

FOUNDATION FOR CHILD DEVELOPMENT

2011

Child and Youth Well-Being Index (CWI)

The Foundation for Child Development (FCD)

The Foundation for Child Development (FCD) is a national, private philanthropy dedicated to the principle that all families should have the social and material resources to raise their children to be healthy, educated, and productive members of their communities.

The Foundation seeks to understand children, particularly the disadvantaged, and to promote their well-being. We believe that families, schools, nonprofit organizations, businesses, and government at all levels share complementary responsibilities in the critical task of raising new generations of children.

Kenneth C. Land, Project Coordinator

Kenneth C. Land, Ph.D., is the John Franklin Crowell Professor of Sociology and Demography at Duke University. He has conducted extensive research on contemporary social trends and quality-of-life measurement, social problems, demography, criminology, organizations, and mathematical and statistical models and methods for the study of social and demographic processes. He is the co-author or co-editor of five books, more than 100 research articles, and numerous book chapters. Dr. Land has been elected a Fellow of the American Statistical Association, the Sociological Research Association, the American Association for the Advancement of Science, the International Society for Quality-of-Life Studies, and the American Society of Criminology.

November 14, 2011

Kenneth C. Land, Project Coordinator

Duke University

Durham, North Carolina

Executive Summary

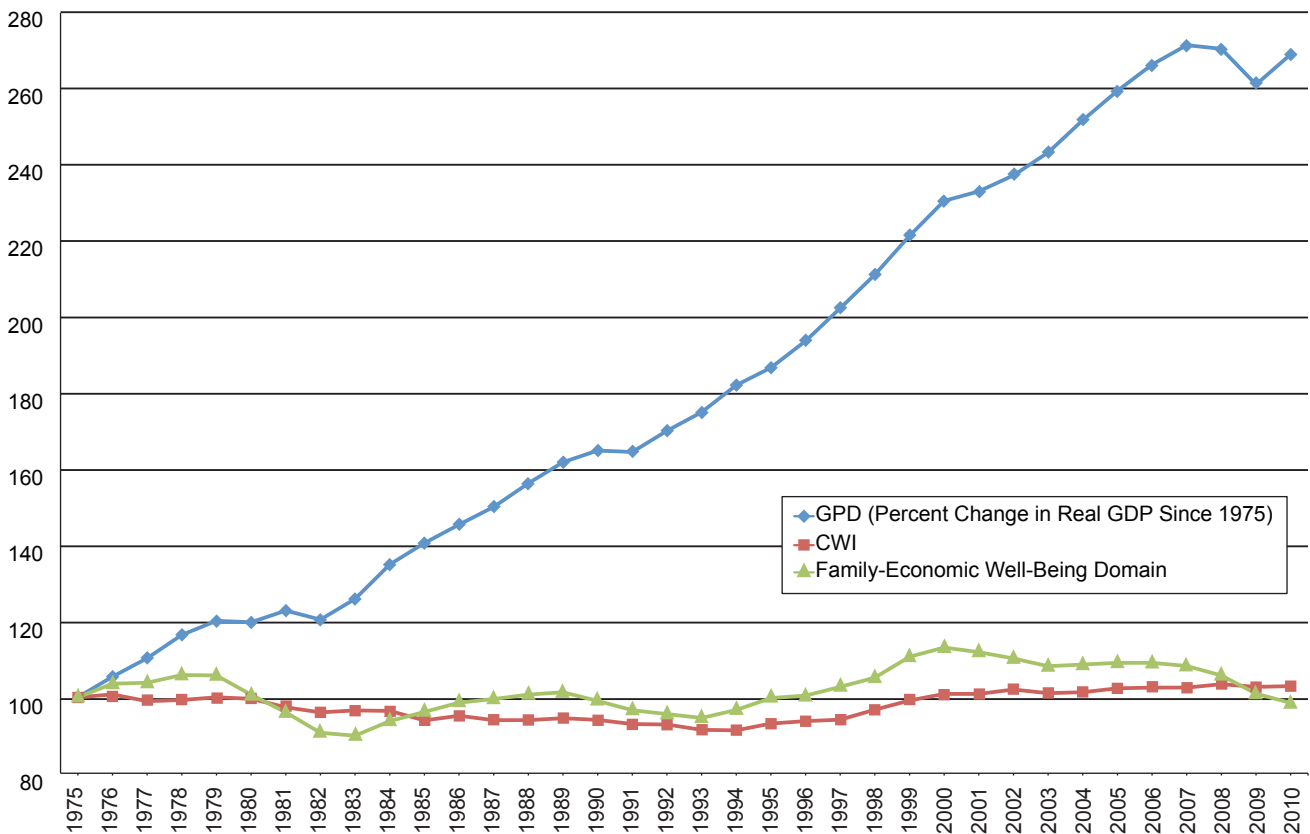
I. Overview

Each year, the **Foundation for Child Development** and the **Child and Youth Well-Being Index Project at Duke University** issue a comprehensive measure of how children are faring in the United States. The overall comprehensive Child Well-Being Index (CWI) is based on a composite of 28 Key Indicators of well-being that are grouped into seven Quality-of-Life/Well-Being Domains. These domains are: family economic well-being, safe/risky behavior, social relationships, emotional/spiritual well-being, community engagement, educational attainment, and health. This year's overall CWI is an updated measure of trends over the 34-year period from 1975 to 2009, with projections for 2010.

