

**Measuring Social Disparities:
A Modified Approach to the Index of Child Well-Being (CWI) for
Race-Ethnic, Immigrant-Generation, and Socioeconomic Groups with
New Results for Whites, Blacks, and Hispanics***

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Introduction

The FCD Index of Child Well-Being (CWI) provides a national composite measure for monitoring change in the quality of life of America's children by indicating the average amount of change that children experience between a baseline year and a subsequent year (Land, Lamb, and Mustillo, 2001; Land, 2005a, 2005b). The method also has been implemented for Whites, Blacks, and Hispanics to assess trends for each group individually (Land, Lamb, and Mustillo, 2001). To assess disparities across groups, the gaps separating Whites from other race-ethnic groups have been calculated as a percentage of the baseline disparity in 1985 set to a value of 100 (Land, Lamb, and Mustillo, 2001; Lamb, Land, Meadows, Traylor, 2005), but this measure cannot show whether disparities have been eliminated, or how much change would be required to eliminate disparities. To overcome this limitation, research presented here offers a modified methodology that measures both levels and disparities in 1985, and from this starting point measures subsequent trends in levels and disparities. Future research will explore disparities among children distinguished by immigrant and socioeconomic circumstances of their families.

Methodology for the Current CWI

The current CWI is calculated with data for 28 key national indicators of child well-being that measure seven quality of life domains. The numerical value of the index for a given year can be calculated in four steps (Land, Lamb, and Mustillo, 2001; Land, 2005a, 2005b). First, assign a value of 100 to each indicator for the baseline year. Second, for a subsequent year calculate the percentage change from the baseline year for

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that indicator. Thus, if the numerical value of an indicator increases by 4 percent between the baseline and a subsequent year, the trend is reflected by an increase in the value of the indicator from 100 in the baseline year to 104 in the subsequent year. Third, for a specific year equally weight the values for the indicators in a domain (calculate the arithmetic mean) to obtain an average change value for the domain as a whole. The seven domains are (1) family economic well-being, (2) health, (3) safety/behavioral concerns, (4) educational attainments, (5) community connectedness, (6) social relationships, and (7) emotional/spiritual well-being. Fourth, for a specific year equally weight the values of each domain (calculated as the arithmetic mean of the values for the seven domains) to obtain the overall CWI value for the year. Thus, the CWI is an evidence-based measure indicating the average amount of change that was experienced by children across the seven domains between a baseline year and a subsequent year.

A corresponding set of race-ethnic specific CWIs can be calculated for Whites, Blacks, and Hispanics by applying the same procedures to each group separately (Land, Lamb, and Mustillo, 2001; Land, 2005a, 2005b). The results measure the average amount of change experienced by each group, using its own starting point as the baseline. Because the baseline for each group is set to a value of 100, this method measures trends during subsequent years for each group, but does not measure either the disparities among groups that existed at the start of the period or whether disparities grow or diminish in subsequent periods.

To assess disparities, for each indicator series the gaps (differences) between Whites and each of the other race-ethnic groups are calculated for each year beginning in 1985. Then the disparity for each year after 1985 is calculated as a percentage of the disparity in 1985, where the baseline 1985 disparity is set to a value of 100. Results are averaged across indicators within domains, and then domains are averaged to obtain an overall disparities measure (Land, Lamb, and Mustillo, 2001). These measures show whether disparities are increasing or decreasing compared to 1985. Because disparities in a given year are measured in comparison to a standard disparity valued at 100, the values calculated for subsequent years cannot show, for example, whether disparities have been eliminated, or how much change would be required to eliminate disparities. Instead, the measure focuses attention on whether, and to what extent, disparities are greater or smaller than in 1985.

Modified Methodology for Specific Race-Ethnic Groups

This paper presents and implements an alternative approach for specific race-ethnic groups. A value of 100 is assigned to each indicator for the baseline year for the total population. Then for each specific group, the percent difference between that group and the total population is calculated for the baseline year. Thus, if the value for Whites on an indicator were 5 percent higher than for the population as a whole, Whites would be assigned a value of 105 for the baseline year. Similarly, if the value for Blacks on an indicator were 20 percent lower than for the population as a whole, Blacks would be assigned a value of 80 for the baseline year. (See Appendix 1 for graphs and tables

presenting these results, and Appendix 2 for the indicator values used in developing these results).

Using these results as the starting point, the subsequent steps in the current procedure are followed to calculate a modified CWI for each specific group. First, domain-specific averages for Whites are calculated as the average of the values of the indicators within each domain for Whites. Second, an overall average is calculated for Whites, by averaging the values of seven domains for Whites. Similarly, domain-specific averages for Blacks are calculated as the average of the values of the indicators within each domain for Blacks, and the overall average for Blacks is calculated as the average of the values for the domains. Thus, differences in values of the modified CWI across race-ethnic groups in the baseline year reflect the average disparities across groups in the baseline year.

