

2010

Poverty, Educational Attainment and Health Among America's Children: Current and Future Effects of Population Diversification and Associated Socioeconomic Change

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Recommended Citation

Murdock, Steve; Zey, Mary; Cline, Michael E.; and Klineberg, Stephen (2010) "Poverty, Educational Attainment and Health Among America's Children: Current and Future Effects of Population Diversification and Associated Socioeconomic Change," *Journal of Applied Research on Children: Informing Policy for Children at Risk*: Vol. 1: Iss. 1, Article 2.
Available at: <http://digitalcommons.library.tmc.edu/childrenatrisk/vol1/iss1/2>

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Introduction

The characteristics of children in the United States are changing demographically, economically and socially.¹ Of these changes the demographics are among the most important, establishing the basic characteristics of the population of children who will ultimately become the nation's adult population.^{2, 3, 4} Although progression to adulthood is inevitable, the human capital they will possess when they reach adulthood is not. Their socioeconomic, educational, and health characteristics will play major roles in determining their financial success and their physical and mental health conditions as adults.

This article examines the changing number and racial/ethnic characteristics of the children of the United States both now and as projected for the future. We examine current socioeconomic, health and educational differences among children from specific subgroups using national data, and Texas data to demonstrate the implications of failing to address children's socioeconomic, health and educational needs in the wake of dramatic demographic change.

Specifically, after reviewing some of the extensive literature on the socioeconomic, health and educational differences among demographic subgroups of children, the article presents basic data on the current and projected changes in the future child population of the United States. It then provides the results of a direct standardization process⁴ that simulates the potential implications of these demographic changes if the nation fails to address the current economic, health and educational conditions and differences among America's children.

Socioeconomic and Demographic Interrelationships

The state of America's children is influenced by a number of closely interrelated factors. Economic conditions, educational achievement, children's health outcomes together with such demographic characteristics as age and race/ethnicity work interactively to determine the life chances of children, in socioeconomic, educational and health terms. However, it is essential to recognize that many of these are concomitant factors and are not necessarily causally related to one another. For example, minority status is associated with lower incomes and higher rates of poverty, lower levels of educational attainment and increased incidence of obesity and shorter life expectancy⁵ but that does not mean that being minority causes such conditions. Rather analyses suggest that being minority is related to (being more likely to have) lower incomes and higher rates of poverty and these in turn (are related to) lead to reduced levels of educational attainment and a higher incidence of negative health outcomes. That is, they are an interrelated set of items which often form a complex of

conditions limiting children's life chances (for a discussion of how such factors interact to affect children see Duncan et al., 2010).⁵ In this work we simulate the effects of racial/ethnic change on several of these socioeconomic, educational and health factors based on projected changes in race/ethnicity. It should be noted, however, that although such an analysis is useful in delineating what may happen in the absence of actions that mitigate the relationships among such factors and racial and ethnic, particularly minority, status, one must never mistake such concomitant factors for causal ones. It is essential to understand some of the key relationships among such factors but causality is not implied.

Socioeconomic, Educational and Health Characteristics Associated with Minority Status

Education Disparities

Roughly one-half of African Americans, Hispanics and American Indians graduate from high school compared to three-fourths of non-Hispanic Whites.⁶ Only 76% of African Americans and 56% of Hispanic adults have basic English literacy compared with 93% of non-Hispanic Whites.⁷ In addition, poor and minority children are more likely to attend under resourced schools located in poverty areas.⁵

The educational gap appears to occur even before formal education begins. Black and Hispanic children living in poverty lag behind Whites on standard measures of achievement.^{8, 9} Gaps between African Americans and Hispanics relative to non-Hispanic Whites are "one standard deviation" apart meaning that Hispanic and African American children are less likely to finish school and likely to complete fewer years of school.⁹ This preschool gap is largely explained by poverty and differences in home environments. Nevertheless, currently, among schools with more than 75% minority students, 43% of their students are failing to make the yearly progress necessary to be promoted to the next grade compared with only 16% of students failing to make progress among schools with less than 25% minority students.¹⁰

