

Developing State Indices of Child Well-Being*

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Introduction

The regular production and release of the national Child Well-Being Index (CWI) by Ken Land and his colleagues has been a significant development for the field of child indicators. It provides a clear way to monitor major trends in child well-being over time and differences among major groups of children. Moreover, the regular publication and public attention it garners heightens public awareness of children issues.

But many researchers, opinion-leaders, and policymakers are interested in the well-being of children at the state and local level. Therefore the usefulness of the index could be greatly enhanced if it were made available at the state level. In this paper, I examine some of the key issues regarding development and use of child well-being indicators and indices at the state level.

Importance of States

There are two important trends I want to highlight as background for the discussion. First, while state governments have long made many important social policy decisions, over the past 15 years devolution has made states even more powerful actors in social policy decisions. Moreover, ideas like block-granting, which would further enhance the powers of states, remain close to the surface of on-going federalism discussions.¹ If states are becoming more powerful actors in social policy decisions, it seems especially important for decision-makers to have data available at the state level.

Second, there is enormous variation across the states in child well-being, suggesting that a national index masks important geographic differences. Given these differences, national measures tell us very little about what is happening in any particular state or set of states. For each of ten key measures of child well-being, Table 1 shows how many states are statistically significantly different that the national measure. Most states are different on most measures. Table 1 shows that of the 500 possible

* Author Note: This working paper was prepared for the forum "Review of the Child Well-Being Index," on May 10, 2006, co-sponsored by Foundation for Child Development and the Brookings Institution. This paper has not been through a formal review process and should be considered a draft. Please contact the author for permission if you are interested in citing this paper or any portion of it. This paper is distributed in the expectation that it may elicit useful comments and is subject to subsequent revision. The views expressed in this piece are those of the author and should not be attributed to the staff, officers, or trustees of the Brookings Institution.

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comparisons of a state value with the corresponding national value (50 states times 10 measures) 339 are statistically different from the national measure.

Building on Existing Work

It is also important to note that there are already on-going efforts to provide indices of child well-being at the state level. Every year since 1990, the Annie E. Casey Foundation's KIDS COUNT Data Book has combined ten indicators of child well-being into a single index and used that index to rank states on overall child well-being. Over the past few years efforts to build on that activity have expanded.²

So the issue is one of enhancing existing efforts to build state-level indices and building closer linkages between the state-level work and the national level indices represented by CWI.

It is also worth noting that the landscape regarding child well-being indicators has changed enormously since the first KIDS COUNT report was published in 1990— not so much by the emergence of new data, although there is some of that, but by the growing public interest in combining data from different sources and domains into a single report and making data on children more easily available.

All of these developments suggest the time is ripe for developing and disseminating improved state-level indices of child well-being.

Framing Key Issues

One key decision that has major implications regarding what issues to discuss here is whether one is interested in developing an index of child well-being for a single state or for a collection of states (all states). Development of an index for only one state eliminates the need for cross-state consistency which is one of the biggest problems faced by those trying to develop state-level child well-being indices.

It is also important to decide whether one is trying to replicate the CWI with state or local data or trying to develop a reasonable state-level index of child well-being that may not be the same as the CWI.

In my comments I assume the interest is in developing indices for all states, and that the interest is in building an index that is not necessarily a replication of the CWI, but may use indicators other than those in the CWI and/or a different set of domains than those used in the CWI. So it is more of a generic discussion of building state-level indices rather than a discussion of how to replicate the CWI at the state level.

Key Issues

I have identified ___ key issues related to construction and presentation of state-level indices of child well-being, including;

- Dearth of Data
- Small Numbers Issues
- Lack of Consistency in Definitions and Data collection
- Issues of Presentation
- Use of Domains

Dearth of Data

The biggest difference between the national CWI and state-level indices is the availability of more data elements at the national level. Figure 1 shows that of the 30 key measures reported each year in America's Children report, only 19 are available at the state level and only 7 are regularly available for large cities.

