A Working Paper

kids count

A Project of the Annie E. Casey Foundation

States Ranked on the Basis of Child Well-Being For Children in Low-income Families

By

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EXECUTIVE SUMMARY

The Annie E. Casey Foundation's KIDS COUNT project has ranked the 50 states based on overall child well-being each year since 1990. However, looking separately at the well-being of children in low-income families is also important. Such children have higher risks for negative outcomes, and, accordingly, this population is often the target of public policies. Furthermore, the proportion of children living in low-income families varies markedly across states; from 23 percent in New Hampshire to 56 percent in Mississippi. Thus, when state rankings are based on information about state-wide child populations, it is hard to know whether a low ranking occurs because children in that state generally fare worse than children in other states at the same income level, or because a state has a relatively large share of children in low-income families and therefore faces a greater challenge in serving at-risk children. Examining the well-being of children in low-income families separately would help illuminate how well states are doing in providing resources for the most vulnerable children. Until now, data have not been available to look at children in low-income families separately in each state.

In this paper we use data from two recently available sources – the American Community Survey and the National Survey of Children's Health – to create comprehensive state-level indices of the condition of children separately for children in low- and higher-income families. In this study, we define low-income families as those with incomes below 200 percent of the federal poverty threshold. We define higher-income families as all other families.

Our key findings are as follows:

- States performing best on the condition of low-income children are clustered in the upper Great Plains and Rocky Mountain regions. The five states with the best performance in terms of the condition of children in low-income families were: 1) Utah, 2) North Dakota, 3) Idaho, 4) Wyoming, and 5) South Dakota. Of the top ten states, only two (Vermont and Hawaii) were not in this region.

- States performing worst on the condition of low-income children are clustered on the East Coast and Mid-Atlantic region. The bottom six states are in this region; 50) Massachusetts, 49) Rhode Island, 48) New York, 47) New Jersey, 46) Maryland, and 45) Delaware.

- State rankings based on the condition of children in low-income families often differ from rankings based on children in higher-income families. There were 17 states for which the ranking for children in low-income families differed by more than 10 ranks

from the ranking for high-income children. This suggests that rankings based on states' entire populations of children mask important differences for groups of children within states.

- States with the biggest difference between rankings for children in low-income families and those in higher-income families were: 1) Massachusetts (29 ranks), 2) Washington (27 ranks), 3) New Mexico (26 ranks), 4) Connecticut (24 ranks), and 5) California/Alaska (23 ranks).

- The top five states where ranking among low-income children are much higher than rankings for higher-income children are Washington, New Mexico, Alaska, California, and Hawaii.

- The top five states where ranking among low-income children are much lower than rankings for higher-income children are Massachusetts, Connecticut, Ohio, North Carolina, and Kentucky.

- Examination of the condition of children in low-income families shows that many states in the Deep South such as Mississippi, Louisiana, Alabama, and Arkansas, are still in the bottom half of the distribution, but they do not dominate the very bottom of the rankings in terms of the condition of children in low-income families.

States Ranked on the Basis of Child Well-Being for Children in Low-income Families

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Introduction

As part of an effort to provide policymakers and the general public with information about well-being of children in the United States, the Annie E. Casey Foundation's *KIDS COUNT Data Book* has ranked the 50 states based on an index of child well-being each year since 1990. Though the *KIDS COUNT Data Book* index includes only 10 items, a recent study found its state rankings correspond closely to rankings based on a more comprehensive 25-item index.[1]

The *KIDS COUNT Data Book* index assesses the well-being of states' entire populations of children, rather than highlighting important differences among states for children at different income levels, which we strive to do in this paper. Indeed, preliminary work testing an index comprised of eight items drawn from the Census 2000 Supplemental Survey suggests that state rankings for the well-being of children in low-income families are different than rankings for states' entire child populations.[2] Due to limitations in the availability of state-level indicator data for income subgroups, more comprehensive indices have not previously been calculated separately for children in low-income families.

Research clearly shows that children living in families with income below the poverty line tend to fare worse than children in non-poor families.[3] However, children living in low-income families (those up to two times the federal poverty threshold) are also at particular risk for negative outcomes.[4] Furthermore, the proportion of children living in low-income families varies markedly across states, from 23 percent in New Hampshire to 56 percent in Mississippi.[5] When state rankings are based on information about state-wide child populations, it is hard to know whether a low ranking occurs because children in that state generally fare worse than children in other states at each income level, or because a state has a relatively large share of children in low-income families and therefore faces a greater challenge in serving at-risk children.

Examining the well-being of children in low-income families will provide important information that can inform public discussion regarding public policies aimed at improving the well-being these vulnerable children. Recent reports show that the Federal Government spent about $335 billion on children in 2005, primarily targeted on low-income children.[6] States spent another $446 billion on children in 2003, mostly on public education.[7] Roughly a third of all children receiving means-tested federal benefits like Food Stamps and Medicaid live in families with incomes between 100 and 200 percent of poverty.[8]

Indicators are useful for monitoring outcomes that policies are intended to affect, when they are well-conceptualized and when they are measured for the appropriate

populations.[9] The connections between public policies and changes in child well-being for specific populations would be better captured by looking at changes among children in those particular populations (for example, state-wide populations of children by varying family income levels).

Examining how levels of well-being in one state compare with levels in another state can also motivate states with relatively low levels of performance to strive for improvement. Furthermore, these efforts can be informed by identifying the conditions and policies that promote the well-being of children in states with relatively high levels of child well-being.[10]

In this paper, we use data from two sources that have only recently become available – the American Community Survey and the National Survey of Children's Health. These two new data sources include indicators of child outcomes and contextual measures that can be used to create indices separately for children in low- and higher-income families in each state. Creating these separate indices allows us to examine which states do the best job of providing resources for children in low-income families and whether state rankings based on children in low-income families differ substantially from those in higher-income families.

We address two questions in this paper:

1) In which states is the condition of children in low-income families the best?

2) Which states have the biggest differences between the condition of children in low-income families and those in higher-income families?

Data and Methodology

We use data from two surveys that are representative of children at the state level: the American Community Survey (ACS) and the National Survey of Children's Health (NSCH). These datasets allow for indicators to be estimated for subgroups of children based on family income within states. Data in the analyses presented here come from a three-year average of the 2002-2004 ACS and from the 2003 NSCH.

The ACS, a relatively new survey conducted by the U.S. Census Bureau, is a nationwide survey designed to provide communities with reliable and timely demographic, housing, social, and economic data every year. It will replace the 2010 Census long form by collecting detailed information throughout the decade. Questions on the ACS cover basic demographic information, as well as many topics relevant to child well-being.

