

AN EVIDENCE-BASED APPROACH TO THE MEASUREMENT OF TRENDS IN CHILD WELL-BEING*

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Overview of presentation:

- Background on social indicators
 - History
 - Uses
- The Child Well-Being Index (CWI)
 - Method of construction
 - Some empirical findings using the CWI
 - Comparisons and expansion of the CWI
- Future directions

What are social indicators and what are their objectives?

“... *social indicators* – statistics, statistical series, and all other forms of evidence – that enable us to assess where we stand and are going with respect to our values and goals...”

-- Raymond A. Bauer, *Social Indicators* (1966) p. 1,
MIT Press

Other relevant publications during the early period:

- *Toward a Social Report* (1969) USDHEW
- Angus Campbell, Philip E. Converse, and Willard L. Rodgers (1976) *The Quality of American Life: Perceptions, Evaluations, and Satisfactions*, Russell Sage Foundation
- Frank Andrews and Stephen Withey (1976) *Social Indicators of Well-Being: Americans' Perceptions of Life Quality*, Plenum.

There have been two major lines of development over the past 30+ years:

(1) Objective Social Indicators:

The emphasis is on the development of statistics that reflect important social conditions and the monitoring of trends in a range of areas of social concern over time.

Since the 1970s, the primary approach to the identification and definition of objective indicators has been through the creation of “expert” panels.

These panels have applied a variety of approaches to their work, such as the “goals commissions” approach (e.g., the *U.S. Healthy People 2010* Goals).

The key element of this approach is that the experts must achieve consensus. Specifically, there must be consensus on:

- the conditions and areas of concern to be measured;
- good and bad conditions; and
- the directions in which society should move.

(2) Subjective Social Indicators, Subjective Well-Being, Happiness, and Satisfaction

- Key element is using social science research techniques to study how people define:
 - their happiness and satisfaction with life, or
 - social conditions of life that are experienced on a day-to-day basis

Subjective/Quality of life study characteristics:

- Potential for a variety of assessments of satisfaction
- Differences in ratings on the importance of key elements
- Certain domains continuously occur across studies (e.g., health, economic well-being)
- Great similarity between domains of subjective well-being and areas of concern identified in objective social indicators research

This naturally leads to the **Question:**

- Can subjective well-being studies be used to make summary quality-of-life studies more *evidence-based*:
 - in being informed by prior research,
 - in the use of empirical data,
 - in the selection of domains
 - to create composite objective social indicators?

The Child Well-being Index

As an exploration of this possibility,
consider our recently developed Child
Well-Being Index (CWI)

The Child Well-Being Index:

- a composite measure of trends over time in the well-being of America's children and young people
- the objective is to give a sense of the overall direction of change in the well-being of children and youth in the U.S. as compared to two base years, 1975 and 1985.

The CWI is designed to address questions such as the following:

- Overall, how did child and youth well-being change in the last quarter of the 20th century and beyond?
- Did it improve or deteriorate?
- By how much?
- In which domains of social life?
- For specific age groups?
- For particular race/ethnic groups?
- For females and males?

Methods of Construction:

Annual time series data on 28 national-level key indicators in 7 quality-of-life domains:

- Family Economic Well-Being,
- Health,
- Safety/Behavioral Concerns,
- Educational Attainment,
- Community Connectedness,
- Social Relationships (with family and peers), and
- Emotional/Spiritual Well-Being

These seven domains of quality of life have been well established in over two decades of empirical research in numerous subjective well-being studies.

They also have been established as important in studies of the well-being of children and youth.

Table 1. Twenty-eight Key National Indicators of Child Well-Being in the United States

| | |
|---|--|
| <i>Family Economic Well-Being Domain:</i> | 1.) Poverty Rate-All Families with Children |
| | 2.) Secure Parental Employment Rate |
| | 3.) Median Annual Income-All Families with Children |
| <i>Family Economic and Health Domain:</i> | 4.) Rate of Children with Health Insurance |
| <i>Family Economic and Social Relationships Domain:</i> | 1.) Rate of Children in Single-Parent Families |
| <i>Social Relationships Domain:</i> | 2.) Rate of Children Who Have Moved Within the Last Year |

| | |
|-----------------------|--|
| <i>Health Domain:</i> | 1.) Infant Mortality Rate |
| | 2.) Low Birth Weight Rate |
| | 3.) Mortality Rate, Ages 1-19 |
| | 4.) Rate of Children with Very Good or Excellent Health (As Reported by Their Parents) |
| | 5.) Rate of Children with Activity Limitation (As Reported by Their Parents) |
| | 6.) Rate of Overweight Children and Adolescents, Ages 6-17 |

| | |
|---|---|
| <i>Health and Behavioral Concerns Domain:</i> | 1.) Teenage Birth Rate, Ages 10-17 |
| <i>Safety/Behavioral Concerns Domain:</i> | 2.) Rate of Violent Crime Victimization, Ages 12-17 |
| | 3.) Rate of Violent Crime Offenders, Ages 12-17 |
| | 4.) Rate of Cigarette Smoking, Grade 12 |
| | 5.) Rate of Alcoholic Drinking, Grade 12 |
| | 6.) Rate of Illicit Drug Use, Grade 12 |
| <i>Educational Attainment Domain:</i> | 1.) Reading Test Scores, Ages 9, 13, 17 |
| | 2.) Mathematics Test Scores, Ages 9, 13, 17 |

| | |
|--|--|
| <p><i>Community Connectedness and Educational Attainment Domain:</i></p> | <p>1.) Rate of Preschool Enrollment, Ages 3-4</p> |
| | <p>2.) Rate of Persons Who Have Received a High-School Diploma, Ages 18-24</p> |
| | <p>3.) Rate of Youths Not Working and Not in School, Ages 16-19</p> |
| | <p>4.) Rate of Persons Who Have Received a Bachelor's Degree, Ages 25-29</p> |
| | <p>5.) Rate of Voting in Presidential Elections, Ages 18-20</p> |
| <p><i>Emotional/Spiritual Well-Being Domain:</i></p> | <p>1.) Suicide Rate, Ages 10-19</p> |
| | <p>2.) Rate of Weekly Religious Attendance, Grade 12</p> |
| | <p>3.) Percent Who Report Religion as Being Very Important, Grade 12 ¹⁹</p> |

- To calculate the CWI, each of the 28 time series of the Key Indicators is indexed by a base year (1975 or 1985).
- The base year value of the indicator is assigned a value of 100 and subsequent values are taken as percentage changes in the index.
- The directions of the indicators are oriented so that a value greater (lesser) than 100 in subsequent years means the social condition measured has improved (deteriorated).

- The 28 indexed Key Indicator time series are grouped into the seven domains of well-being by equal weighting to compute the domain-specific Index values for each year.
- The seven domain-specific Indices then are grouped into an equally-weighted Child Well-Being Index value for each year.

The CWI can be viewed as:

an evidence-based well-being measure of trends in averages of the social conditions encountered by children and youth in the U.S. across recent decades.

Some findings using the CWI:

(1) Domain-Specific Report Card for 2003:

*Change from 2002 to 2003 as a
Domain Percent of Base Year
Value:*

| | |
|----------------------------|-----------|
| Family Economic Well-Being | -1.15 |
| Health | -2.08 |
| Safety/Behavioral | +5.61 |
| Educational Attainment | No Change |
| Community Connectedness | +2.10 |
| Social Relationships | +0.54 |
| Emotional/Spiritual | -2.37 |

(2) Trends in Child Well-Being Over the Past Quarter Century and Into the 21st Century

The following charts show changes over time in the CWI and its various components.