II. Major Findings: Recent Trends in the Overall Child and Youth Well-Being Index

The major trends that can be drawn from the 2011 overall CWI Update include:

- Progress in American children's quality of life has essentially stalled.** Despite a 168 percent increase in the GDP over the past 35 years, American children's quality of life, as measured by the composite Child and Youth Well-Being Index (CWI) has risen a mere 3 percent over that same period of time. The CWI – a measure of the overall well-being of all of America's children and youths – was recorded at 103.42 in 2008, as compared to its base year, 1975 value of 100, which is indicative of only



The Trends in GDP, CWI and Family Economic Well-Being: 1975-2010

slight overall improvements. In addition, while data on all of the 28 Key Indicators of the CWI are not in, it is projected to have declined below the 2008 level to 102.7 in 2009 and to 102.9 in 2010, as the effects of the Great Recession and its aftermath took full force. **This means that our country's significant economic growth since 1975 has not improved American children's lives.**

• **On average for all American children and youths under age 18, all of the improvements in economic well-being of families with children under the age of 18 over the past 35 years have been lost.** This report finds that the Great Recession of 2008-2009 and the slow economic recovery that has followed has had a large negative impact on the Family Economic Well-Being Domain, the value of which for 2010 now is below that of the base year, 1975. Again, this finding runs counter to the fact that our country as a whole has experienced an increase of wealth over the same period of time. The decline in family economic well-being is due primarily to the large increase in the percent of children living in families below the poverty line—from a recent low of 16.9 percent in 2006 to 21.5 percent in 2010. Similar periods of decline in the Family Economic Well-Being Domain occurred in 1981-1988 and in 1990-1995 due to the impacts of the 1981-1982 and 1990-1991 economic recessions, respectively.

• As the 2009 and 2010 CWI Annual reports anticipated, the most immediate, direct impacts of the Great Recession and its aftermath have been in the Family Economic Well-Being Domain. Delayed indirect impacts are occurring in other domains such as community engagement and health as the recession and slow recovery take their toll on publicly-supported programs for children, such as schools, community facilities, and health programs.

The Child and Youth Well-Being Index (CWI)

1975 – 2009, with Projections for 2010

I. Child and Youth Well-Being Index:

A Brief Overview

The Child and Youth Well-Being Index (CWI) is an evidence-based composite measure of trends over time in the quality of life of America's children from birth up to age 18 (up to the 18th birthday)¹. The CWI tracks changes in the well-being of children annually compared to 1975 base year values.

The CWI is designed to address the following questions:

- On average, how did child and youth well-being in the U.S. change since 1975 and beyond?
- Did child well-being improve or deteriorate?
- By approximately how much?
- In which domains of social life?
- For specific age groups?
- For particular race/ethnic groups?

The CWI, based on data from 28 Key Indicators, is computed and updated annually. Updates on almost all annual Key Indicators are currently available for the year 2009 (with the exception of mortality and suicide rates), and ten are available for 2010. The remaining indicators are projected by use of statistical time series models. Past experience has shown that these short-term projections are accurate.

The objective of the CWI is to give a view of changes over time in the overall well-being of children and youth in the United States. The composite Index, an equally-weighted average of the seven Well-Being Domains, provides a sense of the overall direction of change in well-being, as compared to the 1975 base year of the indicators. For this reason, the focus of the Index is not primarily on specific indicators, but rather on the way in which they interact and change over time. As a composite index of changes over time, **the important information in the CWI pertains to its directions of change over sequences of years:** Are the indicators up and thus indicative of overall improvements? Down and thus indicative of deterioration? Flat and thus indicative of stability?

Children and youth live unique lives and as such, at some point, each experiences a range of social conditions. The Index is comprised of Key Indicators associated with different stages of the life course in the first two decades of life.

The overall CWI includes the following 28 Key Indicators organized into seven Domains of Well-Being that have been found in many social science studies to be related to an overall sense of subjective well-being or satisfaction with life. Appendix A briefly describes the Methods of Index Construction for the CWI. Sources for time series data on the Key Indicators are presented in Appendix B²:

¹ Or, as stated using Census/demographic notation, ages 0 to 17 at last birthday. Some of the Key Indicators in the CWI use slightly higher or slightly lower upper bounds, because of the age intervals in which the Indicators are reported. Our analyses, however, have found that the main focus of the CWI – the measurement of trends over time – is not greatly affected by these small differences in upper age boundaries.

² All of these Key Indicators either are well-being indicators that measure outcomes for children and youths or surrogate indicators of the same. For instance, data are not available on direct measure of the poverty status of children but rather on the poverty status of families that have children up to age 18. It is not strained, however, to infer that, if such a family has an income falling below the poverty line, then a child living in that family has a poverty-level economic well-being. Thus, the poverty status of the family is used as a surrogate for the poverty status of the child.