The Census Bureau began testing the ACS in 1996. Between 2000 and 2004, the ACS sampled more than 700,000 addresses per year and the Census Bureau published data every year for the nation, states, and counties with 250,000 or more residents. The

testing phase ended in 2004 and the questionnaire is now mailed to approximately 250,000 addresses every month —about 3 million addresses per year—making it one of the largest surveys in the world. We combined data from three years of the ACS (2002, 2003, and 2004), in order to enhance the precision of the state-level estimates.

The NSCH is funded by the Maternal and Child Health Bureau of the Health Resources and Services Administration and administered by the National Center for Health Statistics of the Centers for Disease Control and Prevention.[11] The NSCH was conducted as part of the State and Local Area Integrated Telephone Survey (SLAITS) program.

The NSCH is based on a random digit dialing (RDD) survey of households. Within households with children under age 18, one child was randomly selected as the focal child. The parent or adult in the household who was most knowledgeable about the child's health and health care answered survey questions about their family and community, and about their child and the child's health care via a telephone interview. In total, over 102,000 interviews were completed between January 2003 and July 2004, yielding samples of roughly 2,000 children per state. Plans call for the survey to be fielded every four years, with the latest administration taking place in 2007.

Methodology

We first identified indicators in each of the two surveys that reflect important aspects of the condition of children, including both child outcomes and contextual measures. To present a robust and unbiased portrait, we selected measures that would contribute to an index reflecting well-being across a broad set of domains.[12] The specific indicators we selected built upon our previous work using individual indicators from the NSCH and ACS to examine the well-being of low-income children in the 50 states.[13] Most of the indicators and domains employed in this project have also been used in national-level child indicator studies.[14]

All indicators were clustered into one of six domains, which include:

(1) health,
(2) social and emotional well-being,
(3) cognitive development and educational attainment,
(4) family activities,
(5) family and neighborhood context, and
(6) social/economic characteristics.

Following common practice in this area of study, we use the outcome and context indicators together to produce one index reflecting the condition of children.[15] Outcome indicators are important because they are direct indicators of how children are faring. But contextual indicators are also important, because they represent aspects of children's environment that affect their well-being, and because public policies aimed at

improving children's well-being often do so by targeting the resources available to children.

When considering whether to include various items in our composite measure, we wanted to avoid including pairs of items that are extremely highly correlated to the point that they are redundant, meaning that two indicators measure the same construct twice. However, strong positive correlations are not necessarily a problem if two indicators represent different constructs, both of which are pertinent to child well-being or to children's contexts.[16] Therefore, using the indicators for children in families of all income levels, we created a correlation matrix using the 50 states as the unit of analysis. Of the 30 indicators that we initially considered for inclusion in the index, we ultimately omitted only one—the percentage of youths not in school and not working—from the final index due to its high correlation with several other indicators.

Appendix Table A1 shows correlations of state-level indicator estimates pertaining to the well-being and context of all children (regardless of family income). Most of the correlations are positive, and many are moderately or strongly associated. In other words, states in which the majority of children tend to fare well according to a given indicator tend to have a large portion of children faring well according to other indicators.

As shown in Appendix Table A1, the percentage of youth ages 16 to 19 who are idle (i.e., not working and not in school) is highly correlated with the rate of teenage high-school dropouts (r = +.80) and to living in a household without secure parental employment (r = +.81), and it is also strongly associated with living in a single-parent household (r = +.62) and living with a householder who is a dropout (r = +.67). Since the construct of idle teens also overlaps in meaning with living with a householder who is a high-school dropout and with teen high-school dropouts, we decided not to include the idle-teens indicator in our index.

Several other indicators are also correlated at r = +.75 or higher, but because they represent substantively distinct constructs, we did not eliminate them from the index. For example, extracurricular activity participation is highly correlated with children's health status (r = +.82), with children's positive social behaviors (r = +.78), with adolescent volunteering (r = +.75) and unsupportive neighborhoods (r = +.77). However, since these indicators all represent distinct experiences and characteristics of children, we decided to retain each of these indicators.

Interestingly, several indicators are inversely correlated with other indicators at the state level. Such negative correlations do not present a problem in creating an index. Each item within the index is intended to represent an important, yet distinct, aspect of child well-being or of children's context. The reverse is true with a scale, in which items are expected to be correlated with each other (or "hang together") because they should all have a single underlying (or "latent") construct as their predictor.[17]

Still, since it may seem counterintuitive for certain indicators to be inversely related, such as fair or poor health and (for adolescents) experiencing depression or anxiety, we felt further exploration of the relationships among indicators would be worthwhile. Accordingly, in Table A2, we show the child-level correlations for the items we found to be negatively correlated at the state level. In all cases, indicators that were negatively correlated at the state level are only weakly ($r < .18$)—and typically positively—correlated at the child level. So, for example, it is true that the larger the share of children in a state with adolescents who have symptoms of anxiety or depression, the smaller the state's share of children with fair or poor health is likely to be ($r = -.44$). However, an individual adolescent who has anxiety or depression is slightly more likely than other children to have symptoms of fair or poor health ($r = +.15$).

In summary, then, indicators were selected based on four principles:

1) No two measures were too highly correlated (i.e., indicating that they were assessing the same underlying construct)
2) Each measure reflected an important dimension of or predictor of well-being
3) Measures collectively reflected all stages of development from birth through early adulthood
4) There were about the same number of indicators in each domain

For a list of the 29 indicators within the 6 domains, see Table 1. The indicators reflect a wide range of conditions that either affect or are direct indicators of child well-being and include measures for every development stage from birth through early adulthood. While data limitations led to slightly more indicators for school-age children (especially in outcomes rather than context), we do have indicators that represent younger children as well.

Table 1: Measures Included in Well-Being of Children Index

Health Status domain

1. Child is in less than very good health (NSCH 2003)
2. Child has an activity limitation (NSCH 2003)
3. Child (10-17) is overweight (NSCH 2003)
4. Child (6-17) engages in vigorous physical activity less than 3 days/week (NSCH 2003)
5. Child has asthma (NSCH 2003)

Social and Emotional Well-Being domain

6. Child (3-5) has emotional or behavioral difficulties (NSCH 2003)
7. Child (6-17) experiences depression or anxiety (NSCH 2003)
8. Child (6-17) exhibits problem behaviors (NSCH 2003)
9. Child (6-17) does not (usually/always) display positive social behavior (NSCH 2003)

Cognitive Development and Educational Attainment domain

10. Difficulty speaking English (5-17) (ACS 2002-2004)
11. Teens (16-19) who are high school dropouts (ACS 2002-2004)
12. Child (1-5) at moderate or high risk for developmental delay (NSCH 2003)
13. Child (6-17) has a learning disability (NSCH 2003)
14. Child (6-17) does not read for fun everyday (NSCH 2003)

Family Activities domain

15. Child (0-5) is read to less than 7 days/week (NSCH 2003)
16. Child (6-17) does not participate in some type of team, club, or activity (NSCH 2003)
17. Child (12-17) did not volunteer in the past year (NSCH 2003)
18. Child attends religious services less than weekly (NSCH 2003)
19. Child eats meals together with family less than 6 days per week (NSCH 2003)