But it is worth noting several recent developments that are likely to have a positive impact on our ability to produce state-level child well-being measures and state-level indices. The development and now full-scale implementation of the American Community Survey (ACS) will provide reliable census-type measures at the state and local levels every year.³ The emergence of the State and Local Area Integrated Telephone Survey (SLAITS), and particularly the National Survey of Children's Health derived from the SLAITS system, adds many new measures of child well-being for states every four years.⁴ The Small Area Income and Poverty Estimates (SAIPE) have provided regular income and poverty estimates for states, counties, and school districts since the mid-1990s.⁵ The recent emergence of the National Survey on Drug Use and Health has provided state estimates since 1999.⁶ Increasing availability of data from income tax returns (see the annual *Statistics on Income*) allow calculation of payments of the Earned Income Tax Credit to families at the state and local levels.⁷ The Local employment Dynamics (LED) system now provides data on workers in most states – but not yet on children of workers.⁸ The No Child Left behind Act now requires all states to participate in the National Assessment of Educational Progress (NAEP), thus giving us consistent educational outcome data for all states.⁹

Recent developments are encouraging and suggest the time is ripe for significant advancement in state-level measures and indices of child well-being.

Small Numbers Issues

One of the constraints for developing reliable measures of child well-being at the state level is that some events are infrequent and many surveys have small sample size for at least some of the states. For some important measures, the number of underlying events is too small to provide a reliable yearly rate for many states. When numbers are small, year-to-year changes, that are largely random, can produce large changes in rates. For example, teen suicide rate is one of the measures used in the CWI, but Table 2 shows that there are 30 states with 25 or fewer teen suicides reported in 2003. Table 3 shows a

list of seven states and the District of Columbia where the number of teen suicides has been 10 or less every year since 2000. When the number of yearly events for a phenomenon is this small, rates vary a lot from year-to-year just due to random fluctuation. For example, the number of teen suicides deaths fell by 66 percent in North Dakota between 2000 and 2001, and the number of teen suicide deaths increased by more than 100 percent in Wyoming between 2002 and 2003. The problem of small numbers can sometimes be alleviated by adding years together. But for most of these seven states, even adding all four years together to try and increase the number of events still leaves the number of events under 25.

For some surveys, like the Census Bureau's Current Population Survey, the sample sizes for many states are too small to produce reliable yearly results. Analysts often produce state-level estimates by combining several years (usually three years) of data which enhances the reliability of the state-level measures, but detracts from timeliness and reduces the ability to detect year-to-year changes. Using a multi-year average also complicates measurement of change over time. Typically in using a multi-year average measures are updated by dropping the last year and adding the latest available year to the three-year average. So moving from one year to the next, two of the three observations used to form the multi-year average are the same. This minimizes large year-to-year changes, but it makes it more difficult to detect real changes over time.

Using a multi-year average can also disrupt the goal of trying to get all measures to reflect the same time period, usually a single year, since some measures will reflect a single-year while other will reflect a range of years.

Lack of Consistency in Definitions and Data Collection

Another problem in trying to compile a state level index is the lack of consistency from state to state in definitions, methods of data collection, and approach to data processing. This is a widespread problem which I will illustrate here with a few examples.

Child abuse data

Child abuse is an issue of great public interest and state-level data are regularly reported by the federal government.¹⁰ When states are ranked on the rate of child maltreatment, Pennsylvania is by far the best state showing a rate of only 1.8 victims per 1,000 children. The next lowest states were New Hampshire and Washington, at 3.1 each. The U.S. average is 12.3.

But the low rate for Pennsylvania is a product of how the state defines child maltreat and not, experts agree, a reflection of less actual child abuse in Pennsylvania.¹¹ One of the key reasons for cross-state differences in maltreatment rates is that the National Child Abuse and Neglect Data System (NCANDS) is an intervention-based system, i.e., information enters the system only if a child protective services (CPS)

intervention takes place. Thus, any cross-state policy differences in the circumstances under which CPS intervenes will be reflected in NCANDS cross-state differences in the incidence of child maltreatment.

Rather than engaging the Child Protection Service system to investigate all reports of child maltreatment, Pennsylvania provides an “alternative response” to reports of child maltreatment that are believed to be less severe. Moreover, interpretation of what is “severe” varies across Pennsylvania counties. Cases that are not investigated by CPS are not entered into the NCANDS system. This helps explain why Pennsylvania has the lowest reported rate of child victimization in the country.

Many states are phasing in alternative response systems.¹² This means that rates of child abuse reported by NCANDS could be inconsistent over time and reported trends within states are likely to be affected by their own policy changes. There have been major decreases in NCANDS victimization rates in states that introduced alternative response systems.

Education data

The inconsistency across state-generated data is also evident in the education field, particularly in the use of state-specific academic achievement tests. When the outcomes of these state-specific tests are compared with outcomes from National Assessment of Educational Progress (NAEP), there are often enormous differences. NAEP tests show for example, that 27 percent of Texas 4th Graders were proficient in reading in 2003, but state assessment tests indicated that 85 percent were proficient. There are similar gaps between NAEP scores and state assessment tests in other states.¹³ Obviously, using state generated assessment scores to compare states would not be prudent. Moreover, many of these state-specific tests change over time and the thresholds used to define a certain standard changes.