Calculations for each subsequent year continue to use the value of 100 for the baseline year for the total population as the starting point. Thus, if the value for Whites on an indicator were 7 percent higher in a subsequent year than for the population as a whole in the baseline year, then Whites would be assigned a value of 107 for the subsequent year for that indicator. Similarly, if the value for Blacks in a subsequent year on an indicator were 18 percent lower than for the population as a whole in the baseline year, then Blacks would be assigned a value of 82 for the subsequent year for that indicator. Then for each group for the subsequent year the values of indicators are averaged to obtain domain specific values for the group, and the domain specific values are averaged to obtain an overall average (modified CWI) value for the group for the specified subsequent year. The procedure also is used to calculate group specific results for Hispanics.

Thus, the value for a group specific CWI for any subsequent year using this method reflects the extent to which that group differs on average in the quality of life from the total population in the baseline year, that is, the total population in the baseline year serves as a benchmark for measuring disparities. Furthermore, differences across groups in a specific year reflect the extent to which these groups differ from each other in that year, using the indicator values for the total population in the baseline year as the starting point. Two groups will, therefore, have CWI values that are equal in a given year, only if they are experiencing the same average quality of life. However, their CWI values will differ as long as there is a disparity between the groups in their average quality of life.

To calculate the magnitude of the overall disparity between Whites and Blacks (or Hispanics), the value of the modified CWI in a given year for Whites is subtracted from the corresponding value for Blacks (or Hispanics). Because higher CWI values reflect a higher quality of life, a negative value for the disparity measure as calculated here indicates that Blacks (or Hispanics) have a lower quality of life overall than Whites, while a positive value for the disparity measure reflects a higher quality of life for Blacks (or Hispanics). Similar calculations are performed to measure disparities in each of the

seven quality of life domains, and to measure disparities in particular well-being indicators.

Results from this new approach contrast with the current approach developed by Land, Lamb, and Mustillo (2001). The current approach leads to identical CWI values for two groups in a given year if these groups have experienced similar changes since the baseline year, even if disparities across groups remain large. But the new approach leads to identical CWI values for two groups in a given year only if the groups have identical levels of well-being. Furthermore, the new approach produces to a negative disparity value if the well-being of the specific group falls below the level for Whites in a given year, while the new approach leads to a positive disparity value if the well-being of the specific groups exceeds the level for Whites in a given year.

The underlying data used to calculate modified CWIs in this paper for specific race-ethnic groups using this new methodology are the same as the data used for the current methodology with two exceptions, the indicators for violent offending and violent crime victimization. Land and his colleagues used published data for violent crime offending, but data by race-ethnicity have not been published. For this paper, race-ethnic specific data were obtained from Callie Rennison of the Department of Criminology and Criminal Justice at the University of Missouri, St. Louis. Prior to joining the faculty at the University of Missouri in St. Louis, Rennison served as a Statistician in the Victimization Statistics Unit of the Department of Justice's Bureau of Justice Statistics in Washington, D.C. for five years. From 2004 to 2006, she was a Post-Doctoral Fellow with the National Consortium on Violence Research (NCOVR). Rennison calculated the offender estimates used here from the National Crime Victimization Survey (NCVS). To assure consistency across time series, this paper also uses NCVS estimates provided by Rennison for violent crime victimization.

Land and his colleagues have compiled their data beginning with 1985 and have generously shared the associated excel spread sheets to provide the foundation for implementing the modified methodology. We have updated the results to 2004 from the same sources wherever possible. In order to extend the results presented here to explore disparities among children distinguished by immigrant and socioeconomic circumstances, the authors will in a future paper return to the underlying data sets to extract group specific data for immigrant and socioeconomic groups. In the present report paper, years with missing data are filled for a specific group with the value for the closest preceding year with available data, or at the beginning of a time series with the value for the first year with data available.

Selected Results Using the Modified Methodology

We present below two sets of selected results to illustrate conclusions that can be drawn using the modified methodology. The first set focuses on changes in the magnitude of race-ethnic disparities through time and differences experienced by Blacks and Hispanics. The second set focuses on one group at a time (Black-White disparities, then Hispanic-White disparities), with attention to the domains that account for changes

in overall disparities for a specific group, and the indicators that account for changes in disparities within domains for that group.

Race-Ethnic Disparities: Magnitudes and Trends

Figure 1 presents the CWI for the total population and, using the new methodology, separately for Whites, Blacks, and Hispanics. The overall index increased by 10 points (from 100 to 110) between 1985 and 2004, with most of the increase occurring after 1997. Disparities in 1985 were substantial, with CWI values ranging from 107 for Whites to a much lower 87 for Hispanics, to only 78 for Blacks.