Family and Neighborhood Context domain

20. Child lives with household members who smoke (NSCH 2003)
21. Parent in fair/poor mental health (NSCH 2003)
22. Adult-child (6-17) relationship is not close (NSCH 2003)
23. Child lives in an unsupportive neighborhood (NSCH 2003)
24. Feels child is safe in neighborhood (NSCH 2003)

Social/Economic Characteristics domain

25. Child lives in a single-parent household (ACS 2002-2004)
26. Child does not have secure parental employment (ACS 2002-2004)
27. Child lives in a household without a telephone (ACS 2002-2004)
28. Child lives in a household without a vehicle (ACS 2002-2004)
29. Child lives with a householder who is a high school dropout (ACS 2002-2004)

Readers may note that one of the most commonly used indicators pertaining to children, child poverty, is not included here. This exclusion is because the main goal of the study is to examine differences between children in low-income and higher income families. It

wouldn’t make sense to compare poverty rates for low-income children and higher-income children, since the poverty rate for children in higher-income families would always be zero.

Prior to calculating index scores, we defined all indicators as negative outcomes or statuses (that is, a higher percentage represents a worse outcome for a state) in order to facilitate the interpretation of the results.

Table 2 shows mean values for all 29 measures of child well-being for low-income and higher income children. Data in this table show that, with only two exceptions, children in low-income families fare worse than children in higher-income families. The two exceptions are the percentage of children who have dinner with their family on fewer than 6 or 7 days per week, for which the rate is ten percentage points higher for higher-income children, and the percentage of children who attend religious services at least weekly, which do not differ significantly for low- and higher-income children.

In some cases, the differences between low-income children and higher-income children are rather small, but in other instances the gap is large. In general, differences in the socioeconomic domain were larger than those in other domains. Differences in the cognitive domain were generally smaller than those in other domains.

Table 2. Indicators of the well-being and context of children under 18, by family income

	Less than 200% poverty	At or above 200% poverty	Percentage point difference
Health Status (NSCH 2003)			
Child is in less than very good health	25%	8%	17%
Child has an activity limitation	8%	4%	4%
Child (10-17) is overweight	20%	12%	9%
Child (6-17) engages in vigorous physical activity < 3 days/week	30%	24%	5%
Child has asthma	9%	7%	2%
Social and Emotional Well-Being (NSCH 2003)			
Child (3-5) has emotional or behavioral difficulties	17%	8%	9%
Child (6-17) experiences depression or anxiety	7%	5%	2%
Child (6-17) exhibits problem behaviors	11%	6%	5%
Child (6-17) does not display positive social behavior	55%	39%	16%
Cognitive Development and Educational Attainment (NSCH 2003)			
Child (5-17) has difficulty speaking English (ACS Variable)	9%	3%	6%
Teens (16-19) who are high school dropouts (ACS Variable)	14%	5%	9%
Child (1-5 year) at moderate or high risk for developmental delay	28%	22%	7%
Child (6-17) has a learning disability	15%	9%	6%
Child (6-17) does NOT read for fun everyday	19%	16%	3%
Family Activties (NSCH 2003)			
Child (under 6) is read to < 7 days/week	60%	46%	14%
Child (6-17) does NOT participate in team, club, or activity	32%	10%	22%
Child (12-17) did NOT volunteer in the past year	51%	32%	19%
Child attends religious services less than weekly	44%	44%	0%
Child eats meals together with family less than 6 days per week	42%	52%	-11%
Family and Neighborhood Context (NSCH 2003)			
Child lives with household members who smoke	37%	25%	13%
Parent in fair/poor mental health	11%	3%	8%
Adult-child (6-17) relationship is not very close	15%	14%	2%
Child lives in an Unsupportive neighborhood	27%	13%	15%
Parent feels child is not always safe in neighborhood	53%	48%	4%
Social/Economic Characteristics (ACS 2002-2004)			
Living in a single-parent household	51%	17%	35%
Without secure parental employment	54%	17%	37%
Living in a household without a telephone	7%	1%	6%
Living in a household without a vehicle	14%	2%	12%
Living with a householder who is a high school dropout	32%	7%	24%

Source: National Survey of Children's Health 2003 and American Community Survey 2002-04

To calculate index scores, we converted each indicator score into a standard score (subtracted the mean and divided by the standard deviation) and averaged them without regard to domains. States were then ranked on the basis of the average of the standard scores.[18] We produced estimates for each indicator separately for low-income children, higher-income children, and for children of all incomes for each state.

Results

The rankings for each state for low-income children, higher-income children, and for all children are shown in Table 3 with states listed in order of the well-being for state low-income child populations.

Our results suggest that it is important to examine children in low- income families separately from state-wide populations of children. State rankings in terms of the condition of children in low-income families often differ markedly from rankings based on all children or children in higher income families, as can be seen in a comparison of Figures 1 and 2 below.

According to our index, the top five states for the condition of children in low-income households were Utah, North Dakota, Idaho, Wyoming, and South Dakota. The five states that ranked lowest were Massachusetts, Rhode Island, New York, New Jersey, and Maryland.

Figure 1. State ranking of on the condition of children in low-Income families: 2003