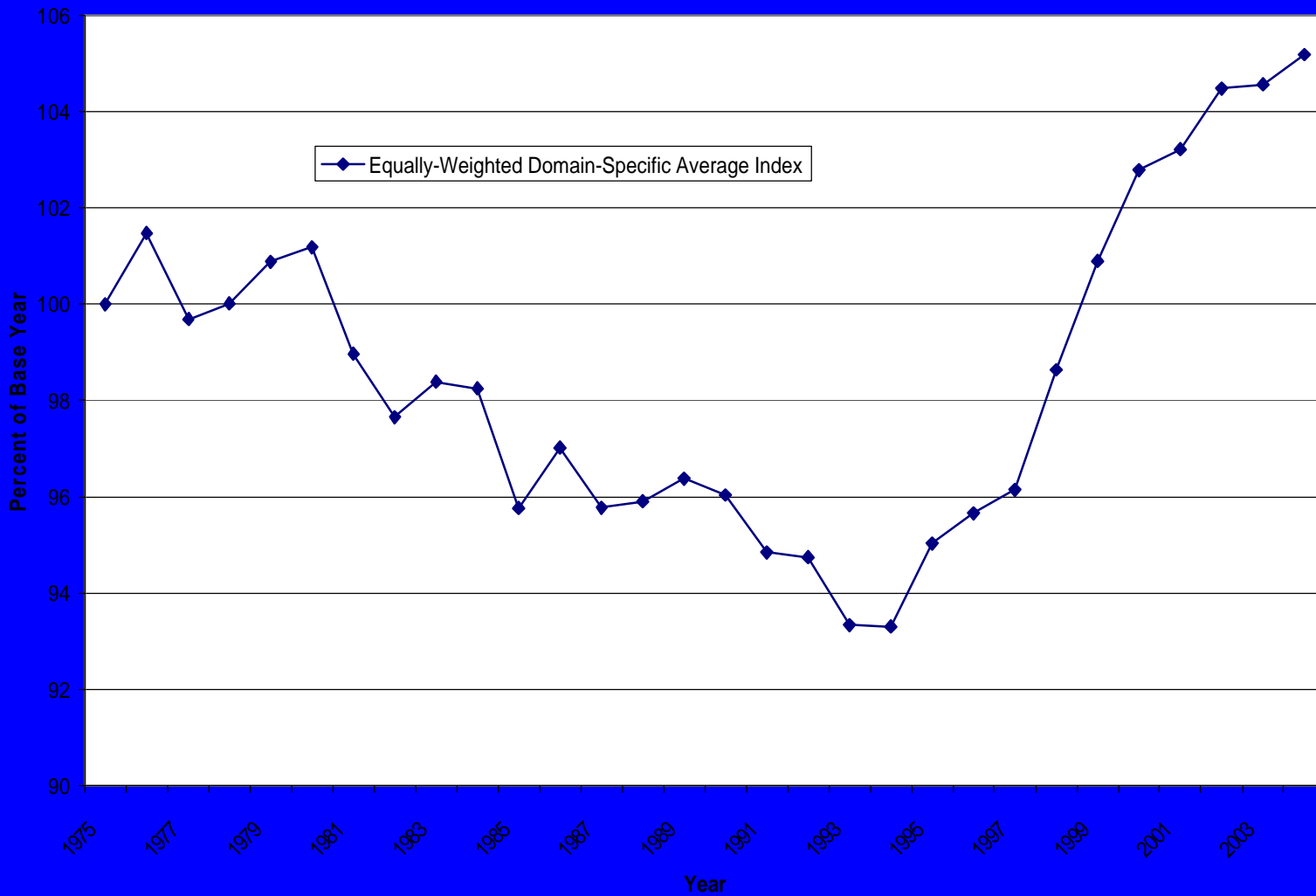


Figure 1. Composite CWI, 1975-2003, with Projections for 2004.

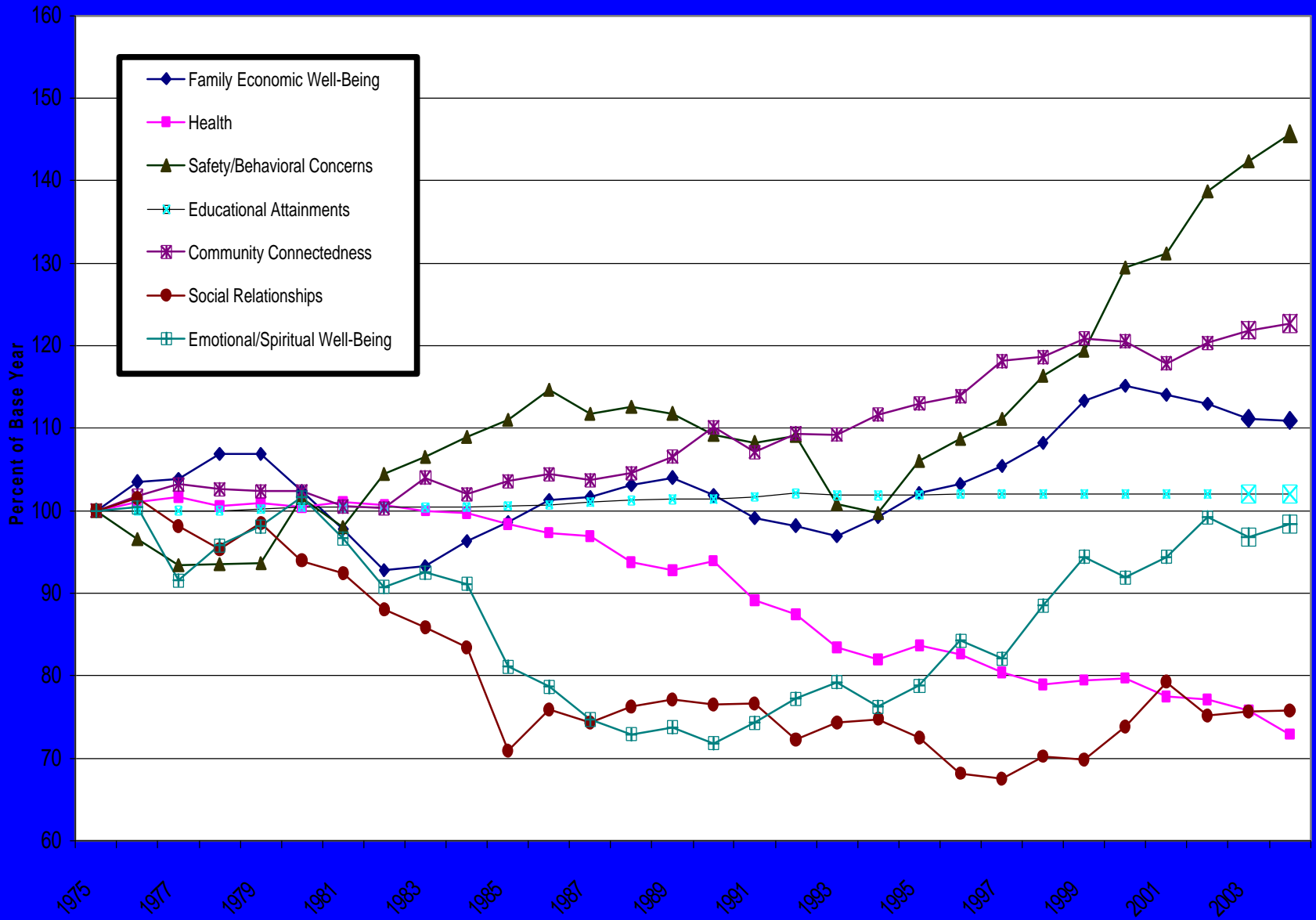


Figure 2. Domain-Specific Indices, 1975-2003, with Projections for 2004.