Family Economic Well-Being Domain³

1. Poverty Rate (All Families with Children)
2. Secure Parental Employment Rate
3. Median Annual Income (All Families with Children)
4. Rate of Children with Health Insurance

Safe/Risky Behavior Domain⁴

1. Teenage Birth Rate (Ages 10-17)
2. Rate of Violent Crime Victimization (Ages 12-19)⁵
3. Rate of Violent Crime Offenders (Ages 12-17)
4. Rate of Cigarette Smoking (Grade 12)
5. Rate of Binge Alcohol Drinking (Grade 12)
6. Rate of Illicit Drug Use (Grade 12)

Social Relationships Domain

1. Rate of Children in Families Headed by a Single Parent
2. Rate of Children who have Moved within the Last Year (Ages 1-18)

Emotional/Spiritual Well-Being Domain:

1. Suicide Rate (Ages 10-19)
2. Rate of Weekly Religious Attendance (Grade 12)
3. Percent who report Religion as Being Very Important (Grade 12)

Community Engagement Domain⁶

1. Rate of Persons who have Received a High School Diploma (Ages 18-24)⁷
2. Rate of Youths Not Working and Not in School (Ages 16-19)
3. Rate of PreKindergarten Enrollment (Ages 3-4)
4. Rate of Persons who have Received a Bachelor's Degree (Ages 25-29)⁸
5. Rate of Voting in Presidential Elections (Ages 18-20)

Educational Attainment Domain

1. Reading Test Scores (Ages 9, 13, and 17)
2. Mathematics Test Scores (Ages 9, 13, and 17)

Health Domain

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 parents)
5. Rate of Children with Activity Limitations (as reported by parents)
6. Rate of Overweight Children and Adolescents (Ages 6-19)

Taken together, changes in the performance levels of these 28 Key Indicators, and the seven domains into which they are grouped, provide a view of the changes in the overall well-being of children and youth in American society. Each domain represents an important area that affects well-being/quality of life: family economic well-being, safe/risky behavior, social relationships, emotional/spiritual well-being, community engagement (participation in schooling, economic, and political institutions), educational attainment, and health. The performance of the nation on each indicator also reflects the strength of America's social institutions: its families, schools, and communities.

Unless otherwise noted, indicators refer to children ages 0-17.

³ The label "material well-being" has also been used for this domain.

⁴ The label "safety/behavioral concerns" has also been used for this domain.

⁵ The upper age limit of 19 is used for this indicator, as the data series for this Key Indicator is not available for ages 12-18 separately.

⁶ The labels "place in community" and "community connectedness" have also been used for this domain.

⁷ Since some youths are delayed in completing the requirements for high school diplomas or General Education Equivalent (GED) degrees, an age interval with a higher age limit is used for this Key Indicator series.

⁸ Similarly to the use of a higher age limit for the high school diploma Key Indicator, a higher age limit is used for this series, as an index of trends in commitment to, and participation in, higher education institutions.

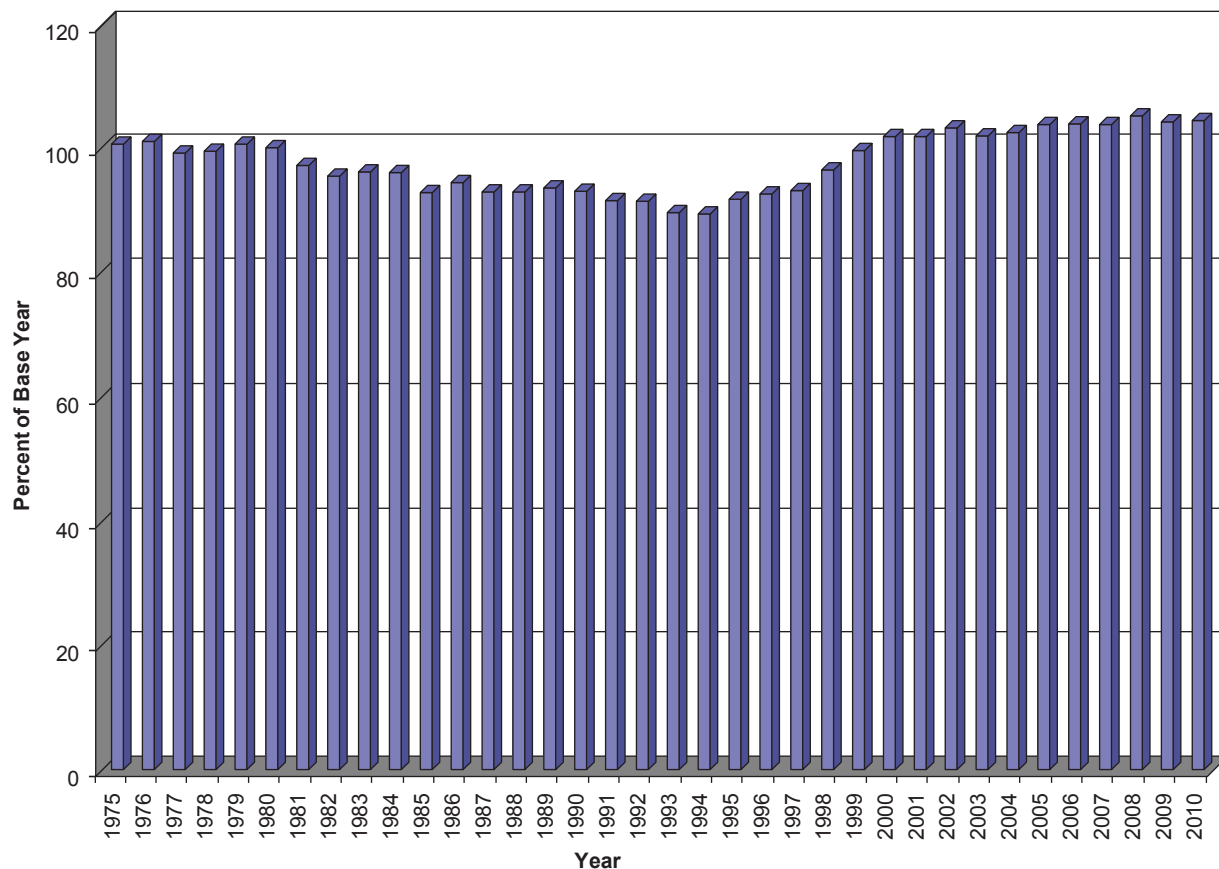


Figure 1a: Child Well-Being Index, 1975-2010

II. Annual Update of the Overall CWI

Each year, we report the updated values of the overall CWI through the most recent year in the current report. Figure 1a charts changes since 1975 in the overall composite CWI⁹.