State-generated high school dropout and graduation rates show similar inconsistencies across states because states use different definitions, difference data collection, and process rules.

Juvenile Justice Data

In the mid-1990s, the KIDS COUNT Data Book used a measure labeled Juvenile Violent Crime Arrest Rate which was derived from the Uniform Crime Report issued each year by the U.S. Department of Justice.¹⁴ However, the Uniform Crime Report relies on voluntary reporting on the part of state and local agencies. This led to several problems and eventually caused us to drop this measure from the Data Book.

One problem was that in some states all local law enforcement agencies reported every year, but in other states only some of them report yearly. So year-to-year changes may have been due to which agencies report, not to differences in actually arrests. In addition, whatever local data were reported was inflated to represent the whole state.

This became a problem when the areas reporting were not representative of the state. For example, during some years Philadelphia was the only agency within Pennsylvania that reported data, so all of Pennsylvania was given the same juvenile arrest rate as Philadelphia.

The voluntary nature of this system became more problematic over time as more and more states stopped submitting any data. Initially, this problem was addressed by using a three-year average for as many years as were available for each state. But eventually, some states had reported no data for an entire 3-year period.

Using administrative data from needs-based programs to measure child well-being can also be problematic because these data tell you who is receiving benefits, but they do not tell you who is needy or eligible. For example, if the number of children receiving Food Stamps increases from one year to the next, it is often not clear whether that means there are more needy children (a bad thing) or a higher percentage of needy children getting assistance (a good thing).

Birth Data

When data were collected for births during 2003, some states used a new revised birth certificate form (which allowed multiple race responses) while many other states continued to use the old birth certificate form which allowed only one race response per respondent. The National Center for Health Statistics created an algorithm to convert the new race categories to the old race categories for national publications.¹⁵ However, the 2003 data are not exactly comparable to old data in terms of race categories, and comparing racial data across states is now less sound. For those states that changed the way the collected data on race, within state trends are also compromised. For those states that changed to the new birth certificate forming 2003, a similar problem exists with how data was collected on smoking during pregnancy before and after the change.

Issues in Presentation of State Level Data

The availability of an index for every state provides a lot more choices in how to present results and is the case with the national CWI. And these choices are no means mutually exclusive.

One could array the states from highest to lowest on the index and assign rank values to them. One could array the states in order from highest to lowest and place the states into groups (i.e. top third, middle third, bottom third) without making distinctions about states within a group. A similar strategy is to assign grades to states (A, B, C, D and E) depending on their score on the index. One can show how states are statistically different (or not statistically different) from a national value or from one another.

One could also set thresholds for creating groups, rather than sorting them into groups of equal size. For example, put all the states where the index had improved by 10 percent or more into a group.

All of these presentation styles require choices and trade offs. And, of course, all of these options can be used for point in time comparisons or for change-over-time comparisons.

Use of Domains

The CWI sorts indicators into seven domains and weights each domain equally in constructing an overall index. Some domains contain as many as six individual measures (for example the Health Domain and the Safety/Behavioral Domain) while others have one two measures (for example, the Educational Attainment and Social Relationship Domains).

Many of the issues about identifying domains in state indices are similar to those faced by the CWI authors, but the restricted number of indicators in states makes the use of domains more problematic. How many indicators are required to adequately represent a domain? Identifying a domain for which there are no measures available is of little value. This is particularly important if one is trying to build a state index that mirrors the CWI or some other national index.

Summary

There are a number reasons why the time is ripe for moving the development of state-level indices of child well-being forward including growing public interest in this kind of measuring and monitoring and expansion of potential indicators available at the state level.

However, several issues need to be addressed in moving this field forward including, the dearth of state level measures, the small number of events for some measures and small sample size for some surveys, inconsistent definitions and data collection methods, more complicated presentation issues, and decisions about the use of domains.

Despite these important issues, I am encouraged by the new possibilities emerging and equally important by the increased public attention state-level indices of child well-being are receiving.