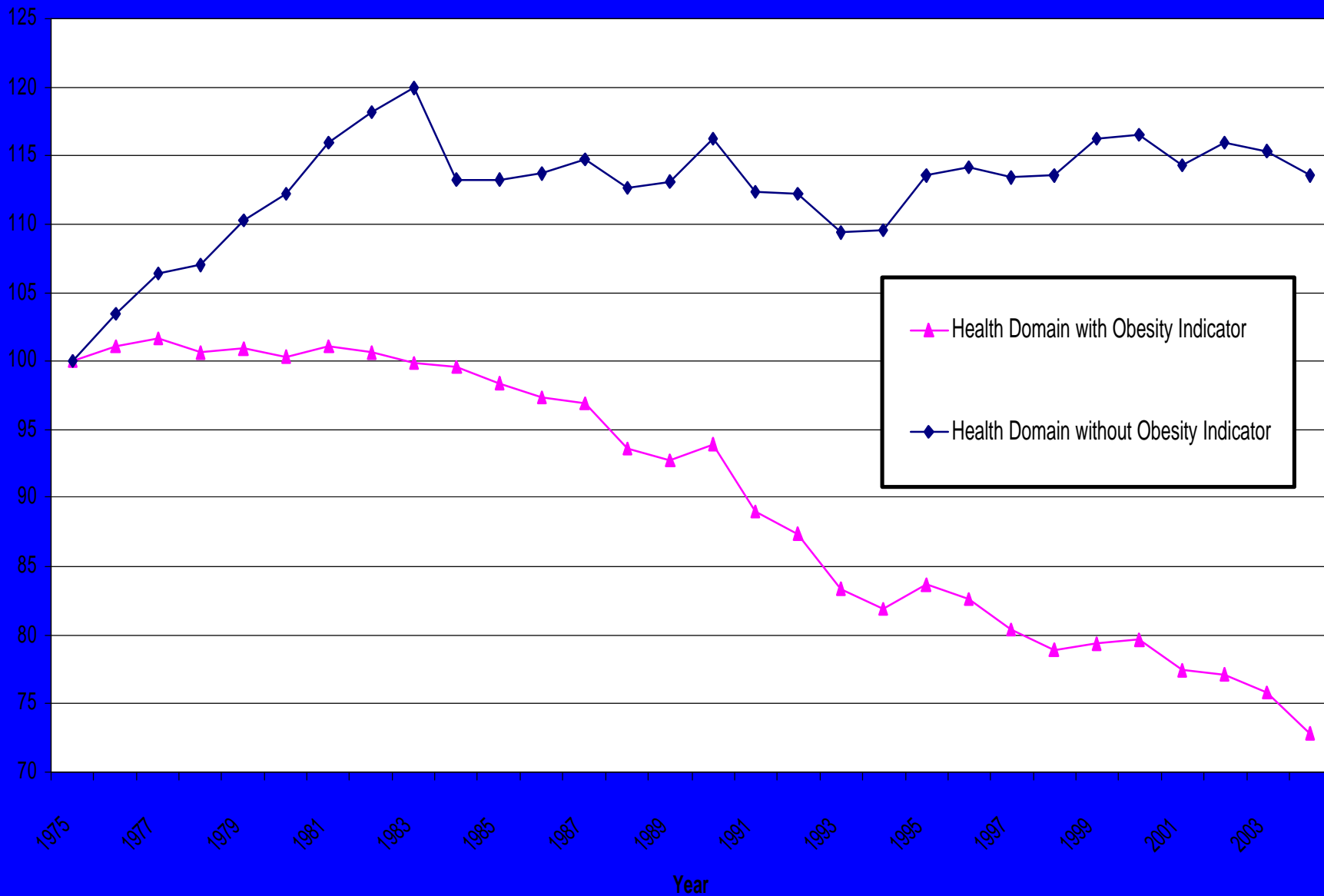


Figure 2.1. Health Domain, with and without Obesity, 1975 - 2003, with Projections for 2004

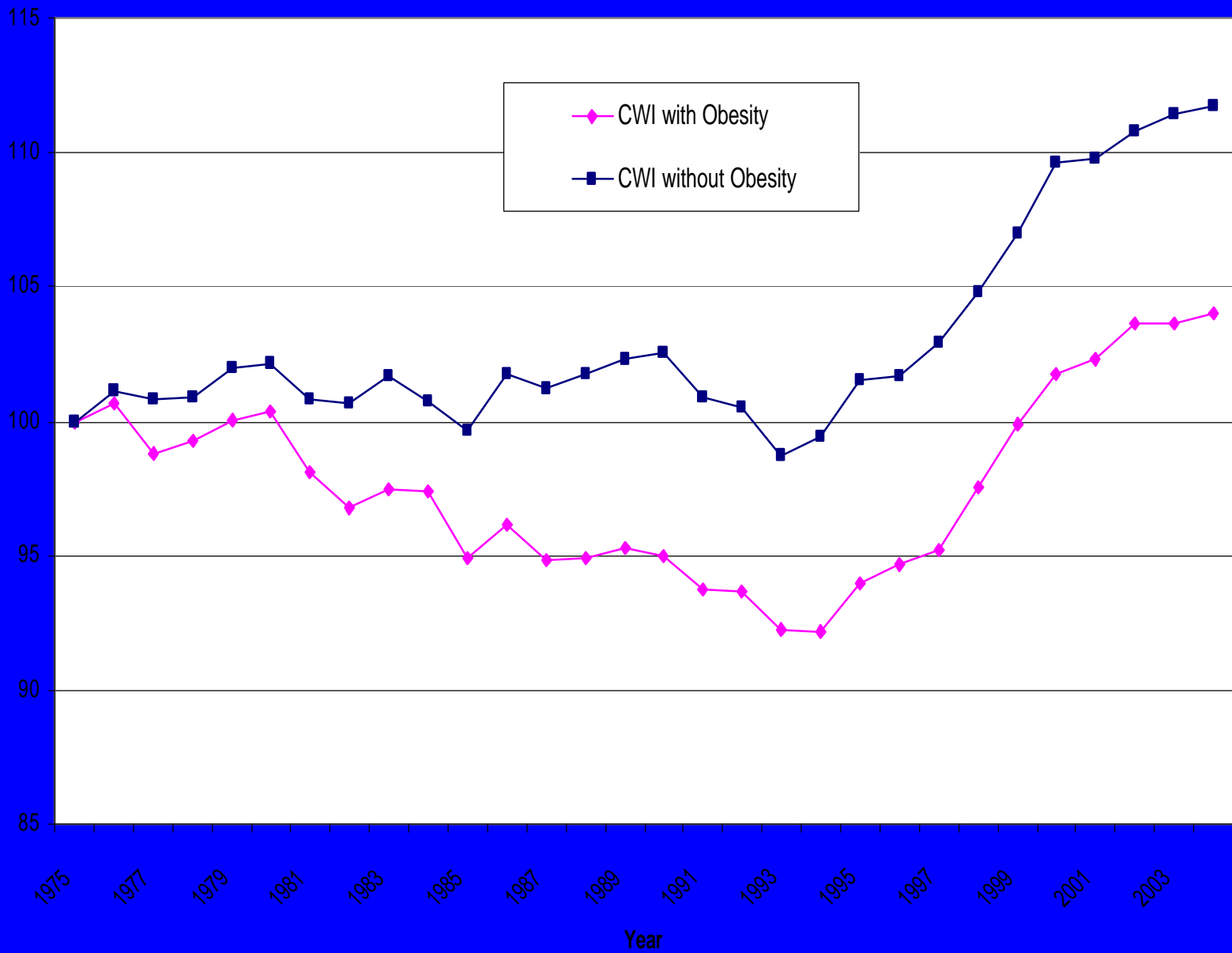


Figure 2.2. CWI With and Without Obesity, 1975 to 2003, with Projections for 2004.