Figure 1a shows that:

- There was only a very slight increase (.19%) in the 2010 CWI compared with 2009.¹⁰
- The very slight increase in the projected value of the CWI for 2010 is largely due to continued improvements in the safe/risky behavior

domain that began in 1995, as adolescents and teenagers have reduced their use of cigarettes and their engagement in binge drinking, their likelihood to be violent crime victims or offenders, or to have teenage births. Indeed, without the improvements in this domain, rather than having recovered to levels above the 1975 base year value of 100 since 2000 as shown in Figure 1a, the overall CWI would have been below 100 for all but the years 1975-1980 – that is, the Index would indicate that overall Child and Youth Well-Being was at a lower level than recorded in the 1975 base year of the Index as shown in Figure 1b.

⁹ The specific annual numerical values of the overall CWI, from which Figure 1a is constructed, are provided in Appendix C.

¹⁰ This is not a statistically significant change (see Appendix D).

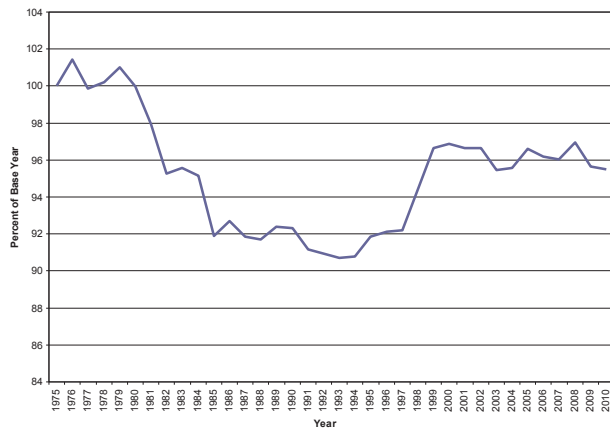


Figure 1b. Child Well-Being Index without the Safe/Risky Behavior Domain, 1975-2010

The Great Recession in 2008-2009 and the following slow economic recovery has had a large negative impact on the Family Economic Well-Being Domain.

Figure 1c charts changes in the Family Economic Well-Being Domain, 1975-2010. For the years 2006 to 2010, the specific values exhibited in Figure 1c are:

- 2006 – 109.00
- 2007 – 108.17
- 2008 – 105.71
- 2009 – 100.94
- 2010 – 98.49

Since these values are indexed to the 1975 base year value of 100, this means that all of the improvements in material well-being of families with children under the age of 18, as measured by the four indicators cited above, over the past 35 years have been lost. Indeed, the value of this domain for 2010 now is below that of the base year. In other words, on average for all American children and youths under age 18, all of the improvements in material well-being of families with children under the age of 18 over the past 35 years have been lost. This decline is due primarily to the large increase in the percent of children living in families below the

poverty line—from a recent low of 16.9 percent in 2006 to 21.5 percent in 2010. Similar periods of decline in the Family Economic Well-Being Domain occurred in 1981-1988 and in 1990-1995 due to the impacts of the 1981-1982 and 1990-1991 economic recessions, respectively.

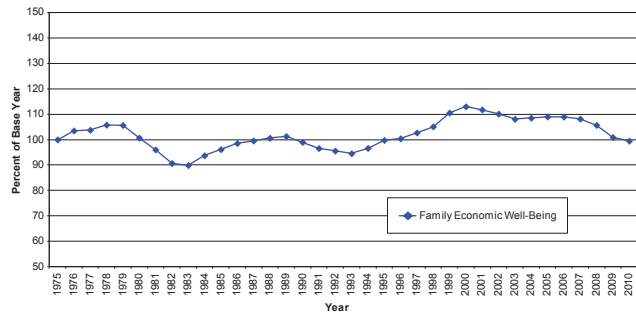


Figure 1c. The Family Economic Well-Being Domain, 1975-2010

These findings are consistent with the scenario of direct and indirect impacts of the Great Recession and its aftermath, as presented in the 2009 and 2010 CWI Annual Reports. The most immediate, direct impacts of the Great Recession were evident in the Family Economic Well-Being Domain. Delayed indirect impacts have occurred, and are occurring, in other domains as the recession and slow recovery took its toll on publicly supported programs for children, such as schools, community facilities, and health programs. Because of the delays in these impacts and because the Key Indicators thereof are not produced as rapidly as those of economic well-being, however it will be a year or two before they are fully reflected in the CWI.

Changes in the Family Economic Well-Being Key Indicators

Because of the declines in the Family Economic Well-Being Domain since 2006, trends in each of its four Key Indicators merits attention. Figure 2a contains the charts of trends since 1975 in

the poverty rate (the *percent* of children living in families with incomes below the official poverty line) and the secure parental employment rate (the *percent* of children living in families with at least one parent employed full-time, year-round) from 1975 to 2010.¹¹ It can be seen that the poverty rate has been above the 1975 base year value of 16.8 percent since 2003. In recent years, the increases in the poverty rate have been rapid, rising from 16.9 percent in 2006 to 21.5 percent in 2010. The rate for 2010 is close to that of 1993, 22 percent, which also occurred after an economic recession, and is the peak year for this Key Indicator time series.