Race-Ethnic Trends in Overall Well-Being. The pattern of change for Whites is, not surprisingly, similar to the population as a whole, insofar as a majority of children are White. Index values are, however, notably higher for Whites than for the total population, and the increase for Whites between 1985 and 2004 was 8 points instead of 10, and the most of the increase occurred after 1997. Index values for Blacks are much lower. Blacks, however, experienced little change between 1985-1990 and then a decline until 1993, followed by a 21 point increase between 1993-2004. The index declined slightly for Hispanics between 1989 and 1993, from 87 to 83, but subsequently increased by 17 points between 1993-2004, nearly as much as the increase experienced by Blacks during these years. Figure 1 also shows that the gap between Blacks and Hispanics narrowed somewhat from 7-11 points between 1985-1995 to 3-6 points between 1995-2003, and 7 points in 2004.

Race-Ethnic Disparities across Time. The overall disparities between Whites and the other groups are presented in Figure 2. In 1985, Hispanics had an index value 20 points below Whites, calculated as the difference between 107.0 for Whites versus 86.7 for Hispanics. The Black-White gap was 9 points larger at 29, calculated as the difference between 107.0 versus 78.1 (Figure 1). These disparities changed little and then expanded somewhat between 1989-1993/1994, and then narrowed greatly as of 2004. Between 1994-2004, disparities compared to Whites have narrowed from 24 to 14 for Hispanics and between 1993-2004 from 35 to 21 for Blacks, that is, by about fourth-tenths. Over the course of this nineteen year period beginning in 1985, then, the Hispanic-White gap narrowed by about one-third, and the Black-White gap narrowed by about one-fourth.

Extrapolating Race-Ethnic Disparities into the Future. Although it is not possible to know whether these trends will continue, extrapolations of such trends are of interest. If these two-decade trends (1985-2004) were to continue, Hispanics would converge on Whites in overall quality of life in another 43 years, that is, around 2047, while Blacks would not converge on Whites until more than a decade later in about 54 years or around 2058. On the other hand, if more recent trends were to continue from 1994 for Hispanics and from 1993 for Blacks, these groups might converge on Whites in 14 years and 18 years, respectively. Of course, as Figures 1 and 2 illustrate, such trends can be reversed. Nevertheless, one way to gauge future progress might be to use these projected values as benchmarks against which to make judgments about whether progress is slowing or

speeding compared to the past decade or two. In making such assessment it will be particularly important to distinguish Hispanics by whether they live in immigrant or native-born families because these groups are quite different along many social and economic dimensions (Hernandez and Darke, 1999; Hernandez, 2004; Hernandez, Denton, and Macartney, 2006a, 2006b). The next stage of our research will involve such analyses.

Equal-Weighted-Indicators versus Domain-Weighted Results. Before turning to an analysis of the components of change in these disparities, it is interesting to ask whether the results would differ greatly if each indicator comprising the index were to be weighted equally, instead of giving equal weight to indicators within domains, and then equal weight to domains. Figure 3 presents another type of gap calculation subtracting equal-weighted-indicators results from domain-weighted results for three race-ethnic groups. A negative value indicates that the equal-weighted-indicators value is lower than the domain weighted value.

The overall results show that the differences between these measures have been small, though increasingly slightly for Blacks and Hispanics over time. For Whites the difference was no more than 1 point in every year between 1985-2004. For Blacks and Hispanics the differences usually have fluctuated in the range of 0-2 points. But there has been a small but noticeable trend for the differences to increase, especially since about 1993. By 2004 the differences had expanded to 2.7 points for Blacks and 1.9 points for Hispanics. The differences for these two groups have, however, been in the opposite directions for every year since 1990. For Blacks the equal-weighted-indicators approach yields in 2004 a result nearly 3 points less than domain-weighted approach, while the corresponding result for Hispanics is about 2 points higher. Thus, an equal-weighted-indicators approach yields in 2004 a Black-White disparity about 3 points greater than domain-weighted difference of 21 points, while the equal-weighted-indicators approach yields a Hispanic-White disparity about 2 points smaller than domain-weighted difference of 14 points. Empirically, then, the use of an equal-weighted-indicators approach would have only a small effect on Black and Hispanic disparities, compared to Whites, and on trends in overall disparities after 1985.