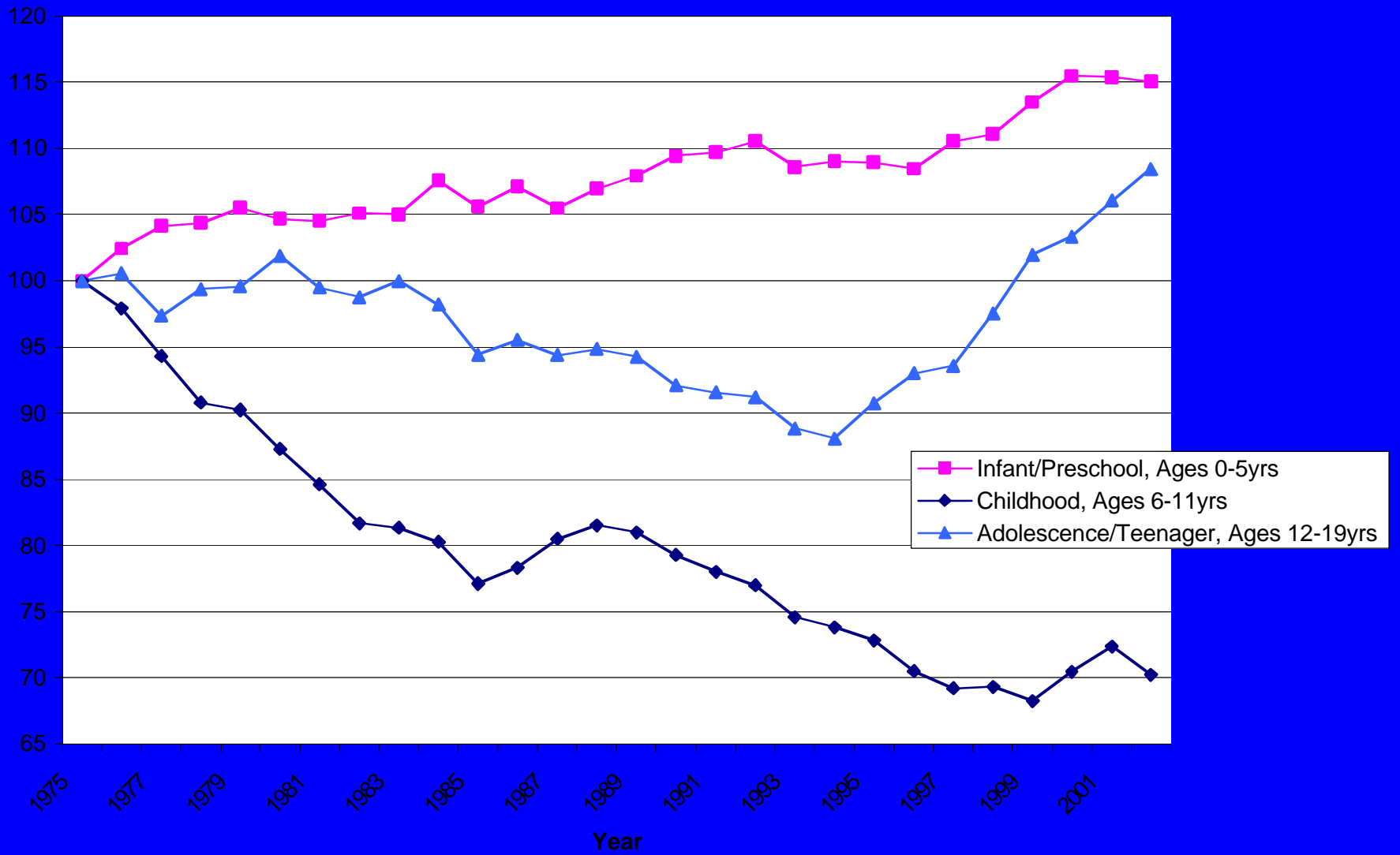


Figure 3. Age-Specific CWIs, 1975-2002

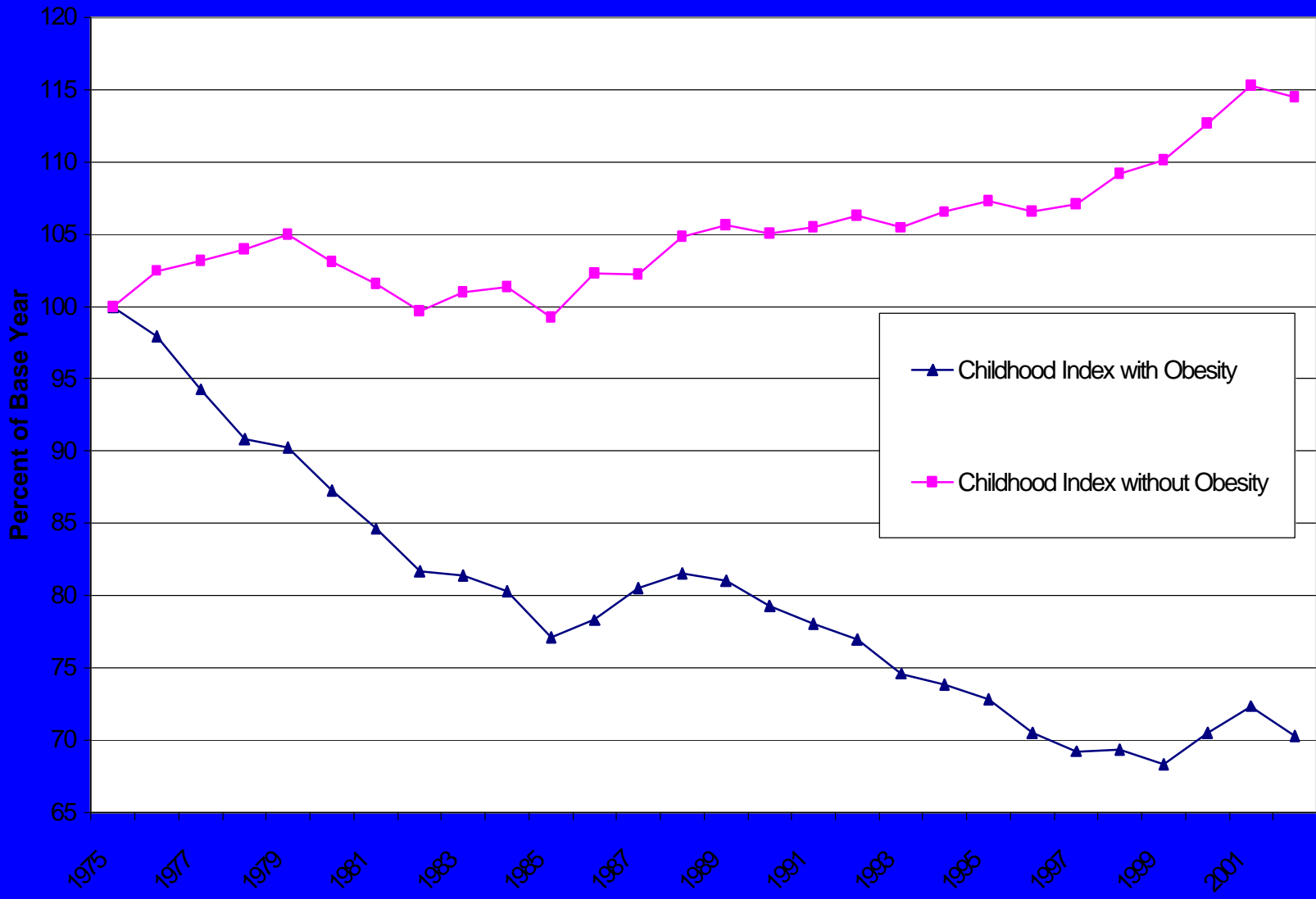


Figure 3.1. CWI for Children (Ages 6-11) With and Without Obesity, 1975 - 2002.

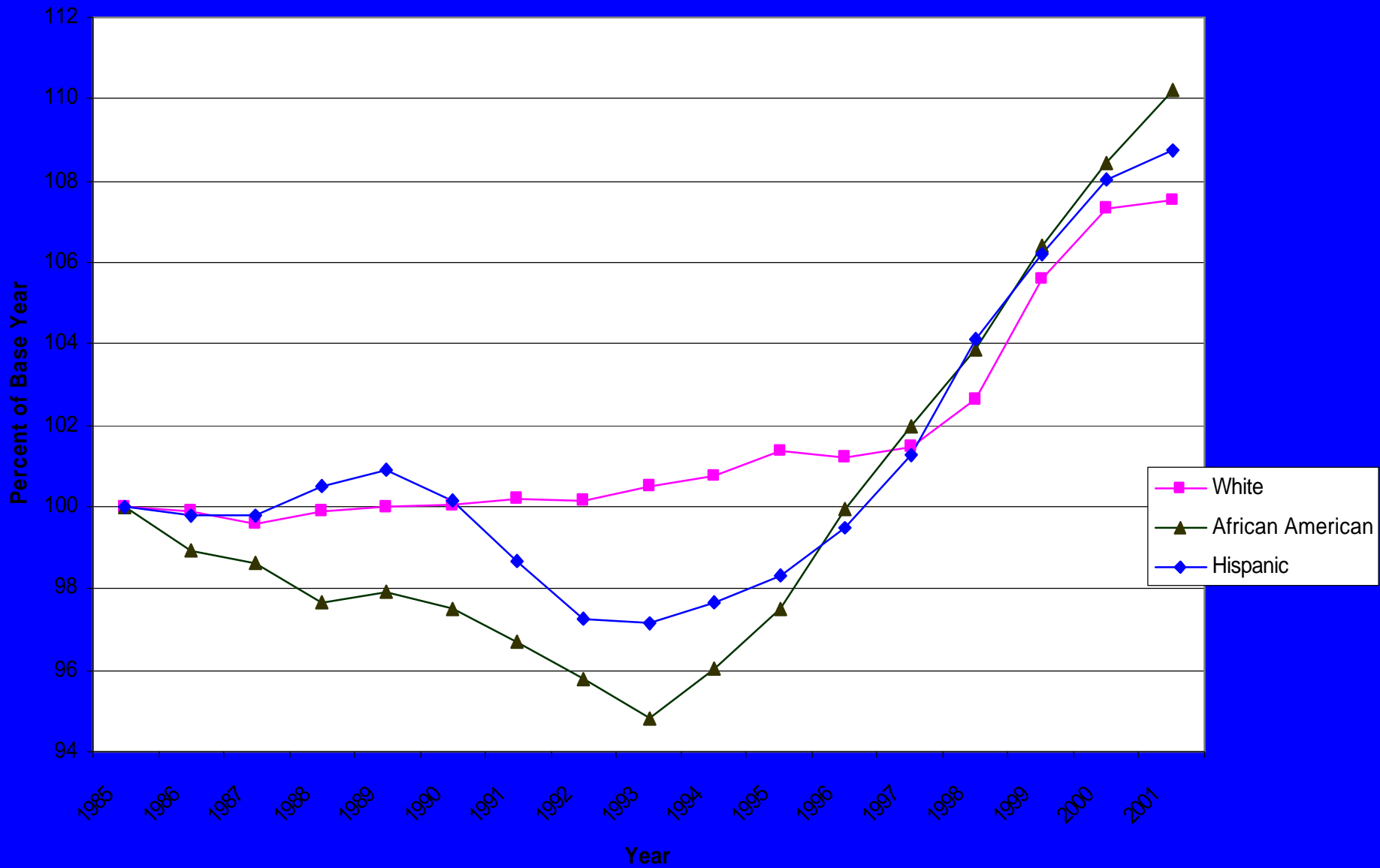


Figure 4. Race/Ethnic Group-Specific CWIs, 1985-2003.