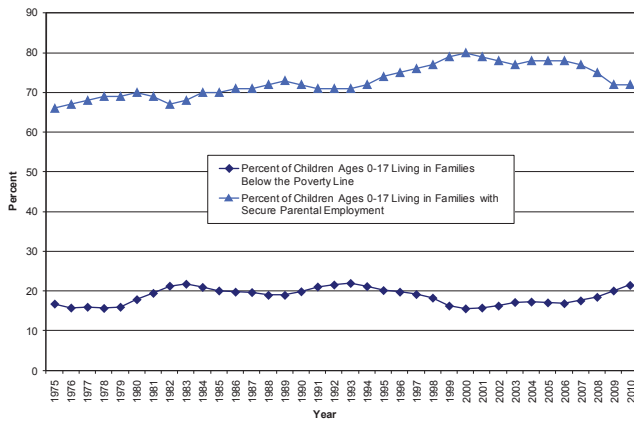


Figure 2a. Poverty and Secure Parental Employment Rates, 1975-2010

By comparison, the secure parental employment rate declined from 78 percent in 2006 to 72 percent in 2009 with no change projected for 2010, as compared to a base year value of 66 in 1975. In brief, even though families with children ages 18 or less in 2009 and 2010 are more likely than in 1975 to have at least one parent employed full-time, year-round (due largely to the increases in female labor force participation rates over the past four decades), they also are more likely to have annual incomes that do not exceed the official poverty line.

Figure 2b shows charts for trends since 1975 in median family incomes for families with children ages 18 or less in constant 2009 dollars both for

all such families, which is the Key Indicator in the Family Economic Well-Being Domain, and separately for female-headed and male-headed single-parent families. The overall median family income for families with children peaked in recent years at \$62,238 in 2007 and declined to \$58,233 in 2009 and \$57,313 in 2010 as compared to \$52,473 in the 1975 base year. While overall median family income is higher in 2010 even after the recent period of declines than in 1975, it also is clear that the recent declines have been substantial.

The charts for the single-headed families show that the largest declines have been among those with male heads, as the Great Recession's impact on employment in 2008-2009 was concentrated among the construction and manufacturing sectors of the economy in which males are more likely to be employed. The median income for male-headed families with children in 2010, \$36,290, also is well below the 1975 base year value of \$43,361. The declines for female-headed families were greater in 2010 than in 2008 or 2009 as the Great Recession and the slow economic recovery in 2009-2010 took its toll on the service sectors of the economy, particularly those in the public sector such as local school districts, wherein females are employed at higher rates. Compared to its base year value

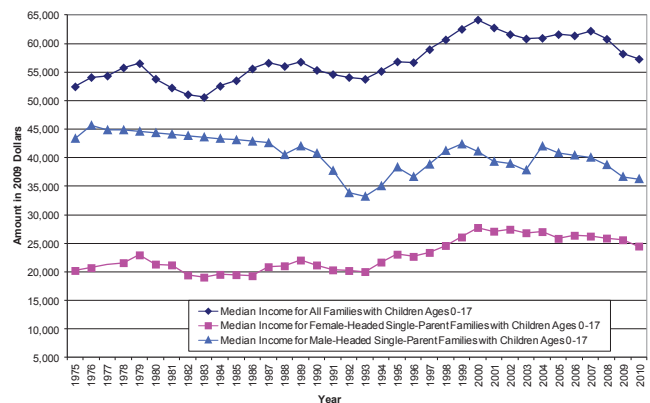


Figure 2b. Median Family Income in Families with Children in 2009 Dollars, 1975-2010

11 Data on the poverty rate are observed through 2010 and those for the secure parental employment rate are observed through 2009 and projected for 2010.

of \$20,211, the median income for female-headed families with children in 2010 stood at \$24,487.

Figure 2c shows charts of trends for the fourth Key Indicator of the Family Economic Well-Being Domain, the percentage of children living in families with some form of health insurance. This is an important indicator of children’s access to health care, and therefore of the material well-being of children, trends in which the economic domain seeks to measure. Data on this indicator series are available back to 1987 rather than the base year of 1975 for most of the CWI indicators. Figure 2c also shows the trends in two forms of health insurance coverage, private and public. Observed values for these series are available through 2010. The chart for the overall health insurance coverage series increased from 89 percent in 2007 to 90.1 percent in 2008 and 90 percent in 2009, due largely to an expansion of publicly supported health insurance programs for children—and these values are higher than the 87.1 percent of the 1987 base year.

In summary, these charts for the four Key Indicators of the Family Economic Well-Being Domain point to the strong negative impacts since 2006 of the poverty rate (a 28 percent increase from 16.9 percent in 2006 to 21.5 percent in 2010) and median family income (a 9 percent decline from 2006 to 2010). **If the economic recovery of 2010 and 2011 continues at its slow pace, it can be anticipated that this domain will continue to signal declines in the material well-being of America’s children.** Indeed, if the slow economic recovery continues and widens to further negatively impact public sector finances and programs, then there may soon be more evident impacts on the secure parental employment and health insurance coverage rates, which would drive this domain down even further as compared to its base year of some 36 years ago.