Income and Poverty Disparities

In 2006, 40% of African American children and 30% of Hispanic children under age 5 lived in poverty compared with 17% of White and 8% of Asian children.¹¹ As recently as 1997, during one of the most prosperous periods the United States has ever experienced, 13.4 million children (19.2% of all children) living in the United States were poor.¹¹

Among the best sources of data on the effects of child poverty in the United States are the longitudinal studies of Brooks-Gunn, Brown, Duncan and Moore,¹² Brooks-Gunn, Phelps and Elder.¹³ These authors maintain

that the current extent and effects of poverty in the United States can be traced back to the Personal Responsibility and Work Opportunity Reconciliation Act signed into law by President Clinton on August 22, 1996. This law ended 60 years of guaranteed government aid to the economically deprived children of the United States, the Aid to Families with Dependent Children (AFDC), in favor of providing block grants to states to provide Temporary Assistance for Needy Families (TANF). State control of funds has resulted in differential allocations to children in poverty across the nation. It has also resulted in deep poverty for single mothers unable to make a successful transition to full-time employment in the recession ridden economy of the first decade of the 21st Century. The United States has one of the highest rates of child poverty among developed countries due, in part, to fewer transfer payments to needy families.

Health Disparities

The physical health results of poverty among minority populations are evident in a 1.7 times higher rate of low-birth-weight babies, 3.5 times higher levels of exposure to lead, and a 1.7 times higher rates of child mortality among minority compared to non-Hispanic White children.¹⁴

Although academics have studied health and education separately, there is a recursive relationship between these two variables. Generally education has been treated as causal and thus disparities in education have been seen as leading to disparities in health. This causal relationship is generally through the mechanism of occupation status, income, residence in poor neighborhoods, and wealth.¹⁵ The racial gap in education is a primary contributor to racial disparities in child mortality with children from households with more highly educated parents having lower rates of mortality. Child poverty and lack of insurance explain many of the racial disparities in adult health with these effects being mediated through disparities in educational achievement.¹⁶ However, education also affects health independently of socioeconomic factors. Gaps in educational achievement are key determinants of racial, ethnic and socioeconomic disparities in adult health.¹⁷ For example, less education is associated with earlier onsets of chronic diseases, disabilities and declining functional status.

Interrelationships among Race/Ethnicity and Poverty, Educational Attainment, and Health Status

Poverty has substantial effects on poor children's academic achievement. Poor children are twice as likely to repeat a grade or to drop out of school. They are 1.4 times more likely to have a learning disability. Other negative

consequences include the fact that poor children are 6.8 times more likely to experience child abuse and neglect, 3.1 times more likely to give birth out of wedlock, and 2.2 times more likely to experience violent crimes, including homicide.^{14,18}

Parental income and education strongly affect general child development particularly among the poorest of children. Findings from a natural experiment¹⁹ using the earned income tax credit and those from experiments involving random assignment to welfare show that increases in family income promote child achievement in preschool years. Dahl and Lockner¹⁹ note that a \$3,000 increase in family income in early and middle childhood boosts reading and math achievement. Work by Duncan et al.⁵ and Duncan and Brooks-Gunn¹⁴ show nonlinear effects indicating that income effects matter more for lower income children than for higher income children.⁵

However, studies in the United States demonstrate that income is more predictive of some types of outcomes than others. For example, verbal ability and achievement appear to be more affected by family income than are behavioral, mental health and physical health.¹⁹ Behavioral, mental, and physical health are causally related to a lack of educational achievement. Schools serving poor and minority children, face far greater risk of closure for lack of achievement under the No Child Left Behind (NCLB) program. In addition, although charter schools and voucher programs are sometimes seen as providing alternatives to such schools, there is little evidence that these schools, when populated by poor and racial minorities, perform any better than public schools. Urban schools with high concentrations of poverty despite insufficient supplemental funding are mandated by NCLB to meet benchmarks that only a small fraction of them have achieved so far.²⁰