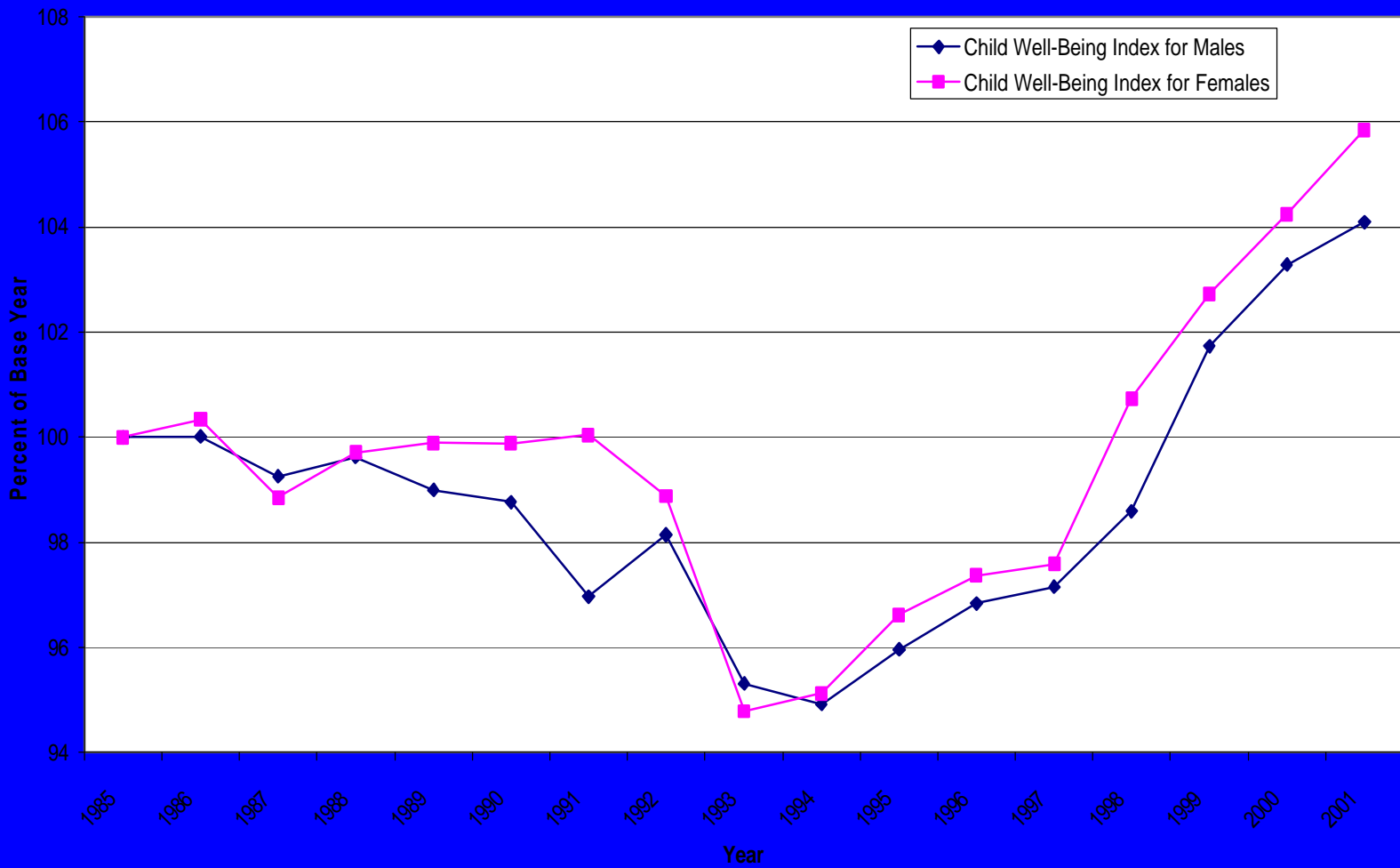


Figure 5. Male and Female CWIs, 1985 - 2002.

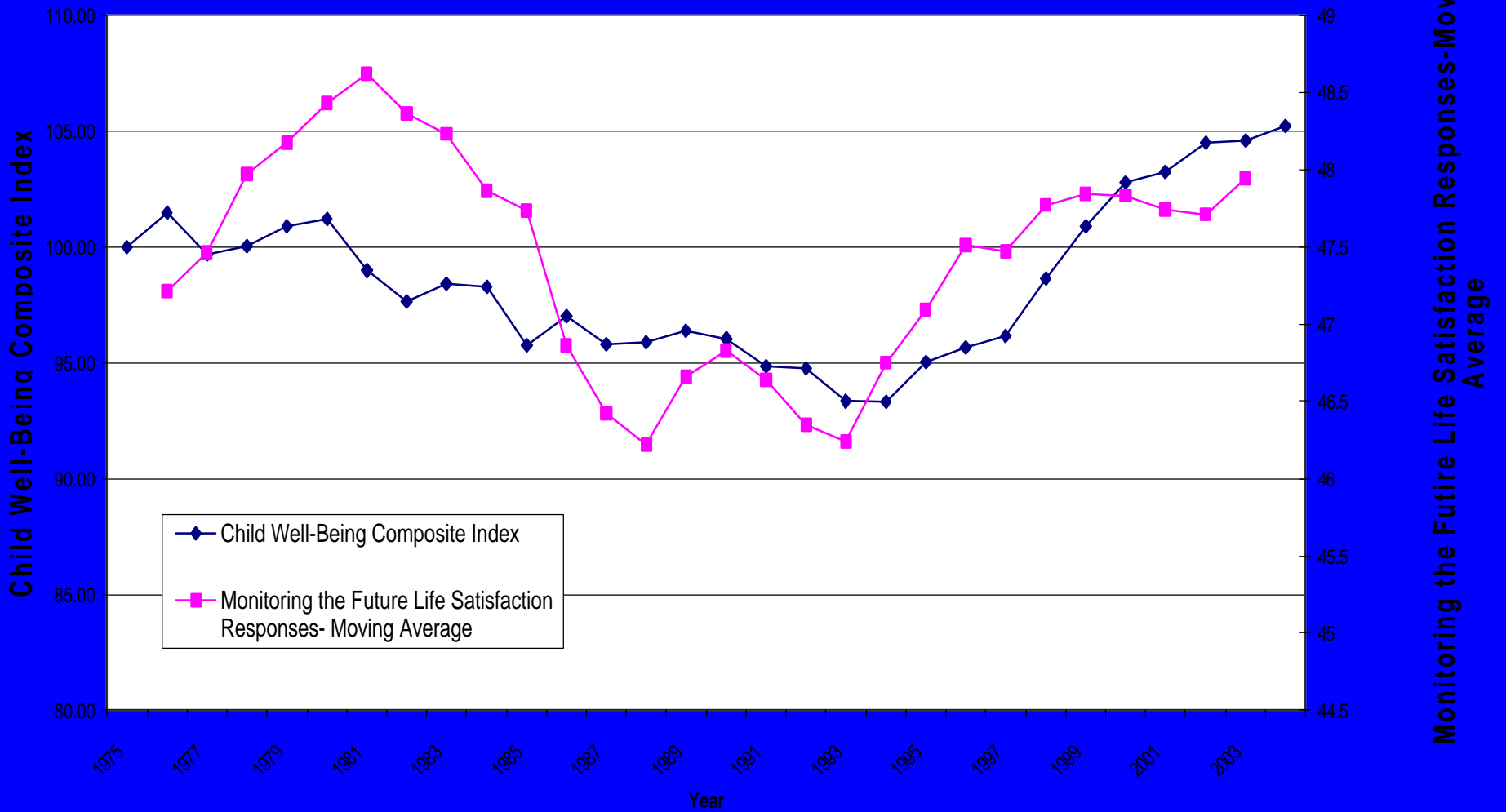


Figure 6. CWI and Smoothed MTF Life Satisfaction, 1975-2003.