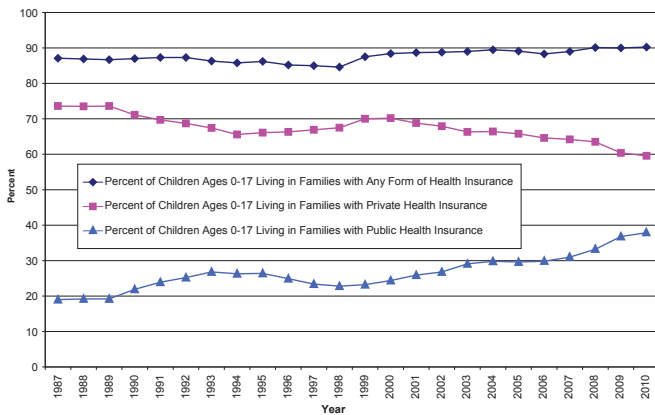


Figure 2c. Rates of Children Living in Families with Health Insurance, 1987-2010

Acknowledgements and Contact Information

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On the Web: More information about the CWI, its construction, and the scientific papers and publications on which it is based can be found on the World Wide Web:

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

and on <http://www.fcd-us.org/our-work/child-well-being-index-cwi>

Appendix A

Methods of Construction and Indicator List for the CWI

Methods of Construction

Annual time series data (from vital statistics and sample surveys) were assembled on 28 national-level indicators in seven quality-of-life domains: *Family Economic Well-Being, Safe/Risky Behavior, Social Relationships, Emotional/Spiritual Well-Being, Community Engagement, Educational Attainment, and Health*. These seven domains of quality of life have been well-established as recurring time after time in over three decades of empirical research in numerous subjective well-being studies. They also have been found, in one form or another, in studies of the well-being of children and youths.

To calculate the CWI, each of the time series of the indicators is indexed by a base year (1975). The base year value of the indicator is assigned a value of 100 and subsequent values of the indicator are taken as percentage changes in the CWI. 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 indexed Key Indicator time series then 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 and Youth Well-Being Index value for each year. The CWI Project uses an equal-weighting strategy for constructing its composite indices for two reasons. First, it is the simplest and most transparent strategy and can easily be replicated by others. Second, statistical research done in conjunction with the CWI Project has demonstrated that, in the absence of a clear ordering of the indicators of a composite index by their relative importance to the composite and on which there is a high degree of consensus in the population, an equal weighting strategy is privileged in the sense that it will achieve the greatest level of agreement among the members of the population. In statistical terminology, the equal-weighting method is a *minimax estimator*. See Hagerty Michael R. and Kenneth C. Land 2007 “Constructing Summary Indices of Quality of Life: A Model for the Effect of Heterogeneous Importance Weights,” *Sociological Methods and Research*, 35(May):455-496.

Since it builds on the subjective well-being empirical research base in its identification of domains of well-being to be measured and the assignment of indicators to the domains, the CWI can be viewed as a *well-being-evidence-based measure of trends in averages of the social conditions encountered by children and youth in the United States across recent decades*.

Appendix B

Sources of Data for the CWI

Child Poverty	US Bureau of the Census, March Population Survey, Current Population Reports, Consumer Income, Series P-60, Washington, D.C.: US Bureau of the Census. http://www.census.gov/hhes/www/poverty/histpov/hstpov3.xls 1975-present
Secure Parental Employment	US Bureau of the Census, March Current Population Survey, Washington, D.C.: US Bureau of the Census. Available from Forum on Child and Family Statistics, http://www.childstats.gov/americaschildren/tables/econ2.asp?popup=true 1980-present. Special tabulation from CPS CD 1975-1979.
Median Annual Income	US Bureau of the Census, March Current Population Survey, Historical Income Tables – Families, Washington, D.C.: US Bureau of the Census. http://www.census.gov/hhes/www/income/histinc/f10AR.xls 1975-present.
Health Insurance	US Bureau of the Census, Housing and Household Economic Statistics Division, unpublished tabulations from the March Current Populations Surveys, Washington, DC: US Bureau of the Census. Special tabulation by Federal Intra-agency Forum http://www.census.gov/hhes/www/hlthins/historic/hihistt3.xls 1987–present.
Infant Mortality	CDC, National Center for Health Statistics, National Vital Statistics System, Monthly Vital Statistics Report (v25-v46), National Vital Statistics Report (v47-v49): Hyattsville, MD: NCHS. http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_01.pdf 1975-present.
Low Birth Weight	CDC, National Center for Health Statistics, National Vital Statistics System, Report of Final Natality Statistics, Monthly Vital Statistics Reports (1975-1996), National Vital Statistics Reports (1997-present). Hyattsville, MD: NCHS. http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_16.pdf
Child and Adolescent Mortality	CDC, National Center for Health Statistics, National Vital Statistics System, Leading Causes of Death. http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_01.pdf 1975–present.
Subjective Health and Activity Limitations	CDC, National Center for Health Statistics, National Health Interview Survey, Hyattsville, MD: National Center for Health Statistics. www.cdc.gov/nchs Available from Forum on Child and Family Statistics, http://www.childstats.gov/ 1984–present.
Obesity	CDC, National Center for Health Statistics, Health United States, 2003 and National Health and Nutrition Examination Survey (NHANES), Hyattsville, MD. http://www.cdc.gov/obesity/data/index.html 1975-present.
Teen Births	CDC, National Center for Health Statistics, National Vital Statistics System. Monthly Vital Statistics Reports (1975-1996), National Vital Statistics Reports (1997-present). Hyattsville, MD: National Center for Health Statistics. http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_16.pdf
Crime Victimization	US Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey and FBI Supplementary Homicide Reports. Available from Sourcebook of Criminal Justice Statistics Online, http://www.albany.edu/sourcebook/pdf/t342008.pdf 1975-present.
Violent Crime Offenders	US Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey. http://www.ojp.usdoj.gov/bjs/ 1975-present.