Inequities at the Start

It is clear that many of the inequalities that have the most lasting effects on later educational and socioeconomic achievement are those which appear in early childhood. In order to eliminate the lack of readiness to learn at age 6, analysts²¹ strongly suggest that children from minority and poor backgrounds be provided with early childhood education between the ages of 3 and 5. Early intervention is far more effective than remediation.^{11,22}

Findings from early intervention studies have been translated into practice. For example, a multi-city, randomized, controlled trial of early Head Start programs showed significant improvements in child cognitive and emotional development.²³ Other studies have shown that enrollment of low-income children in high-quality child care or preschool can reduce

the racial and ethnic gaps in reading readiness by as much as 36 percent.²⁴ Economic studies suggest that investment in early childhood education would yield large savings over the long-run, including improved employment and earnings and reduction in crime and rates of incarceration.^{25,26}

The extent and complexity of interactions among race/ethnicity, educational, income and poverty, and health factors at different stages of the life cycle are illustrated in an excellent analysis by Duncan and associates⁵ in which they note that their analysis

...shows striking differences in adult outcomes depending on whether childhood income prior to age 6 was below, close to, or well above the poverty line during their early childhood. Compared with children whose families had incomes of at least twice the poverty line during their early childhood, poor children complete 2 fewer years of schooling, work 451 fewer hours per year, earn less than half as much, received \$826 per year more in food stamps as adults, and are more than twice as likely to report poor overall health or high levels of psychological distress. Further, poor children have BMIs [Body Mass Indices] that are 4 points higher than those well above the poverty line, and are almost 50% more likely to be overweight as adults. Poor males are twice as likely to be arrested and for females, poverty is associated with a \$200 annual increase in cash assistance, and a six fold increase in the likelihood of bearing a child out of wedlock prior to age 21. . . Children with average annual incomes below poverty in the earliest [age] period have lower average income for all three [adult] periods compared with the other two [more affluent] groups. Additionally, the poorest children are less likely to be White and born into an intact family, and more likely to be born in the South, have younger mothers, more siblings, household heads with lower test scores and educational attainment, homes rated dirtier by interviewers, lower parental expectations, and household heads who report less preference for challenge versus affiliation, less personal control, and less risk avoidance compared with their higher income counterparts.⁵

Methodology

Such analyses clearly show that the use of any one variable to predict the rest is likely to lead to only partial explanations. Nevertheless, we believe,

that given current relationships between minority racial/ethnic status and socioeconomic factors including education, it is useful to examine the socioeconomic implications of current and projected patterns of racial/ethnic population change among America's children. In this article we use recent and projected change in population growth and diversity as an indicator of what will happen *if changes are not made* in the socioeconomic conditions of minority populations in the United States.

In addition to examining such patterns for the nation as a whole we examine such changes in the state with the largest increase in its child population during this decade. Texas has a large number of children (6.7 million in 2008) and accounted for 839,012 of the net national increase of 1,648,036 children [persons less than 18 years of age] from 2000 to 2008. In addition, Texas has a large number of children in poverty (1.6 million in 2008) and data suggest it has had historically poor educational attainment patterns for its minority residents. It is also one of the most diverse states with more than 50 percent of its population being members of minority groups. Texas provides an excellent example of the conditions likely to characterize the conditions of children in the most diverse states in the nation in the future. By examining the United States as a whole and Texas, we are thus able to demonstrate how, in the absence of socioeconomic change, demographic change will impact children nationally as well as those who live in racially and ethnically diverse states.

The analysis focuses on identifying the role of racial/ethnic diversity. To uniquely identify the effects of diversity we examine the results of two simulations that use direct standardization techniques in which the total 2040 population for the United States and Texas are assumed to be the correct total population for both areas for 2040 for both simulations. One simulation assumes that the race/ethnicity composition of the population remains the same as that which existed in 2008. The second assumes the same total population as the first simulation but assumes that the projected race/ethnicity compositions for 2040 are those as projected by the United States Census Bureau (for the United States) and the Texas State Data Center (for Texas). Comparing these two simulations for each of the populations (those in the United States and in Texas) enables us to indicate the effects of projected racial/ethnic change on the child population of the future, holding population size constant.