Race-Ethnic Disparities in Family Economic Well-Being. Figure 4 shows that Black-White disparities in family economic well-being were quite large at 51-55 points between 1985 and 1994, and then fell to 37-41 points after 1999. If the 1985-2004 trend were to continue, convergence would occur in another 51 years, while a continuation of the 1993-2004 would lead to convergence in 23 years. For Hispanics, the disparities varied between 43-49 points between 1985-1998, but have since narrowed somewhat to 32-37 points between 2000-2004. If the trend between 1985-2004 continued convergence would occur in 44 years, while continuation of the 1998-2004 trend would require 15 years. The disparities in family economic well-being experienced by Hispanics compared to Whites were smaller than for Blacks in every year between 1985-2004 except 1995.

Race-Ethnic Disparities in Health. Results for the health domain are quite different (Figure 5). The Black-White disparity is larger than for the economic domain, in the range of 56-63 points between 1985-1996, and somewhat smaller at 47-53 points between 1997-2004, while Hispanics were much more similar to Whites, and the Hispanic disadvantage narrows to 6-10 points after 1996. Although results from any one year may be a statistical anomaly, the Hispanic-White disparity may have nearly disappeared as of 2004.

Race-Ethnic Disparities in Safety/Behavioral Concern. In the safety/behavioral concerns domain, we include not only the teenage birth rate, violent crime victimization, and rates of cigarette smoking, alcohol drinking, and illicit drug use, but also the violent crime offender rate. Blacks had index values lower than Whites by 29-31 points between 1985-1992, but then the gap narrowed rapidly, and between 2001-2004 the disparity had reversed, with a 5 point advantage for Blacks in 2004. Hispanics experienced a similar trend. After a period of fluctuations with Hispanics experiencing lower index values than Whites between 1985-2002, the direction of the disparity reversed and Hispanics experienced slightly high index values than Whites in 2003 and 2004. Thus, in the family economic and health domains, and especially in the safety/behavioral concerns domain, Blacks and Hispanics experienced noteworthy improvement compared to Whites, especially after the early 1990s.

Race-Ethnic Disparities in Educational Attainments. The pattern for the educational attainments domain is quite different from the preceding domains (Figure 7). The disparity in the disadvantage of Blacks and Hispanics, compared to Whites, remained in the narrow range of 9-12 points through the past two decades, with no apparent trends.

Race-Ethnic Disparities in Community Connectedness. Similarly, there has been no clear trend in the Hispanic-White disparity in community connectedness, with Hispanics experiencing a large disadvantage of 55-65 points in all years except two (1985 and 2004), and the Hispanic-White disparity was much larger than the Black-White disparity (Figure 8). Although the Black-White disparity in community connectedness narrowed substantially from about 27-32 points in most years between 1985-2003 to 21 points in 2004, it remains to be seen whether this one-year change is a statistical anomaly.

Race-Ethnic Disparities in Social Relationships. The pattern of disparities for Blacks and Hispanics is the reverse for the social relationships domain. The Hispanic-White gap has been substantially smaller, but still quite large at 27-40 points in most years, with perhaps a slight narrowing trend after the mid 1990s. Disparities in the social relationships domain have been much larger for Blacks, in the range 74-96 points, and the disparities have expanded from 74-78 points in the late 1980s to 82-93 points during the 1990s, and 96 points in 2004 (Figure 9).

Race-Ethnic Disparities in Emotional/Spiritual Well-Being. Finally, the emotional/spiritual well-being domain is the single domain in which the disparities are to the advantage of both Blacks and Hispanics compared to Whites (Figure 10). The well-

being of Blacks is higher than other groups in this domain, albeit with substantial variability, and with no clear trend through time. The Hispanic-White disparity also has fluctuated through time with little apparent trend.

Trends in the Black-White CWI Disparity: Domains and Indicators Accounting for Change

Domains Accounting for Black-White Disparity Change. A second approach to interpreting the disparity indicators is to focus on one group at a time compared to Whites, with attention to domains as components of change in overall disparity, and to specific indicators as components of change in particular domains. The Black-White disparity narrowed from 27-35 points between 1985-1996, to 20-23 points between 2000-2004, or from 29 in 1985 to 21 in 2004 (Figure 11). Four domains account for most of this 8 point reduction between 1985-2004 in the gap separating the overall CWI values for Blacks and Whites. The four domains with the substantial improvement for Blacks compared to Whites were the safety/behavioral concerns domain (25 points), the family economic well-being domain (14 points) the community connectedness domain (11 points), and the health domain (7 points). The reduction in overall disparities would have been greater had the social relationships disparity not increased by 18 points. Each of these changes can, in turn, be accounted for by changes in component indicators of domains.