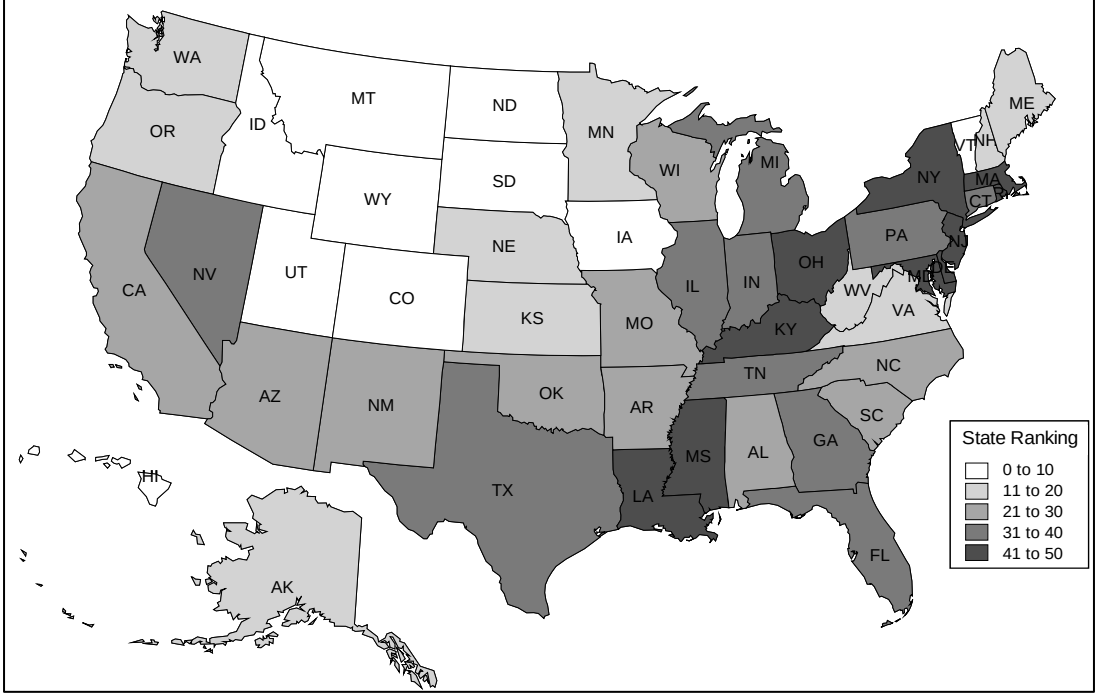
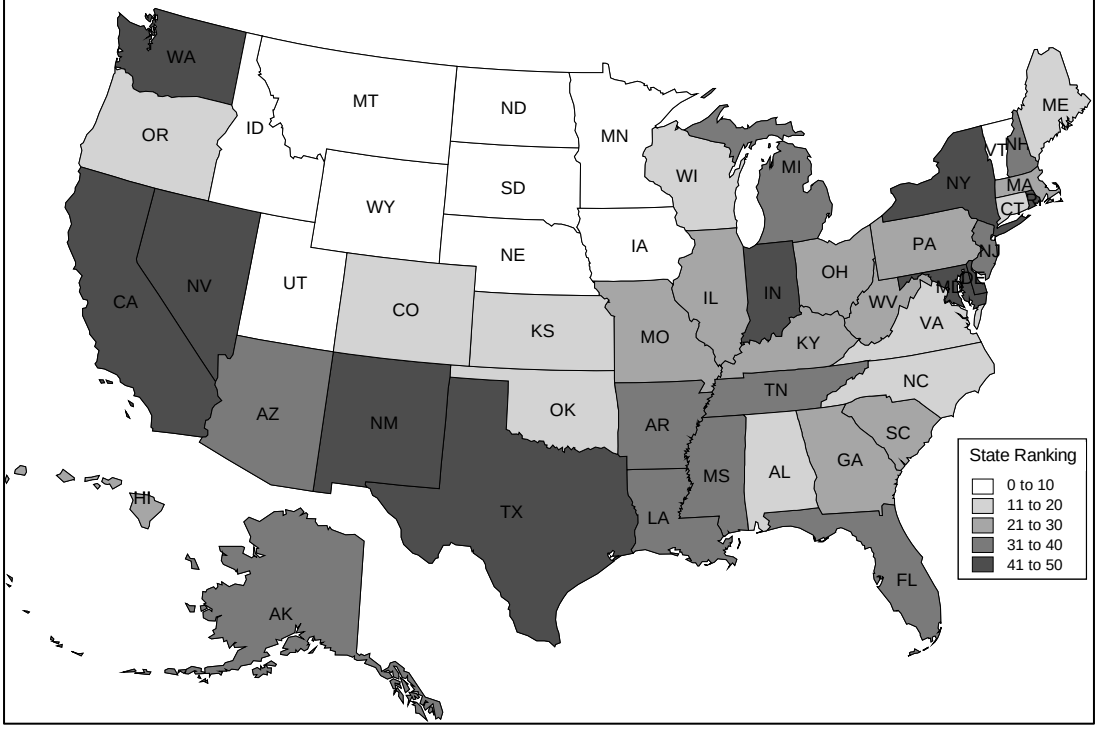


Figure 2. State ranking on the condition of children in higher-Income families: 2003



While states in the Deep South are typically clustered near the bottom of state rankings when the condition of all children is assessed, examination of the condition of children in low-income families shows a somewhat different picture. While states in the Deep South such as Mississippi, Louisiana, Alabama and Arkansas, are still in the bottom half of the distribution, they do not dominate the very bottom of the rankings in terms of the condition of children in low-income families. In fact, in terms of the condition of low-income children, the states in the Deep South are similar to states that typically rank much better in overall child well-being, like Maryland, Delaware, and Indiana.

Table 3 also shows that the ranking for low-income children is substantially different than that for high-income children in many states. In 17 states, the rankings for low-income children and the ranking for higher-income children differ by more than 10 ranks.

For eight of the top ten states based on the condition of low-income children, the ranking for higher-income children is also in the top ten. Indeed, state rankings for low- and higher-income child populations are positively correlated (r = +.69).

We also examined how the index scores for low- and higher-income children were correlated with each other. In contrast with the rankings, which only provide information about whether one state ranks above or below every other state, the index scores add information about the relative sizes of the differences in rankings. We found that the index scores for low- and higher-income children are correlated at a slightly higher degree than are the rankings, at r= +.74. Since low-income children are a subset of all

children, one would expect index scores for low-income to be correlated with index scores for all children, and indeed they are, at r =+ .77. These two relatively high positive correlations indicate that there is a tendency for states who “do well” (relative to other states) by their state-wide populations of children also to do well (relatively to other states) for their low-income child populations.

However, it is important to note that these correlations are not strong enough to indicate that an index of the condition of all children is an acceptable proxy for an index of the condition of low-income children. For example, a correlation coefficient of +.77 indicates that 41 percent of the variation in index scores for low-income children is unrelated to the value of the index for all children.

We also observe that the relative sizes of the low-income population in eight of the ten states ranked at the top for low-income children are also the same as or less than the 50-state average. And indeed, the state-level rate of children in low-income households is moderately correlated with the state ranking based on the well-being of all children (r = +.52). When examining the same relationship using the index scores rather than simple rankings, we found a comparable positive association between state rates of children living in low-income families and the index scores for all children (r = +.50). In other words, the larger the share of children in low-income families, the worse the condition of children overall in a state. But the moderate size of the effect also shows that many other factors in addition to the share of children in low-income families influenced the ranking of states based on the condition of all children. Specifically, the state rate of low-income children explains 25 percent of the variation in the well-being index scores for all children.

So, while it may be that states that provide the resources needed for low-income children also tend to take good care of all children in their state, it may also be that a relatively low share of low-income children may make it less challenging for states to serve their child populations. But while these relationships are moderately strong, they are far from perfect, underscoring the importance of examining the well-being of low-income children separately.