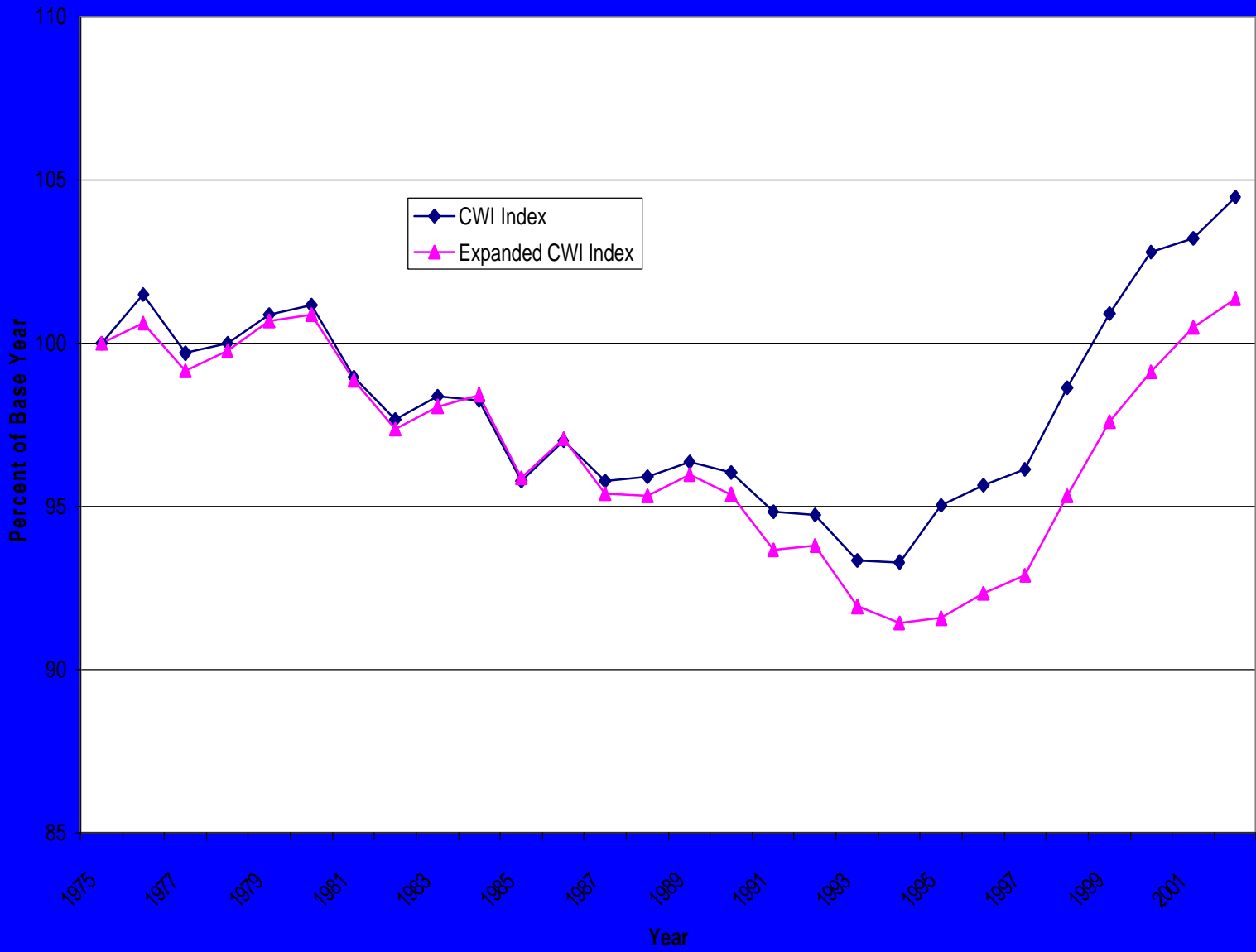


Figure 7. CWI and Expanded CWI, 1975-2002.

In summary, analyses of the CWI show:

- Child well-being in the U.S. deteriorated fairly steadily for a number of years in the 1980s and reached low points in 1992-94. They then began the upturn of the past several years.
- The overall well-being of children and youth in the U.S. showed substantial improvements in the eight years from 1994 to 2002.
- Improvements continued at a slower pace in 2003, and also likely continued in 2004.

- Recent increases in the CWI have pierced the 1975 base year level only in the past few years.
- The downturn in well-being that occurred in the 1985-1994 period was particularly severe for African American and Hispanic children.
- There have been overall improvements in well-being for both males and females since 1985, but there are some domains and indicators in which males have done better and some in which females have done better.

- Historical best-practice analyses (using the best values ever recorded for the U.S.)
 - show that the CWI could be 20 to 25 percent higher than its values in recent years.
- International best-practice analyses (using the best values recorded in recent years by other nations)
 - show that the CWI could be 35 to 40 percent higher than its value in recent years.

- Sensitivity analyses of the CWI show that the Health domain sub-index and the overall index is greatly impacted by the inclusion of the indicator for trends in obesity.
- The CWI also helps identify domains of well-being for which the data base needs to be improved.
 - Component indicators for the social relationships and emotional well-being domains are particularly weak.

- The CWI shows substantial covariation with a smoothed “global life satisfaction” time series from 12th graders in the MTF Project, which provides validating evidence for changes in the CWI.
- The qualitative pattern of changes across the past three decades in an expanded CWI (with 44 Key Indicators) is similar to that of the basic CWI.

Can We Do More?

Recent work has focused on the construction of corresponding CWIs at the state and local levels, a project that is underway in collaboration with KIDS COUNT.