Safety-Behavioral Concerns Disparity: Indicators Accounting for Change. Most of the improvement for Blacks compared to Whites in the safety/behavioral concerns domain between 1985-2004, leading to a Black advantage in this domain, is accounted for changes in two indicators. Most importantly, the disparity in violent crime offenders narrowed from -150 to near parity (-10). The disparity in the teen birth rate also narrowed greatly, by 69 points, from a value of -152 to -82 (Figure 14). Blacks experience a disparity advantage compared to Whites for three other indicators in the safety/behavioral concerns domain, and changes in these indicator disparities were much smaller and in countervailing directions. The 13 point expansion in the advantage in cigarette smoking was counterbalanced by the 13 point narrowing of the advantage in alcohol consumption. The 25 point advantage for Blacks in drug use in 1985 expanded by 5 points to 30 points in 2004. The Black disadvantage in crime victimization was essentially the same 2004 as it had been in the early 1990s. Thus, by 2004 the Black-White disparity to the disadvantage of Blacks unchanged for violent crime victimization indicators, reduced by nearly one-half for the teen birth rate, and nearly eliminated for the violent crime offender indicator, while Blacks continued to experience substantial advantages with regard to cigarette, alcohol, and drug use. Overall the Black disadvantage of 31 points in the safety/behavioral domain had shift to a 5 point advantage by 2004.

Family Economic Well-Being Disparity: Indicators Accounting for Change. Family economic well-being is the second domain with substantial Black-White convergence, at 14 points (Figure 12). Two of the four indicators in this domain account for all of the disparity reduction, since there were tiny 1-2 point changes in the disparity

in median family income and health insurance coverage between 1985 and 2004, and little variation between these years. The poverty disparity closed by 44 points between 1985 and 2004, and if the year with the largest gap of 127 points (1991) is used as a starting point, the gap closed by 58 points. The largest reduction in the poverty disparity occurred between 1991-1997, at 40 points, and then following a 4 point increase, a reduction half as large of 22 points occurred between 1998-2004. The disparity indicator of secure parental employment also narrowed between 1985-2004, but by a much smaller 13 points. This change occurred after 1993, but with substantial intervening changes. Overall, in the family economic well-being domain, the Black-White disadvantage narrowed by three-tenths, because the poverty gap narrowed by about two-fifths from 1985-2004, and the gap in secure parental employment narrowed by about three-tenths.

Community Connectedness Disparity: Indicators Accounting for Change.

Community connectedness is the third domain with substantial Black-White convergence, at 11 points (Figure 16). The 37 point convergence in the component indicator for idle at ages 16-19 is quite large, but about one-half of this change occurred in the single year between 2003-2004 as the disparity narrowed from 54 to 36 points. Preliminary data indicate that much of this apparent one-year change was not sustained in 2005, and it is possible that there will be a return to a level closer to the 1985-2003 average of 61 points. The 19 point improvement in the preschool indicator for Blacks compared to Whites reflects a longer time period beginning in 1997 when Blacks, in most years, were advantaged compared to Whites for the preschool indicator, following perhaps a decade or more in which the disadvantage for Blacks was often about 20 points or more. Perhaps expansion of Head Start or other public programs was instrumental in closing the preschool gap for young Black children. The voting indicator measures a 7 point improvement compared to Whites since 1985, following a period when the gap expanded enormously to 12-22 points in early 1990s. Finally, the disparity in high school graduation varied somewhat through time, but was 8-10 points in both 1983 and 2004.

Health Disparity: Indicators Accounting for Change. Blacks experienced a disadvantage compared to Whites in most indicators of health disparity in most years, but also an improvement compared to Whites in 5 of 6 indicators, at 22 points for child mortality, 17 points for infant mortality, 7 points for low birth weight, and 5 points for subjective health status (Figure 13). The disparities in the two infant indicators began to close after 1989, while child mortality widened until the mid 1990s and then narrowed substantially overall by 2004, and subjective health status narrowed fluctuated slowly across the period. Acting to partially counterbalance these trends, the disparity in obesity expanded by 20 points during the 1990s, although the disparity may have returned by 2004 to the level of 1985. The activity limitations disparity often fluctuated enormously from year to year and appears to have expanded from 16 to 29 points between 1985 and 2004.

Social Relationships Disparity: Indicators Accounting for Change. Instead of narrowing, the disparity in the social relationships domain increased by a large 18 points (Figure 17). The gap in the indicator for living in a single parent home increased by 7 points, although the range of fluctuation was 141-162 in earlier years. Thus most of the

increasing disparity in social relationships is accounted for by the large, 30 point expansion in the residential mobility indicator.

Educational Attainments Disparity: Indicators Accounting for Change. In one of the two remaining domains where little or no disparity change occurred, educational attainments, changes in disparities for reading and math indicators were small to negligible, at 0-2 points, although it is interesting to note that the disparity in reading at age 9 has been greater than for other educational attainment indicators throughout the 1985-2004 period (Figure 15).