Table 3. Percentage of children in low-income families and state rankings according to condition-of-children index, by family income: 2003

State	Percent of children in low-income families	Children under 18 in families with… Low incomes (less then 200% of poverty)	Higher incomes (200% of poverty or more)	All incomes
Utah	36%	1	8	1
North Dakota	35%	2	2	12
Idaho	45%	3	7	5
Wyoming	37%	4	10	2
South Dakota	39%	5	3	3
Montana	47%	6	5	6
Iowa	35%	7	6	13
Vermont	32%	8	4	7
Colorado	32%	9	12	8
Hawaii	34%	10	26	16
Kansas	37%	11	11	11
Alaska	31%	12	35	23
Minnesota	26%	13	9	4
Nebraska	34%	14	1	15
Washington	36%	15	42	22
Maine	35%	16	18	21
Oregon	41%	17	13	17
Virginia	31%	18	19	9
West Virginia	49%	19	23	32
New Hampshire	22%	20	33	14
California	42%	21	44	35
New Mexico	54%	22	48	27
Oklahoma	48%	23	20	43
Wisconsin	33%	24	16	18
Missouri	38%	25	25	39
Arizona	47%	26	40	37
Arkansas	50%	27	37	47
South Carolina	44%	28	24	34
North Carolina	45%	29	14	36
Alabama	47%	30	17	31
Pennsylvania	36%	31	30	29
Illinois	35%	32	27	19
Florida	42%	33	34	41
Tennessee	43%	34	31	42
Nevada	42%	35	50	24
Michigan	37%	36	36	28
Texas	47%	37	43	46
Georgia	42%	38	28	40
Connecticut	24%	39	15	10
Indiana	38%	40	46	30
Mississippi	56%	41	32	48
Ohio	38%	42	22	33
Kentucky	45%	43	29	45
Louisiana	52%	44	39	50
Delaware	31%	45	47	38
Maryland	25%	46	41	25
New Jersey	26%	47	38	20
New York	40%	48	49	49
Rhode Island	33%	49	45	44
Massachusetts	25%	50	21	26

Sources: National Survey of Children's Health 2003 & American Community Survey 2002-04

NOTE: Lower rankings indicate better performance relative to other states.

It is also important to keep in mind that, when indices are used to summarize the condition of children, it may appear that children are generally faring well, even when problems may exist in specific domains of well-being or context. For this reason, we provide Table 4, which shows how states rank in terms of the well-being and context of low-income children in each of the six domains represented in our condition-of-children index. This table will help readers understand where their state may wish to enhance resources in order to improve the overall well-being of children in low-income families.

Table 4 clearly shows that states differ markedly among domains. In order to assess how different the results are when domain-specific index scores are used, we also examined their inter-correlations for state populations of low-income children. We found that, while all the domain scores are positively correlated with each other, correlations ranged from r = +.34 to r = +.81 (see Appendix Table A3). The index for social and economic characteristics seems to be the most highly correlated with the other domains, ranging from r = +.81 (with the health domain) to r = +.53 (for social and emotional well-being). The domain of social and emotional well-being seems to be the most weakly correlated with the other domains (ranging from r = +.34 with the family activities domain to r = +.60 with the health domain).

The moderate sizes of the correlations underscore the importance of including all the domains of well-being in an overall index, as well as the importance of looking more "deeply" into an index to identify which domains do and do not track strongly with the overall index.

Table 4. State rankings based on domain-specific index scores for children in low-income families, 2003

State	Health status	Social and emotional well-being	Cognitive devel. & educ. attainment	Family activities	Family and neighborhood context	Social & economic context
Alaska	7	5	19	10	16	31
Alabama	31	33	35	29	14	37
Arkansas	27	46	45	7	17	36
Arizona	25	16	39	44	21	23
California	19	11	38	36	18	22
Colorado	15	1	26	19	6	20
Connecticut	33	30	48	24	35	41
Delaware	37	42	22	46	48	38
Florida	29	35	41	45	29	24
Georgia	36	39	40	25	34	39
Hawaii	23	22	7	6	11	14
Iowa	5	34	4	4	22	10
Idaho	6	4	14	2	2	5
Illinois	46	9	18	31	37	43
Indiana	35	23	30	38	49	35
Kansas	18	21	15	15	15	7
Kentucky	48	48	31	22	23	33
Louisiana	43	49	44	18	20	46
Massachusetts	50	50	49	35	45	44
Maryland	47	27	21	49	39	47
Maine	22	31	23	16	7	11
Michigan	42	15	25	39	42	28
Minnesota	9	10	9	30	30	13
Missouri	12	41	17	32	47	19
Mississippi	30	47	20	40	25	48
Montana	3	8	8	8	5	4
North Carolina	40	17	28	26	33	34
North Dakota	2	14	3	5	4	3
Nebraska	16	40	11	9	36	6
New Hampshire	14	12	47	28	27	12
New Jersey	49	29	24	50	41	40
New Mexico	28	20	34	17	8	42
Nevada	20	24	50	47	31	21
New York	45	38	36	48	28	50
Ohio	38	44	27	34	46	29
Oklahoma	21	37	33	21	43	16
Oregon	17	13	37	11	32	15
Pennsylvania	26	26	32	33	44	32
Rhode Island	39	43	42	37	50	49
South Carolina	44	25	12	23	13	45
South Dakota	8	2	1	13	24	2
Tennessee	34	45	46	27	10	27
Texas	41	32	43	43	12	30
Utah	1	3	5	1	1	1
Virginia	10	19	10	41	26	26
Vermont	13	36	6	14	3	8
Washington	11	6	13	20	40	18
Wisconsin	24	18	16	42	38	25
West Virginia	32	28	29	12	9	17
Wyoming	4	7	2	3	19	9

Sources: National Survey of Children's Health 2003 & American Community Survey 2002-04

NOTE: Lower rankings indicate better performance relative to other states.

Conclusions

Examining the condition of children in low-income families – a particularly vulnerable group of children – is important. In many states the ranking based on the condition of children in low-income families is substantially different than the rankings based on children in higher-income families or all children.

Our analyses also revealed some geographic patterns in the condition of children in low-income families. The states with the best rankings for children in low-income families are clustered in the Rocky Mountains and Northern Plains states. States with the worst rankings for children in low-income families are clustered along the East Coast.

States that have substantially better index rankings (by more than 10 ranks) for the condition of their low-income child populations than for their higher-income child populations include several located in the Southwest, as well as Alaska, Hawaii, Washington, New Hampshire, and Arkansas. States that have substantially better condition-of-children index rankings for their higher-income child populations than for their low-income child populations are more geographically scattered, but tend to be located east of the Mississippi River.

Our findings demonstrate the importance of collecting and making available data on children using comparable measures and methods across the 50 states. It also demonstrates the importance of ensuring that data are available not just for state-wide populations of children, but for important demographic subgroups such as low-income children, who are often the targets of policy interventions due to their increased risk of negative outcomes.