Smoking, Drinking, and Drugs	The Monitoring the Future Study, Institute for Social Research, University of Michigan: Ann Arbor, MI. www.monitoringthefuture.org/data/data.html , 1975-present.
Reading and Mathematics Scores	US Department of Education Statistics, National Assessment of Education Progress (NAEP). http://nces.ed.gov/nationsreportcard 1975-present.
High School Completion	US Bureau of the Census, October Current Population Surveys, Washington, D.C.: US Bureau of the Census. http://www.census.gov/population/socdemo/school/TableA-5a.xls 1975-present.
Not Working and Not in School	US Bureau of Labor Statistics, Current Population Surveys, Washington, D.C.: US Bureau of the Census. Available from Forum on Child and Family Statistics, http://www.childstats.gov/ 1985-present. Special tabulation from CPS CD, 1975-1984.
Preschool Enrollment	US Department of Education, National Center for Education Statistics, Digest of Education Statistics and Bureau of the Census, Current Population Survey. http://www.nces.ed.gov/programs/digest/d08/tables/dt08_006.asp , 1980-present, interpolated years 1976-1979.
Bachelor's Degree	US Department of Education, National Center for Education Statistics, Condition of Education http://nces.ed.gov/programs/coe/2009/section3/table-eda-1.asp , 1975-present.
Voting in Presidential Elections	US Bureau of the Census, Current Population Reports, Series P-20, Voting and Registration, Washington, D.C.: US Bureau of the Census http://www.census.gov/hhes/www/socdemo/voting/publications/p20/2008/tables.html 1975-present.
Single Parent Families	US Bureau of the Census, Current Population Reports, Marital Status and Living Arrangements, Annual Reports. http://www.census.gov/population/socdemo/hh-fam/cps2008/tabC3-all.xls 1975-present.
Residential Mobility	US Bureau of the Census, Series P-20, Geographic Mobility, Washington, D.C.: US Bureau of the Census. http://www.census.gov/population/socdemo/migration/cps2008/tab01-01.xls 1975-present.
Suicide	CDC, National Center for Health Statistics, National Vital Statistics System. http://www.cdc.gov/nchs/nvss/mortality_tables.htm 1975-present.
Church Attendance and Importance	The Monitoring the Future Study, Institute for Social Research, University of Michigan: Ann Arbor, MI. http://www.monitoringthefuture.org/ 1975-present.

Appendix C

Child and Youth Well-Being Index Values, 1975-2008, with Projections for 2009-2010

Year	CWI	Change in CWI
1975	100.00	NA
1976	100.75	0.75
1977	98.93	-1.82
1978	99.26	0.32
1979	99.97	0.71
1980	99.59	-0.37
1981	97.37	-2.23
1982	96.02	-1.35
1983	96.55	0.53
1984	96.43	-0.11
1985	93.92	-2.51
1986	95.14	1.22
1987	93.98	-1.15
1988	94.00	0.01
1989	94.52	0.52
1990	94.06	-0.46
1991	92.97	-1.09
1992	92.84	-0.13
1993	91.45	-1.40
1994	91.29	-0.16
1995	93.11	1.83
1996	93.74	0.63
1997	94.13	0.39
1998	96.74	2.61
1999	99.13	2.39
2000	100.83	1.70
2001	100.88	0.05
2002	102.00	1.12
2003	101.05	-0.96
2004	101.30	0.25
2005	102.35	1.05
2006	102.50	0.15
2007	102.49	-0.01
2008	103.42	0.94
2009*	102.70	-0.72
2010**	102.89	0.19

*As of release date, 6 Key Indicators were projected for 2009.

**As of release date, 18 Key Indicators were projected for 2010.

Appendix D

Long-Term Changes in the CWI Domains and Key Indicators

Figure 1a of Section II, the Annual Update, displayed the long-term (since 1975) pattern of changes in the CWI since the base year 1975. Here we describe in more detail the long-term changes in the CWI, each of its domains, and each of its Key Indicators.

Corresponding to Figure 1a of the Annual Update, Figure D-1 shows long-term changes in the seven Well-Being Domains of the CWI. In the following discussion, we describe the long-term changes through 2010.