Emotional/Spiritual Well-Being Disparity: Indicators Accounting for Change. In contrast to the situation in the educational attainments domain, the lack of change (small 2 point increase) in the emotional/spiritual well-being domain was the result of countervailing trends in the three component indicators, each of which reflected a Black advantage compared to Whites in every year between 1985-2004 (Figure 18). The 28 point increase in disparity for the religious attendance indicator was counterbalanced by the 14 point reduction in the disparity for suicide at ages 15-19 and the 7 point reduction in the disparity indicator that religion is very important. A much larger reduction in the suicide disparity occurred between 1985 and the late 1990s, only to be followed by a substantial expansion, while the current rather large disparity in the religious attendance indicator is the latest in a series of substantial changes.

Overall, Black children were advantaged compared to White children, from 1985-2004, not only because they were more likely to attend religious services weekly and report religion as being very important, but also because of their lower suicide rates.

Trends in the Hispanic-White CWI Disparity: Domains and Indicators Accounting for Change

Domains Accounting for Hispanic-White Disparity Change. For Hispanics the 6 point reduction in overall well-being disparity compared to Whites is slightly smaller than the 8 point reduction experienced by Blacks, and is also accounted for mainly by four (Figures 19 and 11). Three of these domains are the same for both Hispanics and Blacks: family economic well-being, health, and safety/behavioral concerns. The narrowing disparity in community connectedness and health for Blacks is replaced by a narrowing disparity in social relationships for Hispanics. The magnitude of narrowing disparity for Hispanics in these four domains range from 9 to 14 points.

Safety-Behavioral Concerns Disparity: Indicators Accounting for Change. The 14 point narrowing of the Hispanic safety-behavioral concerns domain disparity compared to Whites is much smaller than the 25 point narrowing for Blacks (Figure 22 and 14). As is true for Blacks, Hispanics are advantaged compared to Whites regarding the three behavioral indicators in this domain, rates of cigarette smoking, alcohol drinking, and drug use, and these changes tended to counterbalance each other. The increased gap in cigarette smoking of 8 points was nearly equal to the reduced gap of 9 points in alcohol consumption. Meanwhile the drug use advantage of Hispanics

compared to Whites expanded by 9 points, twice the size of the corresponding change for Blacks.

Two indicators account for most of the reduction in the Hispanic-White disparity in the safety-behavioral concerns domain, the teen birth rate and the crime victimization rate. The Hispanic disadvantage in the teen birth rate narrowed by a large 14 points, although this was much less than the 69 point narrowing for Blacks. By 2004 the Hispanic-White disparity of 120 points was half again larger than the Black-White disparity of 82 points. Improvement in the crime victimization rate for Hispanics compared to Whites accounted for the largest portion of the reduction in the Hispanic-White disparity in this domain, because the Hispanic disadvantage of 48 points in 1992 was reversed to a Hispanic advantage of 18 points in 2004, for a comparative Hispanic improvement of 66 points. The Hispanic advantage compared to Whites in violent crime offending narrowed slightly between 1985 and 2004 from 20 to 16 points.

Family Economic Well-Being Disparity: Indicators Accounting for Change. The Hispanic-White disparity in family economic well-being narrowed by a similar 13 points between 1985-2004 (Figure 20). Most of this convergence can be accounted for by the 38 point reduction in the poverty disparity. Insofar as the poverty disparity increased by 9 points between 1985-1994, all of the disparity narrowing occurred between 1994-2004. The health insurance coverage disparity narrowed by a much smaller 7 points. Surprisingly, employment and income disparities moved in opposite directions, and tended to counterbalance each other. The employment disparity narrowed by 19 points mainly after 1994, while the family income disparity expanded by 9 points mainly before 1994. The opposing directions of changes in the employment and income disparities may be associated with the increasing proportion of Hispanic children living with immigrant parents, a possibility to be explored in the next phase of this research. Overall, in the family economic well-being domain, the Hispanic-White disadvantage narrowed by three-tenths, because the poverty gap narrowed by about two-fifths from 1985-2004, and the gap in secure parental employment narrowed by about six-tenths, and the gap in health insurance coverage narrowed by about one-third.

Health Disparity: Indicators Accounting for Change. The Hispanic disadvantage of 12 points in the health domain, compared to Whites, as of 1985 was essentially eliminated by 2004 (Figure 21). The indicator contributing most of this improvement was the increase in the Hispanic advantage in activity limitations from 6 points in 1985 to 55 points in 2004. Two indicators also contributing substantially to overall reduction in the Hispanic-White disparity in the Health domain were the narrowing of the obesity disparity by 17 points, declining from 69 to 52 points, and the reversal 15 point of the low birth weight disparity from a 9 point Hispanic disadvantage to a 6 point advantage. The 8 point Hispanic disadvantage in the child mortality rate was also nearly eliminated by 2004. These improvements for Hispanics compared to Whites may also be associated with the increasing proportion of Hispanic children living with immigrant parents.