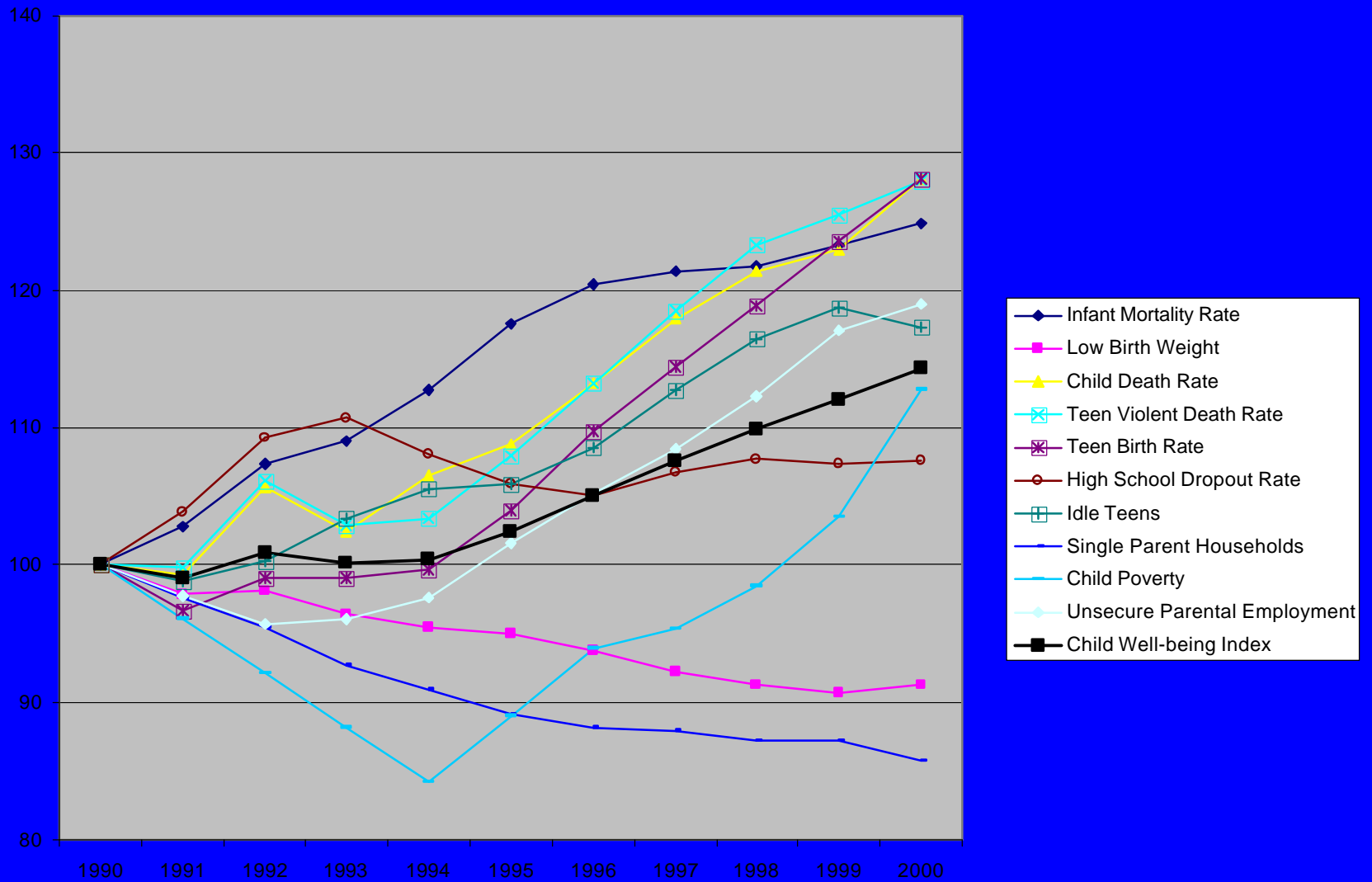


Figure 1. Child Well-being Trends for the 10 KIDS COUNT Indicators, 1990-2000

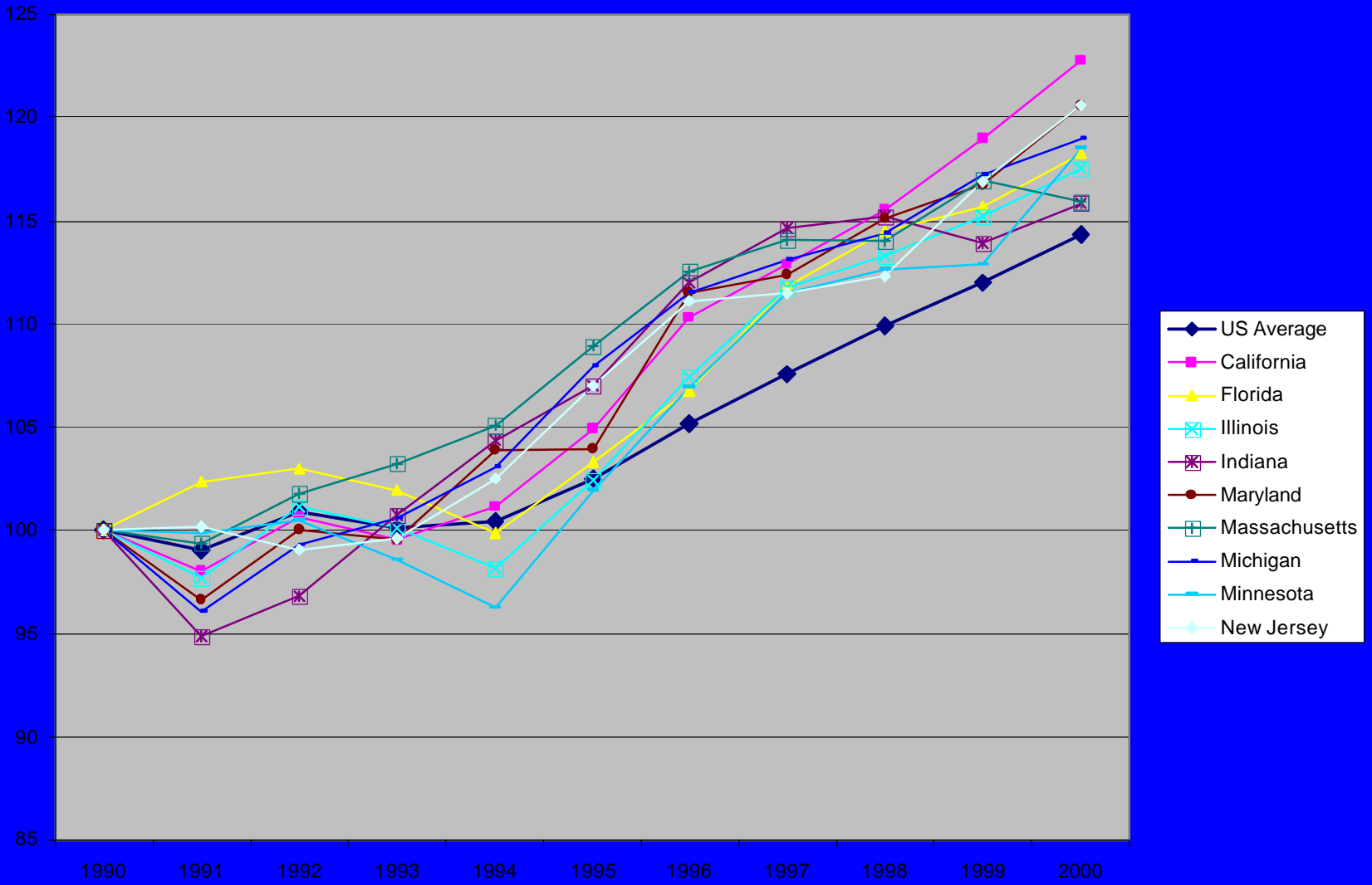


Figure 2. Best Overall State Trends, Tracking Above U.S. CWI Trajectory Since 1995