Appendix Table A1. Correlations of state-level measures of well-being and context for all children under age 18

	Health Status					Social and Emotional Well-Being			
Health Status (NSCH 2003)	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**
1 Child is in less than very good health	1.00								
2 Child has an activity limitation	0.21	1.00							
3 Child (10-17) is overweight	0.50 ***	0.59 ***	1.00						
4 Child (6-17) engages in vigorous physical activity < 3 days/week	0.03	0.04	0.05	1.00					
5 Child has asthma	0.20	0.49 ***	0.54 ***	0.29 **	1.00				
Social and Emotional Well-Being (NSCH 2003)									
1 Child (3-5) has emotional or behavioral difficulties	0.23	0.52 ***	0.44 ***	0.01	0.29 **	1.00			
2 Child (6-17) experiences depression or anxiety	-0.44 ***	0.11	-0.18	0.23	0.17	-0.10	1.00		
3 Child (6-17) exhibits problem behaviors	0.35 **	0.54 ***	0.55 ***	0.02	0.34 **	0.33 **	0.13	1.00	
4 Child (6-17) does not display positive social behavior	0.74 ***	0.42 ***	0.66 ***	0.11	0.51 ***	0.45 ***	-0.33 **	0.51 ***	1.00
Cognitive Development and Educational Attainment (NSCH 2003)									
1 Difficulty speaking English (5-17) (ACS Variable)	0.34 **	-0.21	0.11	-0.05	0.01	0.04	-0.10	-0.18	0.08
2 Teens who are high school dropouts (16-19) (ACS Variable)	0.16	0.29 **	0.35 **	-0.08	0.13	0.38 ***	-0.20	0.17	0.27 *
3 Child (1-5 year)at moderate or high risk for developmental delay	0.52 ***	0.51 ***	0.48 ***	0.08	0.32 **	0.58 ***	-0.32 **	0.46 ***	0.64 ***
4 Child (6-17) has a learning disability	-0.09	0.43 ***	0.19	0.18	0.32 **	0.07	0.45 ***	0.46 ***	0.02
5 Child (6-17) does NOT reads for fun everyday	0.40 ***	0.50 ***	0.64 ***	0.06	0.41 ***	0.49 ***	0.02	0.68 ***	0.49 ***
Family Activties (NSCH 2003)									
1 Child (under 6) is read to lt 7 days/week	0.70 ***	0.19	0.37 ***	-0.10	-0.06	0.25 *	-0.48 ***	0.30 **	0.62
2 Child (6-17) does NOT participate in team, club, or activity	0.82 ***	0.27 *	0.58 ***	0.06	0.29 **	0.21	-0.37 ***	0.52 ***	0.78 ***
3 Child (12-17) did NOT volunteer in the past year	0.61 ***	0.44 ***	0.56 ***	0.23	0.45 ***	0.24 *	-0.17	0.60 ***	0.64 ***
4 Attends religious services less than weekly	-0.40 ***	-0.22	-0.46 ***	0.18	0.05	-0.40 ***	0.48 ***	-0.17	-0.46 ***
5 Eats meals together with family less than 6 days per week	-0.34 **	0.03	0.11	0.46 ***	0.21	0.05	0.14	-0.06	-0.08
Family and Neighborhood Context (NSCH 2003)									
1 Child lives with household members who smoke	-0.04	0.58 ***	0.59 ***	-0.03	0.37 ***	0.44 ***	-0.05	0.52 ***	0.25 *
2 Parent in fair/poor mental health	0.62 ***	0.51 ***	0.58 ***	0.01	0.33 **	0.37 ***	0.01	0.67 ***	0.64 ***
3 Adult-child (6-17) relationship is not very close	-0.40 ***	-0.25 *	-0.40 ***	-0.15	-0.22	-0.08	0.10	-0.29 **	-0.34 **
4 Child lives in an UNsupportive neighborhood	0.69 ***	0.12	0.35 **	0.31 **	0.37 ***	0.03	-0.23	0.40 ***	0.63 ***
5 Feels child is safe in neighborhood	0.32 **	-0.32 **	-0.35 **	0.29 **	-0.11	-0.28 *	-0.11	-0.22	0.05
Social/Economic Characteristics (ACS 2002-2004)									
1 Living in a single-parent household	0.18	0.40 ***	0.37 ***	0.02	0.41 ***	0.30 **	0.02	0.35 **	0.42 ***
2 Without secure parental employment	0.31 **	0.40 ***	0.34 **	-0.26 *	0.25 *	0.22	-0.06	0.19	0.39 ***
3 Living in a household without a telephone	0.24 *	0.17	0.32 **	-0.13	0.12	0.19	-0.17	0.21	0.28 **
4 Living in a household without a vehicle	-0.01	0.11	0.16	-0.12	0.11	0.11	0.03	-0.07	0.15
5 Living with a householder who is a high school dropout	0.46 ***	0.12	0.38 ***	-0.08	0.18	0.32 **	-0.20	0.14	0.36 ***
6 Teens who are idle; not in school and not working (16-19)	0.18	0.39 ***	0.40 ***	-0.25 *	0.23	0.37 ***	-0.13	0.18	0.40 ***

Note: Astersisks indicate statistical significance (*: p<.10, **: p<.05, ***: p<.01)

Sources: National Survey of Children's Health 2003 and American Community Survey 2002-2004

Appendix Table A1 (Cont.) Correlations of state-level measures of well-being and context for all children under age 18