After first examining the projected growth in race/ethnicity in the nation and Texas we then examine how the effects of population diversity will affect the change in the number of persons in poverty, the educational status of householders in poverty, and the health conditions of the poverty

populations in both the United States and in Texas. Throughout the analysis we emphasize that race/ethnicity itself is not the causal factor but rather, due to a variety of historical, discriminatory and other factors, race/ethnicity is concomitant with the poverty, educational and health factors examined in the analysis.

Current Patterns of Population Growth and Diversification in the Child Population

The data in Table 1 show changes in the child population of the United States from 2000 to 2008. These data indicate an increase of only 1.6 million children during the first 8.25 years (from April 1, 2000 to July 1, 2008) of the post-2000 decade compared to an overall population increase of 22.6 million. Although children accounted for 25.6 percent of the total population in 2000 and 24.3 percent in 2008, the growth in the child population accounted for only 7.3 percent of population growth from 2000 to 2008. As a result, the proportion of the population made up of children decreased by 1.3 percent from 2000 to 2008 indicating both that birth rates for many population subgroups remain quite low and other age groups are increasing more rapidly because of past differentials in growth.

What is most apparent, however, is how rapid the growth has been in the number of Hispanic and non-Hispanic Other (includes Asian, American Indian, Alaskan Natives, Native Hawaiian and multi-race children) children versus non-Hispanic White and Black children. Whereas the number of non-Hispanic White children decreased by nearly 2.8 million and the number of non-Hispanic Black children decreased by nearly 265,000, the number of non-Hispanic Other children increased by more than 929,000 and the number of Hispanic children increased by more than 3.7 million. The number of non-Hispanic White children decreased by six percent in only eight years while the number of Hispanic children increased by more than 30 percent. What is equally apparent in Table 1 is that the percent of the child population that is non-Hispanic White is decreasing both across time and from older to younger ages. In 2000, the percentage of the child population that was non-Hispanic White was 61.3 percent but in 2008 it was 56.2 percent, a decrease of 5.1 percent but the decrease was even more evident in the under 5 category where the 2000 to 2008 decline was 6.2 percent compared to 4.6 for children 5-17 years of age. This suggests that future trends are toward higher proportions of Hispanic and non-Hispanic Other children, and, of course, subsequently toward higher proportions of Hispanic and non-Hispanic Other adults. This growth of Hispanic and non-Hispanic Other populations at younger ages is also evident in the fact that non-Hispanic Whites represented 69.5 percent

Table 1: Child Population by Age Group and Race/Ethnicity for the United States for 2000 and 2008 and Numerical and Percentage Population Change by Age Group and Race/Ethnicity Between 2000 and 2008

Race/ Ethnicity	Age 0 - 4	Age 5 - 17	Age 0 - 17	Total Population	Age 0 - 4	Age 5 - 17	Age 0 - 17	Total Pop
Census 2000 Population								
White	11,287,342	33,043,665	44,331,007	195,575,485	58.9	62.3	61.3	69.5
Black	2,760,926	7,980,866	10,741,792	34,313,007	14.4	15.0	14.9	12.2
Hispanic	3,717,974	8,624,285	12,342,259	35,305,818	19.4	16.2	17.1	12.5
Other	1,409,556	3,469,198	4,878,754	16,227,596	7.3	6.5	6.7	5.8
Total	19,175,798	53,118,014	72,293,812	281,421,906	100.0	100.0	100.0	100.0
Estimated Population in 2008								
White	11,065,386	30,498,450	41,563,836	199,491,458	52.6	57.6	56.2	65.6
Black	2,853,546	7,623,424	10,476,970	37,171,750	13.6	14.4	14.2	12.2
Hispanic	5,287,996	10,804,541	16,092,537	46,943,613	25.2	20.4	21.7	15.4
Other	1,798,924	4,009,581	5,808,505	20,452,903	8.6	7.6	7.9	6.8
Total	21,005,852	52,935,996	73,941,848	304,059,724	100.0	100.0	100.0	100.0
Numeric Change, 2000-2008								
White	-221,956	-2,545,215	-2,767,171	3,915,973	-2.0	-7.7	-6.2	2.0
Black	92,620	-357,442	-264,822	2,858,743	3.4	-4.5	-2.5	8.3
Hispanic	1,570,022	2,180,256	3,750,278	11,637,795	42.2	25.3	30.4	33.0
Other	389,368	540,383	929,751	4,225,307	27.6	15.6	19.1	26.0
Total	1,830,054	-182,018	1,648,036	22,637,818	9.5	-0.3	2.3	8.0