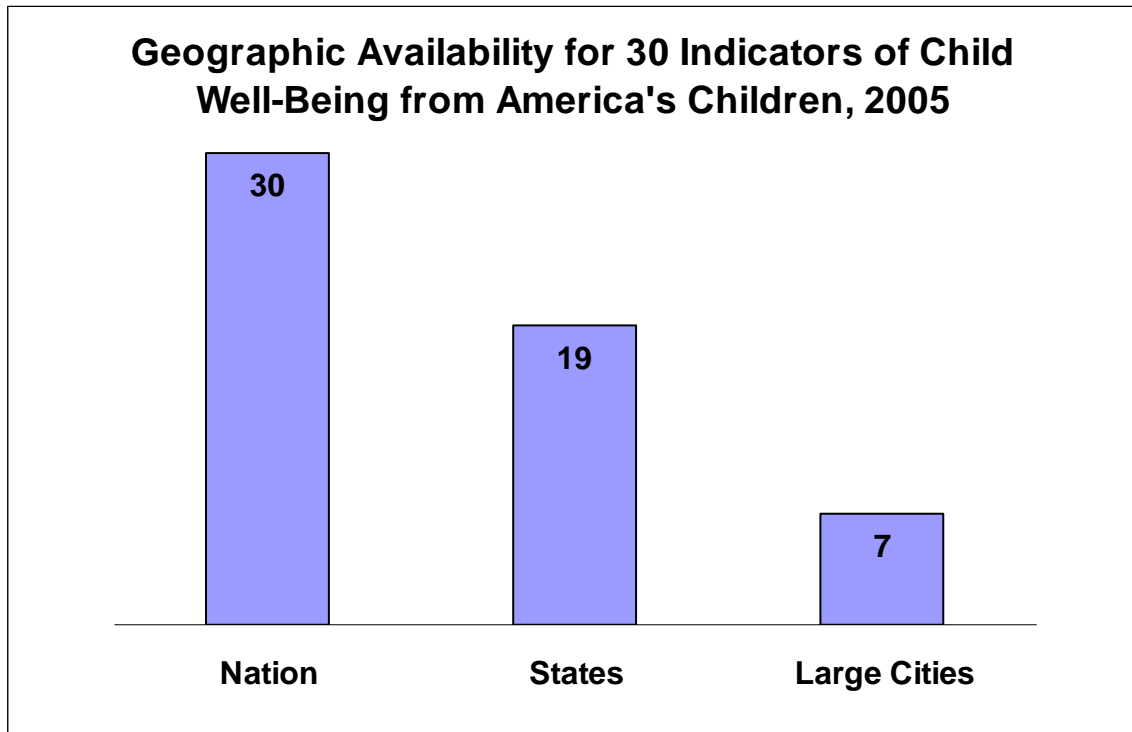
Table 1

Number of States that Differ from the National Rate on Measures of Child Well-Being

MEASURE	Number of State Estimates Statistically Significantly Different from U.S. Estimate (90 percent confidence)
1 <u>Percent low-birthweight babies 2002</u>	<u>44</u>
2 <u>Infant mortality rate 2002</u>	<u>36</u>
3 <u>Child death rate 2002</u>	<u>26</u>
4 <u>Teen death rate 2002</u>	<u>28</u>
5 <u>Teen birth rate 2002</u>	<u>49</u>
6 <u>Percent of teens who are high school dropouts 2003</u>	<u>19</u>
7 <u>Percent of teens not attending school and not working 2003</u>	<u>21</u>
8 <u>Percent of children living in families without secure parental employment 2003</u>	<u>39</u>
9 <u>Percent of children in poverty 2003</u>	<u>43</u>
10 <u>Percent of children in single-parent households 2003</u>	<u>34</u>
<u>Total</u>	<u>339</u>



Figure 1



Source: Population Reference Bureau

Table 2. States by Number of Teen Suicides in 2003

Number of Teen Suicides in 2003	Number of states in Category
10 or less	12
11 to 25	18
25 to 50	16
50+	5

Source: www.kidscount.org

Table 3. List of 8 states with 10 or Fewer Teen (age 15-19) Suicide Deaths Each Year from 2000 to 2003

	Teen Deaths Suicide 2000	Teen Deaths Suicide 2001	Teen Deaths Suicide 2002	Teen Deaths Suicide 2003
Delaware	2	5	6	6
District of Columbia	0	2	1	1
Hawaii	2	9	5	9
New Hampshire	8	10	9	9
North Dakota	6	2	7	6
Rhode Island	7	4	3	2
Vermont	5	1	1	4
Wyoming	4	9	4	10

Source: www.kidscount.org

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⁵ www.census.gov/hhes/www/saipe/saipe.html

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