	Cognitive Development and Educational					Family Activties				
Cognitive Development and Educational Attainment (NSCH 2003)	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
1 Difficulty speaking English (5-17) (ACS Variable)	1.00									
2 Teens who are high school dropouts (16-19) (ACS Variable)	0.16	1.00								
3 Child (1-5 year)at moderate or high risk for developmental delay	0.05	0.32 **	1.00							
4 Child (6-17) has a learning disability	-0.01	-0.07	0.05	1.00						
5 Child (6-17) does NOT reads for fun everyday	0.07	0.11	0.49 ***	0.38 ***	1.00					
Family Activties (NSCH 2003)										
1 Child (under 6) is read to lt 7 days/week	0.07	0.25 *	0.49 ***	-0.27 *	0.17	1.00				
2 Child (6-17) does NOT participate in team, club, or activity	0.23	0.13	0.47 ***	0.10	0.45 ***	0.60 ***	1.00			
3 Child (12-17) did NOT volunteer in the past year	0.18	0.19	0.49 ***	0.34 **	0.59 ***	0.33 **	0.75 ***	1.00		
4 Attends religious services less than weekly	-0.03	-0.36 **	-0.42 ***	0.40 ***	-0.20	-0.73 ***	-0.27 *	-0.02	1.00	
5 Eats meals together with family less than 6 days per week	-0.22	0.03	0.03	0.02	0.04	-0.24 *	-0.31 **	-0.05	0.06	1.00
Family and Neighborhood Context (NSCH 2003)										
1 Child lives with household members who smoke	-0.25 *	0.28 *	0.30 **	0.22	0.41 ***	0.06	0.10	0.32 **	-0.25 *	0.28 **
2 Parent in fair/poor mental health	0.22	0.20	0.48 ***	0.17	0.61 ***	0.46 ***	0.67 ***	0.65 ***	-0.32 **	-0.15
3 Adult-child (6-17) relationship is not very close	-0.11	-0.08	-0.10	-0.27 *	-0.43 ***	-0.16	-0.45 ***	-0.53 ***	0.01	0.04
4 Child lives in an UNsupportive neighborhood	0.26 *	0.01	0.39 ***	0.16	0.37 ***	0.43 ***	0.77 ***	0.72 ***	0.00	-0.11
5 Feels child is safe in neighborhood	0.14	-0.19	-0.01	-0.18	-0.27 *	0.18	0.22	0.08	0.16	-0.15
Social/Economic Characteristics (ACS 2002-2004)										
1 Living in a single-parent household	0.05	0.66 ***	0.35 **	0.11	0.27 *	0.24 *	0.30 **	0.34 **	-0.20	0.05
2 Without secure parental employment	0.15	0.61 ***	0.33 **	0.04	0.15	0.31 **	0.33 **	0.32 **	-0.25 *	-0.13
3 Living in a household without a telephone	0.03	0.70 ***	0.23	-0.15	0.04	0.31 **	0.23	0.19	-0.26 *	-0.09
4 Living in a household without a vehicle	0.24 *	0.20	0.08	-0.08	-0.01	0.14	0.02	-0.02	-0.25 *	0.05
5 Living with a householder who is a high school dropout	0.58 ***	0.76 ***	0.28 **	-0.09	0.22	0.37 ***	0.41 ***	0.33 **	-0.30 **	-0.15
6 Teens who are idle; not in school and not working (16-19)	0.14	0.80 ***	0.32 **	-0.02	0.15	0.31 **	0.21	0.18	-0.36 **	-0.14

	Family and Neighborhood Context					Social/Economic Characteristics					
Family and Neighborhood Context (NSCH 2003)	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**	**6**
1 Child lives with household members who smoke	1.00										
2 Parent in fair/poor mental health	0.31 **	1.00									
3 Adult-child (6-17) relationship is not very close	0.01	-0.34 **	1.00								
4 Child lives in an UNsupportive neighborhood	-0.04	0.49 ***	-0.40 ***	1.00							
5 Feels child is safe in neighborhood	-0.63 ***	0.05	-0.10	0.43 ***	1.00						
Social/Economic Characteristics (ACS 2002-2004)											
1 Living in a single-parent household	0.34 **	0.42 ***	-0.19	0.26 *	-0.11	1.00					
2 Without secure parental employment	0.19	0.41 ***	-0.21	0.12	0.04	0.66 ***	1.00				
3 Living in a household without a telephone	0.32 **	0.21	-0.07	0.07	-0.07	0.55 ***	0.54 ***	1.00			
4 Living in a household without a vehicle	0.15	0.15	-0.03	-0.10	-0.27 *	0.48 ***	0.29 **	0.08	1.00		
5 Living with a householder who is a high school dropout	0.09	0.45 ***	-0.24 *	0.29 **	0.07	0.65 ***	0.65 ***	0.62 ***	0.30 **	1.00	
6 Teens who are idle; not in school and not working (16-19)	0.23	0.30 **	-0.16	0.01	-0.17	0.62 ***	0.81 ***	0.59 ***	0.27 *	0.67 ***	1.00

Note: Astersisks indicate statistical significance (*: p<.10, **: p<.05, ***: p<.01)

Sources: National Survey of Children's Health 2003 and American Community Survey 2002-2004

Appendix Table A2. State- and child-level correlations for all children under 18, for indicators that were correlated negatively at the state-level

	State-level correlation	Child-level correlation
Child (6-17) experiences depression or anxiety, correlation with:		
Child is in less than very good health	-0.44 ***	0.15 ***
Child (6-17) does not (always/usually) display positive social behavior	-0.33 **	0.11 ***
Child (1-5 years) at moderate or high risk for developmental delay	-0.32 **	N/A [1]
Child (under 6) is read to lt 7 days/week	-0.48 ***	N/A [1]
Child (6-17) does not participate in some type of team, club, or activity	-0.37 ***	0.05 ***
Child attends religious services less than weekly, correlation with:		
Child is in less than very good health	-0.40 ***	0.00
Child (10-17) is overweight	-0.46 ***	0.00
Child (3-5) has emotional or behavioral difficulties	-0.40 ***	0.04 ***
Child (6-17) does not (always/usually) display positive social behavior	-0.46 ***	0.05 ***
Teens who are high school dropouts (16-19)	-0.36 **	N/A [2]
Child (1-5 years) at moderate or high risk for developmental delay	-0.42 ***	0.02 ***
Child (under 6) is read to lt 7 days/week	-0.73 ***	0.03 ***
Child (6-17) does not participate in some type of team, club, or activity	-0.27 *	0.14 ***
Child lives with household members who smoke	-0.25 *	0.15 ***
Parent in fair/poor mental health	-0.32 **	0.04 ***
Without secure parental employment	-0.25 *	N/A [2]
Living in a household without a telephone	-0.26 *	N/A [2]
Living in a household without a vehicle	-0.25 *	N/A [2]
Living with a householder who is a high school dropout	-0.30 **	N/A [2]
Adult-child (6-17) relationship is not very close, correlation with:		
Child is in less than very good health	-0.40 ***	0.06 ***
Child has an activity limitation	-0.25 *	0.02 ***
Child (10-17) is overweight	-0.40 ***	-0.01 ***
Child (6-17) exhibits problem behaviors	-0.29 **	0.16 ***
Child (6-17) does not (always/usually) display positive social behavior	-0.34 **	0.18 ***
Child (6-17) has a learning disability	-0.27 *	0.04 ***
Child (6-17) does not read for fun everyday	-0.43 ***	0.12 ***
Child (6-17) does not participate in some type of team, club, or activity	-0.45 ***	0.04 ***
Child (12-17) did not volunteer in the past year	-0.53 ***	0.07 ***
Parent in fair/poor mental health	-0.34 **	0.08 ***
Child lives in an unsupportive neighborhood	-0.40 ***	0.06 ***
Living with a householder who is a high school dropout	-0.24 *	N/A [2]
Feels child is safe in neighborhood, correlation with:		
Child has an activity limitation	-0.32 **	0.03 ***
Child (10-17) is overweight	-0.35 **	0.00
Child (3-5) has emotional or behavioral difficulties	-0.28 *	0.06 ***
Child (6-17) does not read for fun everyday	-0.27 *	0.00
Child lives with household members who smoke	-0.63 ***	0.00
Living in a household without a vehicle	-0.27 *	N/A [2]

Sources: National Survey of Children's Health 2003 and American Community Survey 2002-2004
Note: Astersisks indicate statistical significance (*: p<.10, **: p<.05, ***: p<.01)
[1] Child-level correlation cannot be calculated because the two variables apply to children of different age groups.
[2] Child-level correlation cannot be calculated because the two variables come from different datasets.

