (odds ratio of 3.3, $p < 0.001$, compared to 3.7, $p < 0.001$, for respondent parents only).

Likewise, we examined whether including parent physical health and mental health as separate, independent variables in the models—rather than overall parent health as a single variable—affects our findings. For respondent parents, both physical and mental health are significantly associated with child health (odds ratios of 3.7 and 3.3, respectively, with $p < 0.001$ for both measures).

To determine whether the effects of emotional support for parenting might differ at varying levels of parent health, we also tested a model that includes the interaction between respondent parent health and parental support as an independent variable, along with our regular set of covariates. Parent health and several controls are significantly associated with child health, while parenting support and the interaction between parenting support and parent health are not.

In addition to the demographic and household controls used in our main regression models, we ran supplemental models that include binary indicators of child health insurance coverage and difficulty accessing health care as covariates. The measure for child access to health care includes children who did not receive needed health care at least once in the past 12 months due to their ineligibility for services, need for services not available in the area, problems getting an appointment, problems getting transportation or child care, the place of care not being open, or cost-related issues. These models returned results similar to those presented in Table 4. Parent health remains significantly and substantially related to child health when including these additional controls for respondent parents, mothers, and fathers (odds ratios of 3.6, 4.0, and 2.7, respectively, with $p < 0.001$). Child health insurance coverage is never significantly associated with child health in these models, while the presence of difficulties accessing health care is significantly associated with a lower likelihood of very good or excellent child health for parent and mother respondents (odds ratios of 0.4 for both, with $p < 0.001$). Parent emotional support still has a nonsignificant relationship with child health when including these covariates.

As noted in the brief, descriptive statistics related to parent health are based on self-reports of respondent parents and are broken down by respondent mothers and fathers. Including the respondent's report of a second adult's health in the parent health measure yields results that are substantially similar when presenting findings for the health of mothers and fathers. For example, 61.7 percent of respondent mothers reported their health as very good or excellent; including mothers who were second adults raises that proportion to 64.1 percent. For fathers, including second adults lowers the proportion from 69.3 to 68.7 percent.

Appendix B. Percentage of children and parents in very good or excellent health, by state: 2016

State	Children in very good or excellent health (%)	Parents in very good or excellent health (%)
United States	**89.7**	**64.0**
Alabama	87.2	61.9
Alaska	93.5	66.0
Arizona	87.5	53.9
Arkansas	87.4	57.3
California	89.8	64.2
Colorado	91.2	66.5
Connecticut	93.1	73.6
Delaware	91.1	61.3
District of Columbia	91.0	72.3
Florida	86.7	65.4
Georgia	90.3	65.9
Hawaii	91.7	65.6
Idaho	92.1	65.6
Illinois	88.5	64.3
Indiana	90.4	60.0
Iowa	92.4	63.1
Kansas	90.6	68.4
Kentucky	89.2	58.3
Louisiana	84.6	62.2
Maine	90.2	60.5
Maryland	93.7	69.9
Massachusetts	90.0	68.3
Michigan	93.2	64.5
Minnesota	91.6	68.4
Mississippi	86.3	58.4
Missouri	90.8	60.0
Montana	91.5	58.4
Nebraska	88.6	63.8
Nevada	87.6	57.3
New Hampshire	92.0	63.9
New Jersey	91.4	73.5
New Mexico	89.9	54.1

Appendix B, cont. Percentage of children and parents in very good or excellent health, by state: 2016

State	Children in very good or excellent health (%)	Parents in very good or excellent health (%)
New York	89.3	70.0
North Carolina	89.6	62.4
North Dakota	92.7	63.2
Ohio	90.4	62.2
Oklahoma	90.5	54.9
Oregon	90.5	61.3
Pennsylvania	92.1	64.5
Rhode Island	89.7	65.0
South Carolina	91.6	60.4
South Dakota	92.7	65.6
Tennessee	89.2	62.9
Texas	86.3	61.6
Utah	92.7	67.1
Vermont	93.3	62.8
Virginia	92.9	66.0
Washington	90.6	64.3
West Virginia	90.7	55.7
Wisconsin	91.5	62.6
Wyoming	90.2	60.4

Source: Child Trends' original analyses of the 2016 National Survey of Children's Health.
Notes: Data are weighted. Child N = 50,060; Parent N = 44,985. The child sample is representative at the state level, though the parent sample may not be. Parent "Health" includes both mental and physical health and is presented for the respondent parent only, not the second parent in the household.

Appendix C. Percentage of parents who report having emotional support for parenting, by state: 2016

State	Overall (%)
United States	**76.2**
Alabama	83.1
Alaska	84.8
Arizona	71.4
Arkansas	78.8
California	70.1
Colorado	79.7
Connecticut	76.2
Delaware	78.7
District of Columbia	72.3
Florida	73.2
Georgia	76.5
Hawaii	80.8
Idaho	86.9
Illinois	76.9
Indiana	79.5
Iowa	83.3
Kansas	83.8
Kentucky	80.6
Louisiana	81.0
Maine	87.7
Maryland	74.9
Massachusetts	76.6
Michigan	78.7
Minnesota	82.3
Mississippi	80.4
Missouri	84.2
Montana	87.6
Nebraska	81.1
Nevada	69.4
New Hampshire	81.3
New Jersey	69.7
New Mexico	72.5
New York	74.7
North Carolina	79.3

Appendix C, cont. Percentage of parents who report having emotional support for parenting, by state: 2016

State	Overall (%)
North Dakota	86.4
Ohio	81.9
Oklahoma	82.1
Oregon	80.1
Pennsylvania	79.2
Rhode Island	75.3
South Carolina	81.8
South Dakota	82.5
Tennessee	80.5
Texas	67.5
Utah	86.7
Vermont	83.5
Virginia	77.3
Washington	75.0
West Virginia	76.3
Wisconsin	84.1
Wyoming	86.2

Source: Child Trends' original analyses of the 2016 National Survey of Children's Health.
Notes: Data are weighted. Total N = 45,088. While the NSCH child sample is representative at the state level, the parent sample may not be. The data present availability of emotional support for the respondent parent only and do not include second parents.

About the Data Used in This Brief

The 2016 National Survey of Children's Health (NSCH) is a national study funded and directed by the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau (MCHB). The NSCH is weighted to be statistically representative of children ages 0 to 17 at both the national and state levels, and describes children's physical and mental health, access to quality health care, and children's family, neighborhood, school, and social context. The survey was fielded in 2003, 2007, 2011-12, and, beginning in 2016, on an ongoing basis. This brief uses data from the 2016 data collection, which included 50,212 adult respondents. For more information on the NSCH, please visit the survey homepage: http://childhealthdata.org/learn/NSCH.

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