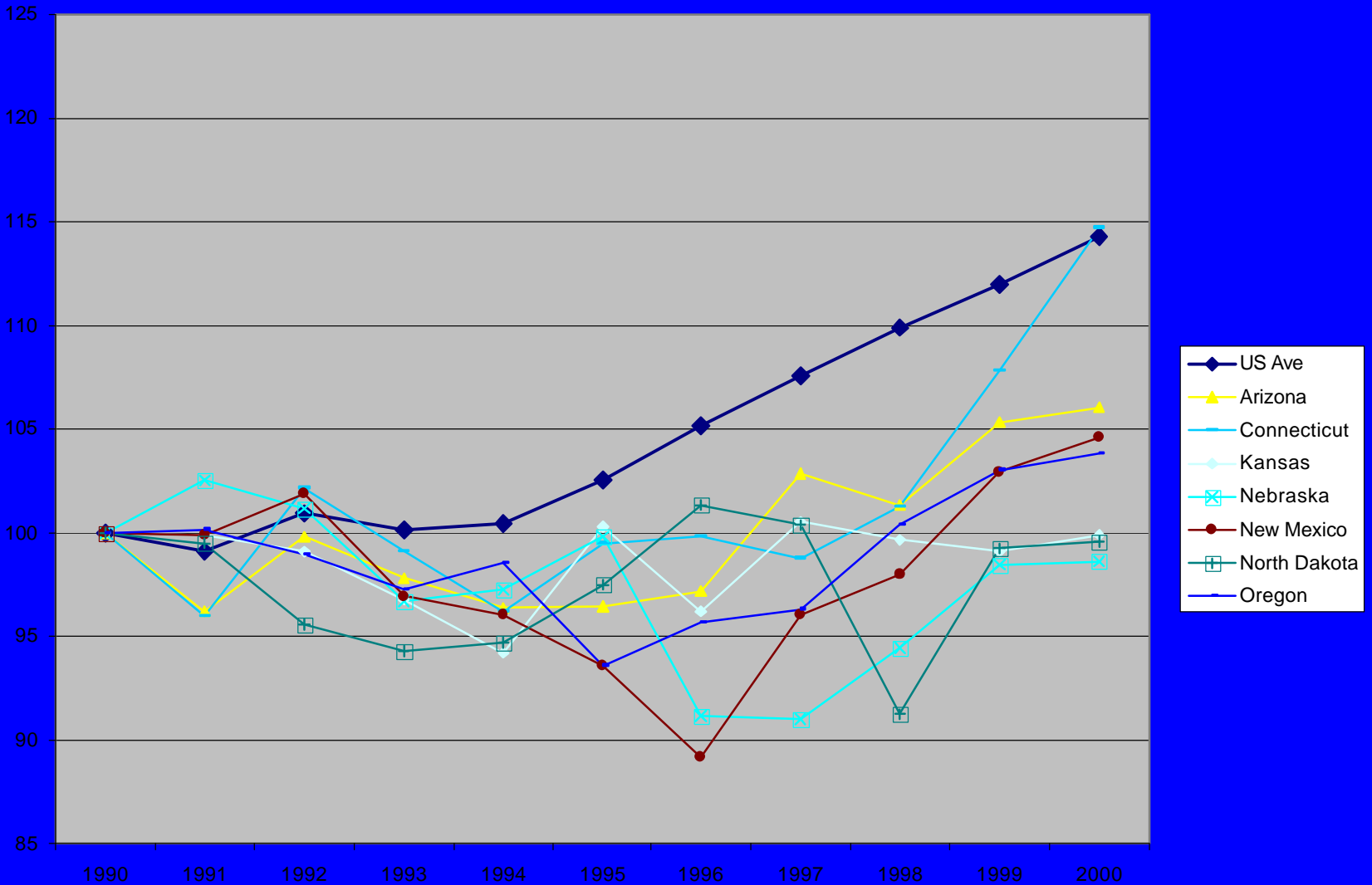
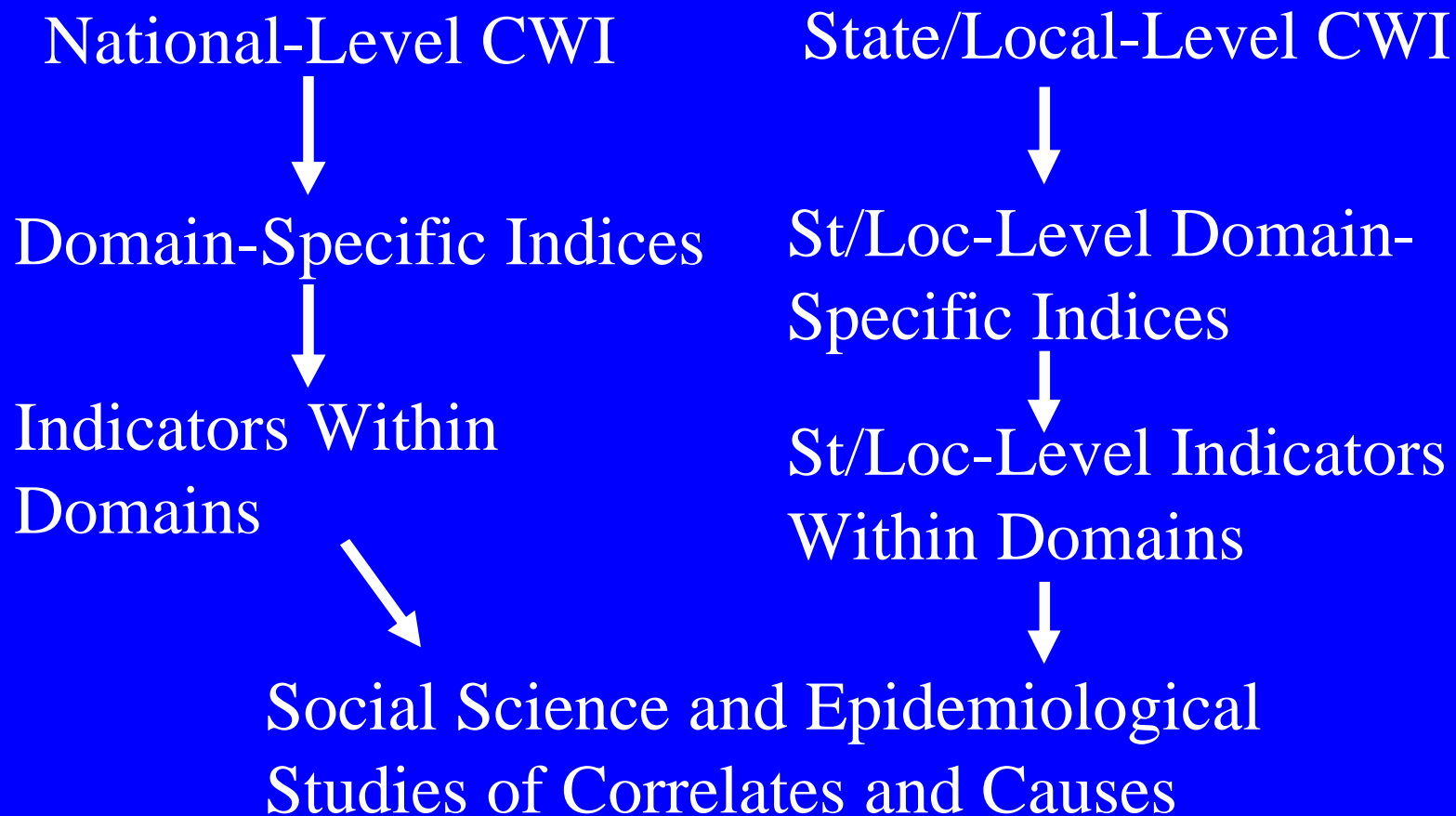


Figure 3. Below average trends over 1990s

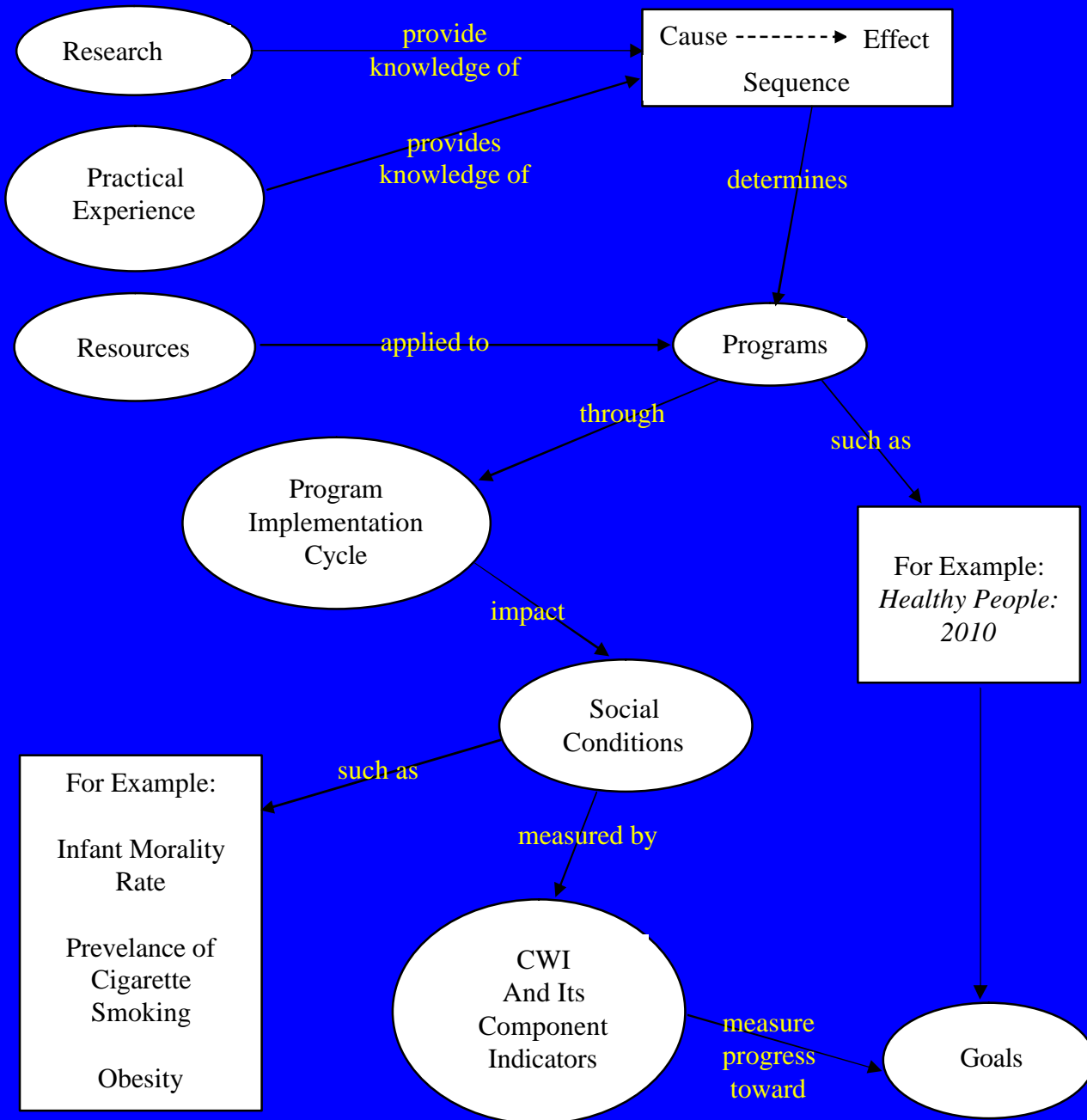
As data sources become thin at the local community level, what can be done?

- Concentrate on well-being/outcome indicators that are analogues of the CWI and KIDS COUNT indicators
- Make local community comparisons with the national and state indicators and trends
- Articulate goals/objectives for improvements at the local level

Hierarchical Relationships Among the CWI, Domain Indices, Indicators, and Scientific Studies



Further articulation and application is needed of the planned social change process described in Land and Ferriss (2002) to the CWI and its component indicators, as illustrated in the next chart.



The Child Well-Being Index project on the Web:

<http://www.soc.duke.edu/~cwi/>