Appendix Table A3. Correlations of domain-specific index scores for children in low-income families, 2003

	Health status	Social and emotional well-being	Cognitive devel./educ. attainment	Family activities	Family and neighborhood context
Health status	1.00				
Social and emotional well-being	0.60 ***	1.00			
Cognitive devel. & educ. attainment	0.60 ***	0.48 ***	1.00		
Family activities	0.62 ***	0.34 **	0.53 ***	1.00	
Family and neighborhood context	0.49 ***	0.41 ***	0.37 ***	0.64 ***	1.00
Social/economic characteristics	0.81 ***	0.53 ***	0.65 ***	0.68 ***	0.55 ***

Source: National Survey of Children's Health 2003 and American Community Survey 2002-04

[1] Mather, Mark, William O'Hare, and Dia Adams, 2007. Testing the Validity of the KIDS COUNT State-Level Index of Child Well-Being. *A KIDS COUNT Working Paper.* Available on-line at http://www.aecf.org/upload/PublicationFiles/DA3622H1400.pdf

[2] O'Hare, William and Melissa Scopilliti, 2005, State Rankings on the Well-being of Children in Low-Income families: Some Preliminary Findings, KIDS COUNT Working Paper, October, Annie E. Casey Foundation Baltimore, MD available online at http://www.aecf.org/upload/PublicationFiles/DA3622H5025.pdf

[3] For example, Brooks-Gunn, J., and Duncan, G. 1997. The effects of poverty on children. *The Future of Children* 7(2): 55-71; McLoyd, V. 1998. Socioeconomic disadvantage and child development. *American Psychologist* 53(2): 185-204.

[4] Mather, Mark, and Dia Adams. 2006. The Risk of Negative Child Outcomes in low-Income Families. *A KIDS COUNT/PRB Report on Census 2000*. available on-line at http://www.aecf.org/upload/PublicationFiles/DA3622H1234.pdf

[5] Data available on the KIDS COUNT website at http://www.kidscount.org/sld/compare_results_pf.jsp?i=220&yr=6&va=&s=a

[6] Carasso, Adam, C. Eugene Steuerle, and Gillian Reynolds, 2007, KIDS SHARE 2007: How Children Fare in the Federal Budget, The Urban Institute, Washington, DC.

[7] Billen, Patricia and Donald Boyd, 2007, State Funding for Children: Spending in 2003 and How it Changed from Earlier Years, Nelson A. Rockefeller Institute of Government, Albany, NY, April

[8] O'Hare, William, 2004, Trends in the Well-being of America's Children, The American People, Census 2000 Series, Russell Sage Foundation and Population Reference Bureau, Table 3

[9] Because a multitude of factors can affect child well-being, experimental evidence is needed in order to determine with certainty whether a particular policy directly causes changes in child well-being. Moore, Kristin Anderson, Brett V. Brown, and Harriet J. Scarupa. 2003. The uses (and misuses) of social indicators: Implications for public policy. Child Trends Research Brief #2003-01. Washington, DC: Child Trends. Available online at http://www.childtrends.org/Files//Child_Trends-2003_02_01_RB_UseAndMisuse.pdf.

[10] Vandivere, Sharon, Kristin Anderson Moore, Laura Lippman, and Cameron McPhee. 2006. Calculating child well-being index scores and conclusions about the status of children in thirteen states: A comparison of the KIDS COUNT index with data from the National Survey of America's Families. Unpublished paper submitted to the Annie E. Casey Foundation.

[11] Additional information about the NSCH can be found in Stephen J., Blumberg, Lorayn Olson, Martin R. Frankel, Larry Osborn, K.P. Srinath, and Pamela Giambo. 2005. Design and Operation of the National Survey of Children's Health, *Vital and Health Statistics* 1(43), National Center for Health Statistics. Available online at http://0-www.cdc.gov.mill1.sjlibrary.org/nchs/data/series/sr_01/sr01_043.pdf.

[12] Moore, Kristin Anderson. 1997. "Criteria for indicators of child well-being." Pp. 36-44 in *Indicators of Children's Well-being* (R.M. Hauser, B.V. Brown, and W.R. Prosser, eds.) New York: Russell Sage Foundation.

[13] In general, estimates for each indicator were already available through work on a set of "state fact sheets" (PRB and Child Trends, 2006). Readers can view estimates for individual indicators by visiting http://www.aecf.org/kidscount/nsch_acs_fact_sheets.htm.

[14] See the Federal Interagency Forum on Child and Family Statistics annual report called America's Children: Key National Indicators of Well-Being, available on-line at http://childstats.gov ; The Annie E. Casey Foundation's annual KIDS COUNT Data Book, available on-line at www.kidscount.org; the Foundation for Child Development's annual Child Well-Being index available on-line at http://www.soc.duke.edu/~cwi/ ; UNICEF report, An Overview of Child Well-Being in Rich Countries, UNICEF Innocenti Research Centre, Report Card 7, available on-line at www.unicef.org/frc : and Child Trends DataBank, available on-line at www.childtrendsdatabank.org .

[15] See, for example, the Federal Interagency Forum on Child and Family Statistics annual report called America's Children: Key National Indicators of Well-Being, available on-line at http://childstats.gov ; The Annie E. Casey Foundation's annual KIDS COUNT Data Book, available on-line at www.kidscount.org; the Foundation for Child Development's annual Child Well-Being index available on-line at http://www.soc.duke.edu/~cwi/ ; UNICEF report, An Overview of Child Well-Being in Rich Countries, UNICEF Innocenti Research Centre, Report Card 7, available on-line at www.unicef.org/frc.

[16] Bradshaw, Jonathan, Petra Hoelscher, and Dominic Richardson. 2007. An index of child well-being in the European Union. *Social Indicators Research*, 80: 133-177.

[17] Bradshaw and colleagues (2007) provide an elegant treatment of why individual indicators in a child well-being index (or what we prefer to call a "condition-of-children" index, since it includes both contextual and well-being indicators) should not necessarily be expected to be correlated with each other. As they explain, a causal model is used in identifying indicators for an index. In other words, indicators are selected that are predictive of overall child well-being (or of well-being in a particular domain of well-being). Each indicator should be an independent predictor of the domain. This explanation also illustrates why many researchers find it acceptable to describe an index that includes both contextual and outcome measures a "well-being" index, despite the fact that contextual indicators are not direct measures of well-being.

[18] This differs from some prior work, in which the standard scores are summed. We prefer to average the standard scores, because this potentially allows comparisons of index scores that are based on different numbers of items. Additionally, averaging the standard scores allows for a scale that may be meaningful, in that the unit of measure represents “average” standard deviations from the 50-state mean. Thus, most states should have an index score falling between -1 and +1.