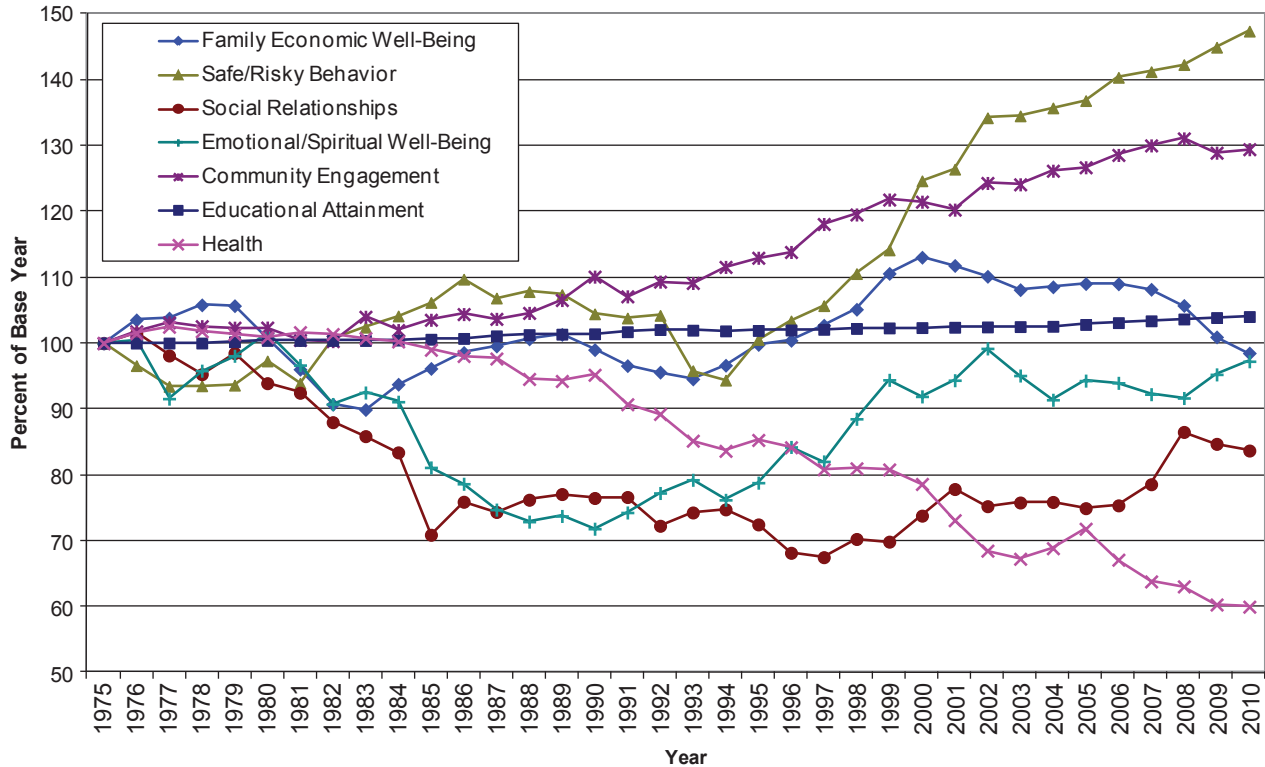


Figure D-1 Domain Specific Summary Indices, 1975-2010

Since 1975:

As noted in Section II of the Annual Update, the overall composite CWI is **up just under 3 percent** over its 1975 base year value of 100.

In addition, Figure D-1 shows that **three of the domains** of well-being **improved**:

- safe/risky behavior,
- educational attainment, and
- community engagement.

Four of the domains of well-being **deteriorated**:

- family economic well-being,
- health,
- social relationships, and
- emotional/spiritual well-being.

Twenty-one of the 28 specific Key Indicators improved:

- median family income,
- health insurance,
- secure parental employment,
- infant mortality,
- child and adolescent mortality,
- very good or excellent health reported by parents,
- activity limitation reported by parents,
- teenage births,
- smoking,
- drinking,
- violent crime victimization,
- violent crime offenders,
- high school completion,
- not working or in school,
- college degree,
- PreKindergarten enrollment,
- voting,
- reading,
- math,
- suicide and
- religion importance.

Seven of the 28 Key Indicators deteriorated:

- poverty,
- single parenthood,
- residential mobility,
- low birth weight,
- obesity,
- drug use, and
- weekly religious attendance.

Comparisons by Time-Period

An analysis of the CWI by time-period over the 35 years from 1975 to 2010 helps to clarify the pattern of trends.

Period	Starting Index Value	Ending Index Value	Change During Period
1975 – 1980	100.00	99.59	-0.41%
1980 – 1985	99.59	93.92	-5.69%
1985 – 1990	93.92	94.06	+0.15%
1990 – 1995	94.06	93.11	-1.01%
1995 – 2000	93.11	100.83	+8.29%
2000 – 2005	100.83	102.35	+1.52%
2005 – 2010	102.35	102.89	+0.54%

In brief:

- The CWI showed **relative stability** in overall child and youth well-being in the five years from 1975 to 1980 followed by a **sharp decline** from 1980 to 1985.
- This was followed by **further deterioration** through the mid-1990s.
- The last half of the 1990s saw a **strong recovery** of the CWI to, or above, its 1975 value of 100.
- In the most recent period from 2000 to 2010, the Index **improved slightly while exhibiting fluctuations up and down**. The CWI went down in 2003 after 9/11 and the 2001-2002 recession, and up slightly from 2004 to 2008.

Statistical Significance of Changes in the CWI

In studying the year-to-year or period-to-period changes in the CWI time series, questions of statistical significance sometimes are raised. That is, given that the CWI has changed by, say, xx percent, from one year to another or from one time period to another, the question is: Is the xx change statistically significant? One approach to addressing this question is to study the time series fluctuations in the CWI from year-to-year; estimate a standard deviation or error of fluctuations in the time series, and then assess the size of a year-to-year or period-to-period change relative to the estimated standard deviation of the series. To operationalize this procedure, the expected value of the CWI for each year must be calculated. These

values then can be subtracted from the observed values, squared, and divided by the length of the time series to estimate the variance. The square root of the estimated variance then can be taken as an estimate of the standard deviation of the CWI series taken as a time series.

We have applied this method, using a three-point moving average of the CWI values centered on each year t as the expected value of the CWI for year t. The resulting estimated standard deviation of the CWI time series compared to expected values based on three-point centered moving averages is 0.51. This implies that a year-to-year or period-to-period change in the CWI that is smaller than about 1.02 is not a statistically significant change.



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