Source: U.S. Census Bureau²⁷

of the total population but only 61.3 percent of the 0-17 population in 2000. In 2008, they represented 65.6 percent of the total but 56.2 percent of the child population.

Even in a rapidly growing state such as Texas in which more than 3.4 million persons were added from 2000-2008 (see Table 2), the increase in the child population is less than for the total population -- 14.3 percent for children compared to 16.7 percent for the population as a whole. But the changing racial and ethnic composition of the population of the United States and rapidly growing states such as Texas is particularly evident among children, especially Hispanic and non-Hispanic Other children. Although the number of non-Hispanic White children in Texas decreased by nearly 48,000 and the number of non-Hispanic Black children increased by nearly 42,000, the number of non-Hispanic Other children increased by nearly 116,000 and the number of Hispanic children increased by more than 729,000.

Texas total non-Hispanic White Population dropped from 52.7 percent in 2000 to 47.4 percent in 2008 (5.3 percent) but the percent of non-Hispanic White children decreased from 42.9 to 36.8 (6.1 percent) and the percent of non-Hispanic White children among those 0-4 years of age decreased from 39.8 to 33.5 percent (6.3 percent). The percent of all children who are Hispanic increased from 40.5 to 46.4 percent and the percentage among those who are 0-4 years of age increased from 44.0 to 50.1 percent.

The data in Tables 1 and 2 indicate that the proportion of children in the total population is decreasing while at the same time becoming more diverse with the largest increases among Hispanic youth. This clearly suggests that the patterns of recent population change are ones likely to lead to a more diverse America, particularly at the youngest ages.

Projected Future Trends in Population Growth and Diversification in the Child Population

The implications of a diversifying childhood population are even more evident in Table 3 which shows projections for 2000 to 2040 for the United States child population. Of the 124.2 million increases in the United States population from 2000 to 2040, only about 21.7 million or 17.5 percent of total population growth is expected to be due to children. Of the increase in the child population of 21.7 million a nearly 21 million increase in the Hispanic child population, 5.5 million increase in the non-Hispanic Other child population, and an increase of approximately 311,000 in the number of non-Hispanic Black children will offset a 5.1 million decrease in the number of non-Hispanic White children.

Table 2: Child Population by Age Group and Race/Ethnicity for Texas for 2000 and 2008 and Numerical and Percentage Population Change by Age Group and Race/Ethnicity Between 2000 and 2008

Race/ Ethnicity	Age 0 - 4	Age 5 - 17	Age 0 - 17	Total Population	Age 0 - 4	Age 5 - 17	Age 0 - 17	Total Pop
Census 2000 Population					Percent of Age Group Pop			
White	646,570	1,877,844	2,524,414	10,986,965	39.8	44.1	42.9	52.7
Black	191,236	547,541	738,777	2,378,444	11.8	12.8	12.6	11.4
Hispanic	714,284	1,672,481	2,386,765	6,669,666	44.0	39.2	40.5	32.0
Other	72,538	164,265	236,803	816,745	4.4	3.9	4.0	3.9
Total	1,624,628	4,262,131	5,886,759	20,851,820	100.0	100.0	100.0	100.0
Estimated Population in 2008					Percent of Age Group Pop			
White	678,319	1,798,221	2,476,540	11,525,623	33.5	38.3	36.8	47.4
Black	219,898	560,750	780,648	2,748,323	10.8	11.9	11.6	11.3
Hispanic	1,016,117	2,100,086	3,116,203	8,870,475	50.1	44.7	46.4	36.5
Other	112,973	239,407	352,380	1,182,553	5.6	5.1	5.2	4.8
Total	2,027,307	4,698,464	6,725,771	24,326,974	100.0	100.0	100.0	100.0
Numeric Change, 2000-2008					Percent Change, 2000-2008			
White	31,749	-79,623	-47,874	538,658	4.9	-4.2	-1.9	4.9
Black	28,662	13,209	41,871	369,879	15.0	2.4	5.7	15.6
Hispanic	301,833	427,605	729,438	2,200,809	42.3	25.6	30.6	33.0
Other	40,435	75,142	115,577	365,808	55.7	45.7	48.8	44.8
Total	402,679	436,333	839,012	3,475,154	24.8	10.2	14.3	16.7