Social Relationships Disparity: Indicators Accounting for Change. The Hispanic disadvantage in the social relationships domain narrowed by 9 points, partly because of

the 12 point narrowing of the disparity in the indicator living with a single parent, and partly because of the 6 point narrowing of the disparity in residential mobility (Figure 25).

Community Connectedness Disparity: Indicators Accounting for Change. The disparity between Hispanics and Whites in the community connectedness domain expanded by a small 3 points between 1985-2004, compared to the narrowing of 11 points for Blacks (Figures 24 and 16). Both Hispanics and Blacks experienced large reductions in the preschool indicator disparity gap, of 17 and 18 points, respectively, although the Hispanic change, a narrowing of the Hispanic-White gap by one-third, occurred only within the past 2 years and may not be sustained. But by 2004 the Hispanic disadvantage in the preschool indicator remained large at 30 points, while the Black disparity compared to Whites had been eliminated. Acting to more than counterbalance this change, the Hispanic disadvantage in BA Degree at ages 25-29 indicator expanded by 30 points, or by one-half. The disparity in other indicators of community connectedness for Hispanics changed by no more than 6 points.

Educational Attainments Disparity: Indicators Accounting for Change. Hispanics, like Blacks, experienced little overall disparity change in the educational attainments domain. The indicator exhibiting the greatest disparity for both groups was reading at age 9, although this disparity narrowed by 4 points for Hispanics, compared to 2 points for Blacks (Figures 23 and 15).

Emotional/Spiritual Well-Being Disparity: Indicators Accounting for Change. Also similar to Blacks, Hispanics experienced little change in the magnitude of the disparity, compared to Whites, in the emotional/spiritual well-being domain (Figures 26 and 18). For Hispanics the disparity in religious attendance shifted from a 6 point disadvantage to a 5 point advantage, and the Hispanic advantage in the religious importance indicator expanded by 17 points. But these large changes were more than counterbalanced by the 26 point decline in Hispanic advantage in the suicide rate. Overall, Hispanic children were advantaged compared to White children, from 1985-2004, not only because they were usually more likely to attend religious services weekly and report religion as being very important, but also because of their lower suicide rates.

Conclusions

Results using the new methodology for calculating CWI values that reflect differences in both trends and disparities for race-ethnic groups indicate the following. According to CWI values for specific groups, the quality of life increased, overall, for Whites, Blacks, and Hispanics between 1985-2004, although only Blacks and Hispanics experienced noteworthy sustained improvement during the earlier years between 1985-1997. In 1985 overall disparities were quite large, but by 2004 the Black-White disparity had narrowed by one-fourth and the Hispanic-White disparity had narrowed by one-third. Nevertheless, race-ethnic disparities continued to be large in 2004, at 21 points for Blacks and 14 points for Hispanics. If past trends were to continue, the most optimistic extrapolation is that Blacks and Hispanics would reach parity with Whites in as little as

14-18 years, but based on longer-term trends, convergence would require more than five decades for both Blacks (54 years) and more than four decades for Hispanics (43 years).

Child well-being would be improved greatly if all disparities between White, Blacks, and Hispanics were eliminated, but further progress would be both desirable and possible. Two best practice summary indexes have been developed using national and international indicator values as a yardstick (Land, Lamb, and Mustillo, 2001). The national best practice index uses as the standard the best value for each well-being indicator ever recorded historically in the United States. The international best practice index uses as the standard the best value observed internationally in any other country for which there are comparable indicators and for which performance of the United States is inferior.

Using the CWI value of 100 in 1985 as the baseline, the numerical value for the national best practice index is 129, while the numerical value for the international best practice index is 144. These index values are substantially higher than the value of 115 for Whites in 2004. Thus, even if Black children and Hispanic children reach parity with the current level of well-being among White children, the overall level of well-being of all three groups would be have a considerable distance to go to meet the best practice level reflecting the historical experience of U.S. children, and even more so the international best practice level.

Of course, trends can reverse, and it will be important to continue to monitor changing disparities during the coming years. In addition, these overall trends reflect changes in disparities for seven component domains of well-being that are not all changing, or not changing in the same direction.

Three domains contributed to the narrowing disparity for both Blacks and Hispanics, compared to Whites, the safety/behavioral concerns domain, the health domain, and the family economic well-being domain. The disparities compared to Whites narrowed in the safety/behavioral concerns domain by 25 points for Blacks and 13 points for Hispanics. The indicators mainly accounting for these changes for Blacks were the violent criminal offending and teen birth rate indicator, with the Black-White disadvantage narrowing by 140 points and 69 points, respectively. For Hispanics the largest change in this domain was a the shift from a 48 point disadvantage to a 18 point advantage in violent victimization, followed by a 14 point narrowing of the disparity in teen birth rates. Sustained changes in the teen birth indicator began after 1991 for Blacks and 1994 for Hispanics. For both groups, the changing disparities compared to Whites in cigarette and alcohol consumption counterbalanced each other, although both Blacks and Hispanics continued to be advantaged compared to Whites in these indicators. Both groups also increased their advantage in the drug use indicator, by 5 points for Blacks and 9 points for Hispanics.