Source: U.S. Census Bureau²⁷

Table 3: Child Population by Age Group and Race/Ethnicity for the United States for 2000 and Projected for 2040 and Numerical and Percentage Population Change by Age Group And Race/Ethnicity Between 2000 and 2040

Race/ Ethnicity	Age 0 - 4	Age 5 - 17	Age 0 -17	Total Population	Age 0 - 4	Age 5 - 17	Age 0 -17	Total Pop
Census 2000 Population								
White	11,287,342	33,043,665	44,331,007	195,575,485	58.9	62.3	61.3	69.5
Black	2,760,926	7,980,866	10,741,792	34,313,007	14.4	15.0	14.9	12.2
Hispanic	3,717,974	8,624,285	12,342,259	35,305,818	19.4	16.2	17.1	12.5
Other	1,409,556	3,469,198	4,878,754	16,227,596	7.3	6.5	6.7	5.8
Total	19,175,798	53,118,014	72,293,812	281,421,906	100.0	100.0	100.0	100.0
Projected Population in 2040								
White	10,602,435	28,622,121	39,224,556	206,064,884	40.6	42.2	41.7	50.8
Black	3,023,457	8,029,212	11,052,669	48,780,297	11.6	11.8	11.8	12.0
Hispanic	9,462,750	23,876,967	33,339,717	108,223,292	36.2	35.2	35.5	26.7
Other	3,028,274	7,341,185	10,369,459	42,586,822	11.6	10.8	11.0	10.5
Total	26,116,916	67,869,485	93,986,401	405,655,295	100.0	100.0	100.0	100.0
Numeric Change 2000-2040								
White	-684,907	-4,421,544	-5,106,451	10,489,399	-6.1	-13.4	-11.5	5.4
Black	262,531	48,346	310,877	14,467,290	9.5	0.6	2.9	42.2
Hispanic	5,744,776	15,252,682	20,997,458	72,917,474	154.5	176.9	170.1	206.5
Other	1,618,718	3,871,987	5,490,750	26,359,226	114.8	111.6	112.5	162.4
Total	6,941,118	14,751,471	21,692,589	124,233,389	36.2	27.8	30.0	44.1

Source: U.S. Census Bureau²⁸

Equally dramatic is the fact that the 17.1 percent of the child population that was Hispanic in 2000 will increase to 35.5 percent by 2040 while the non-Hispanic White child population which was 61.3 percent of the total child population in 2000 is projected to be only 41.7 percent in 2040.

The child population of Texas will increase and diversify more dramatically than the child population of the United States as a whole (see Table 4). Although already more than 40 percent of the child population in 2000, Hispanic children will account for nearly two of every three (63.5 percent of) Texas children by 2040. As with the United States child population increases in minority child populations the increase in Texas will offset a decrease of more than 579,000 non-Hispanic White children with the nearly 3.4 million increase in the Hispanic population of children, the 110,000 increase in non-Hispanic Black children and the nearly 269,000 increase in the number of non-Hispanic Other children resulting in a net increase of more than 3.1 million children in Texas. Because of projected increases in young adult populations (from immigration and domestic immigration), the percent of the increase in the total population accounted for by children is even less than that for the United States population as a whole with the increase in the child population of Texas accounting for only 13.1 percent of the total population compared to the 17.5 percent of the total increase accounted for by children in the United States as a whole. Nevertheless, the data for Texas, as that for the United States, show a growing and rapidly diversifying child population. In both Texas and the United States, the racial and ethnic diversification of the child populations will be extremely critical in determining the demand on educational and other public services and on the socioeconomic and physical well-being of children.

Socioeconomic Implications of the Diversification of the Child Population of the United States and Texas

Effects on Poverty

The diversification of the child population would not have significant socioeconomic consequences were it not that, due to a variety of historical, discriminatory and other factors, minority children tend to have access to fewer socioeconomic, educational and other resources resulting in increased levels of poverty, reduced educational attainment, increased health risks and negative health outcomes.^{2,3} The data in Figure 1 show the race/ethnicity differentials in poverty in the United States and Texas. The data in this figure show that in both the United States as a whole and in Texas poverty rates for non-Hispanic Black and Hispanic children are roughly 30 to 35 percent while poverty rates for non-Hispanic White

Table 4: Child Population by Age Group and Race/Ethnicity for Texas for 2000 and Projected for 2040 and Numerical and Percentage Population Change by Age Group And Race/Ethnicity Between 2000 and 2040

Race/ Ethnicity	Age 0 - 4	Age 5 - 17	Age 0 - 17	Total Population	Age 0 - 4	Age 5 - 17	Age 0 - 17	Total Pop
Census 2000 Population				Percent of Age Group Population				
White	646,570	1,877,844	2,524,414	10,986,965	39.8	44.1	42.9	52.7
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Other	72,538	164,265	236,803	816,745	4.4	3.9	4.0	3.9
Total	1,624,628	4,262,131	5,886,759	20,851,820	100.0	100.0	100.0	100.0
Projected Population in 2040				Percent of Age Group Population				
White	520,624	1,424,365	1,944,989	11,196,427	19.7	22.3	21.5	24.9
Black	227,182	621,501	848,683	4,341,627	8.6	9.7	9.4	9.7
Hispanic	1,741,194	4,000,115	5,741,309	25,090,745	65.9	62.5	63.5	55.9
Other	153,505	352,358	505,863	4,243,239	5.8	5.5	5.6	9.5
Total	2,642,505	6,398,339	9,040,844	44,872,038	100.0	100.0	100.0	100.0
Numeric Change, 2000-2040				Percent Change, 2000-2040				
White	-125,946	-453,479	-579,425	209,462	-19.5	-24.1	-23.0	1.9
Black	35,946	73,960	109,906	1,963,183	18.8	13.5	14.9	82.5
Hispanic	1,026,910	2,327,634	3,354,544	18,421,079	143.8	139.2	140.5	276.2
Other	80,967	188,093	269,060	3,426,494	111.6	114.5	113.6	419.5
Total	1,017,877	2,136,208	3,154,085	24,020,218	62.7	50.1	53.6	115.2

Source: Texas State Data Center²⁹

children are 10-12 percent. The data also suggest that if the additions of minority, particularly Hispanic, children shown in Tables 3 and 4 occur without changes in the socioeconomic characteristics of minority children, the result will be to increase substantially the number of children in poverty.

The data in Tables 5 and 6 verify patterns suggested by the analysis presented above. These tables show in the top panel the projected number of children in poverty when the 2008 race/ethnicity composition of the population is applied (or assumed to apply to) the 2040 total population projection and the poverty rates shown in Figure 1 are applied to that projected population. In the second panels of Tables 5 and 6 the number of children in poverty is shown using the race/ethnicity composition of the population as actually projected for 2040 and assuming the 2008 poverty values shown in Figure 1. A comparison of data in these two panels of Tables 5 and 6 (and subsequent tables similarly constructed) allow one to control for the effects of the projected change in size (since both use the same total population value) so that the differences resulting from racial/ethnic differentiation are identified. Also shown in these tables are the total number of persons in poverty if total poverty rates by race/ethnicity are applied to the 2040 population with the 2008 and the actual 2040 population racial/ethnic compositions.