Both groups also experienced reduced disparities in the family economic well-being domain, at 14 points. Most of the convergence is accounted for by reduction in poverty indicator disparities of 44 points for Blacks and 38 points for Hispanics. Both

groups also experienced a convergence in the secure parental employment indicator, 13 points for Blacks and 19 points for Hispanics, although Hispanics experienced a counterbalancing increased disparity of 9 points in the median family income indicator, and a smaller 7 point convergence in health insurance coverage.

The health domain is the third which contributed to the overall narrowing of the Black-White and Hispanic-White disparities. The Health disparity narrowed by 7 points for Blacks, because of a substantial narrowing for child mortality (22 points) and infant mortality (17 points), and smaller reductions for low birth weight (7 points) and subjective health status (5 points). By contrast, the obesity disparity changed little (2 points), while the activity limitations disparity expanded by 14 points. For Hispanics, the Health disparity compared to Whites narrowed by a larger 12 points, mainly because of the 49 point expansion in the size of the activity limitation disparity, which is to the advantage of Hispanics compared to Whites, combined with a reversal of the disadvantage in low birth weight (15 points), and a reduction in the Hispanic obesity disparity disadvantage (17 points).

The fourth domain contributing to the reduction in the overall Black-White disparity is the community connectedness domain, while the additional domain contributing to the reduction in the overall Hispanic-White disparity is the social relationships domain.

For Blacks, the disadvantage in community connectedness disparity narrowed by one-third, that is, to 21 points in 2004 compared to 32 points in 1985. Most of this disparity narrowing is accounted for by the 37 point reduction in the disparity in the idle at age 16-19 (although half may be a transitory one-year anomaly), and by the 19 point reduction change involving the shift from an 18 point disadvantage of a 1 point advantage in the preschool enrollment indicator. The preschool enrollment disparity also narrowed for Hispanics, by a substantial 17 points, but the community connectedness disparity for Hispanics expanded overall slightly by 3 points, mainly because the disparity in the BA degree age 25-29 indicator expanded by 30 points.

Social relationships is the fourth domain contributing to the narrowing of the overall Hispanic-White disparity. The 9 point reduction in the size of this disparity is accounted for by the 12 point reduction in the disparity for the single parent home indicator and the 6 point reduction in the residential mobility indicator. The Black-White disparity in social relationships expanded, overall, by a large 18 points due to an increased disparity of 7 points for the single parent home indicator, but mainly an increased disparity of 30 points in the residential mobility indicator.

Neither Blacks nor Hispanics experienced substantial changes in overall disparities, compared to Whites, for the educational attainments domain or the emotional/spiritual well-being domain. Both groups also experienced little or no change in the component indicators for reading and math at ages 9, 13, or 17, although both experienced small 2-4 point reductions in the disparity for reading at age 9 between 1985 and 2004. In the emotional/spiritual well-being domain, however, the small disparity

changes for both groups were associated with large counterbalancing changes in indicator disparities. For Blacks, the advantage compared to Whites in religious attendance expanded by 28 points, but the Black advantage in the suicide disparity narrowed by 14 points, and the Black advantage in the religious importance indicator narrowed by 7 points. For Hispanics, the advantage in the suicide indicator also narrowed, by 26 points, while the advantage in the religious importance indicator expanded by 17 points, and the 6 point disadvantage in religious attendance shifted to a 5 point advantage.

In sum, results for children using the new methodology presented here show that disparities in overall well-being for Blacks and Hispanics, compared to Whites, narrowed substantially during the two decades spanning 1985-2004, but that large disparities remain. The results also highlight that disparities in the safety/behavioral concerns domain are to the slight advantage of both Blacks and Hispanics, while disparities in emotional/spiritual well-being domain are to the substantial advantage of both groups compared to Whites. But these race-ethnic minorities continue to experience large to enormous disadvantages, compared to Whites, in the disparities pertaining to family economic well-being, health, educational attainments, community connectedness, and social relationships. The direction of change during the past two decades in these disparities also differs across groups and domains. The aim of this paper has been to offer a methodological innovation to the FCD Index of Child Well-Being that will enhance its utility in portraying the nature of and changes in race-ethnic disparities in the U.S. Future research will extend this approach to assess disparities among children who are members of diverse immigrant and socioeconomic groups.

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