The data in Tables 5 and 6 show first the effects of changes in the population composition on the number of children in poverty. For example, in the absence of changes in the socioeconomic conditions of minority children (see Table 5) the number of children in poverty will increase by nearly 1.8 million in the United States and (Table 6) by more than 306,000 in Texas.

What is even more startling is the extent to which poverty will be increasingly concentrated among minority children because they make up most of the total increase in the child population. For example, as shown in Table 5 with the 2008 composition values, minority children would account for 64.8 percent of all children in poverty in the United States but under the projected composition minority children would account for more than three-quarters (76.2 percent) of all children in poverty. Equally important is the fact that although Hispanic children would account for 32.5 percent of all children in poverty in 2040 if the current race/ethnicity composition existed in 2040, under the actual projected composition, Hispanic children would account for nearly half (48.2 percent) of all children in poverty in the United States in 2040. The data in Table 6 show

Table 5: Child Population in Poverty in the United States in 2040 Assuming 2008 Poverty Rates and U.S. Census Bureau Projected Population Composition Compared to a Projected 2040 Population Assuming 2008 Demographic Composition and 2008 Poverty Rates

Race / Ethnicity	Age 0 - 4	Age 5 - 17	Age 0 - 17	Percent of Poverty Pop Age 0 - 17
2008 Composition				
White	1,966,231	4,534,767	6,500,998	35.2
Black	1,426,438	3,244,704	4,671,142	25.3
Hispanic	2,097,389	3,918,241	6,015,630	32.5
Other	406,130	887,190	1,293,320	7.0
Total	5,896,188	12,584,902	18,481,090	100.0
Projected Composition				
White	1,516,148	3,320,166	4,836,314	23.8
Black	1,215,430	2,665,698	3,881,128	19.1
Hispanic	3,018,617	6,757,182	9,775,799	48.2
Other	548,118	1,262,684	1,810,802	8.9
Total	6,298,313	14,005,730	20,304,043	100.0
Numeric Difference				
White	-450,083	-1,214,601	-1,664,684	----
Black	-211,008	-579,006	-790,014	----
Hispanic	921,228	2,838,941	3,760,169	----
Other	141,988	375,494	517,482	----
Total	402,125	1,420,828	1,822,953	----
Percent Difference				
White	-22.9	-26.8	-25.6	----
Black	-14.8	-17.9	-16.9	----
Hispanic	43.9	72.4	62.5	----
Other	35.4	42.8	40.5	----
Total	6.8	11.3	9.9	----

Table 6: Child Population in Poverty in Texas in 2040 Assuming 2008 Poverty Rates and Texas State Data Center Projected Population Compared to a Projected 2040 Population Assuming 2008 Demographic Composition and 2008 Poverty Rates

Race / Ethnicity	Age 0 - 4	Age 5 - 17	Age 0 - 17	Percent of Poverty Pop Age 0 – 17
2008 Composition				
White	108,884	237,705	346,589	16.2
Black	108,449	236,035	344,484	16.1
Hispanic	485,869	900,918	1,386,787	64.8
Other	18,202	44,705	62,907	2.9
Total	721,404	1,419,363	2,140,767	100.0
Projected Composition				
White	64,037	138,163	202,200	8.3
Black	86,329	192,665	278,994	11.4
Hispanic	639,018	1,260,036	1,899,054	77.6
Other	18,881	48,273	67,154	2.7
Total	808,265	1,639,137	2,447,402	100.0
Numeric Difference				
White	-44,847	-99,542	-144,389	----
Black	-22,120	-43,370	-65,490	----
Hispanic	153,149	359,118	512,267	----
Other	679	3,568	4,247	----
Total	86,861	219,774	306,635	----
Percent Difference				
White	-41.2	-41.9	-41.7	----
Black	-20.4	-18.4	-19.0	----
Hispanic	31.5	39.9	36.9	----
Other	3.7	8.0	6.8	----
Total	12.0	15.5	14.3	----

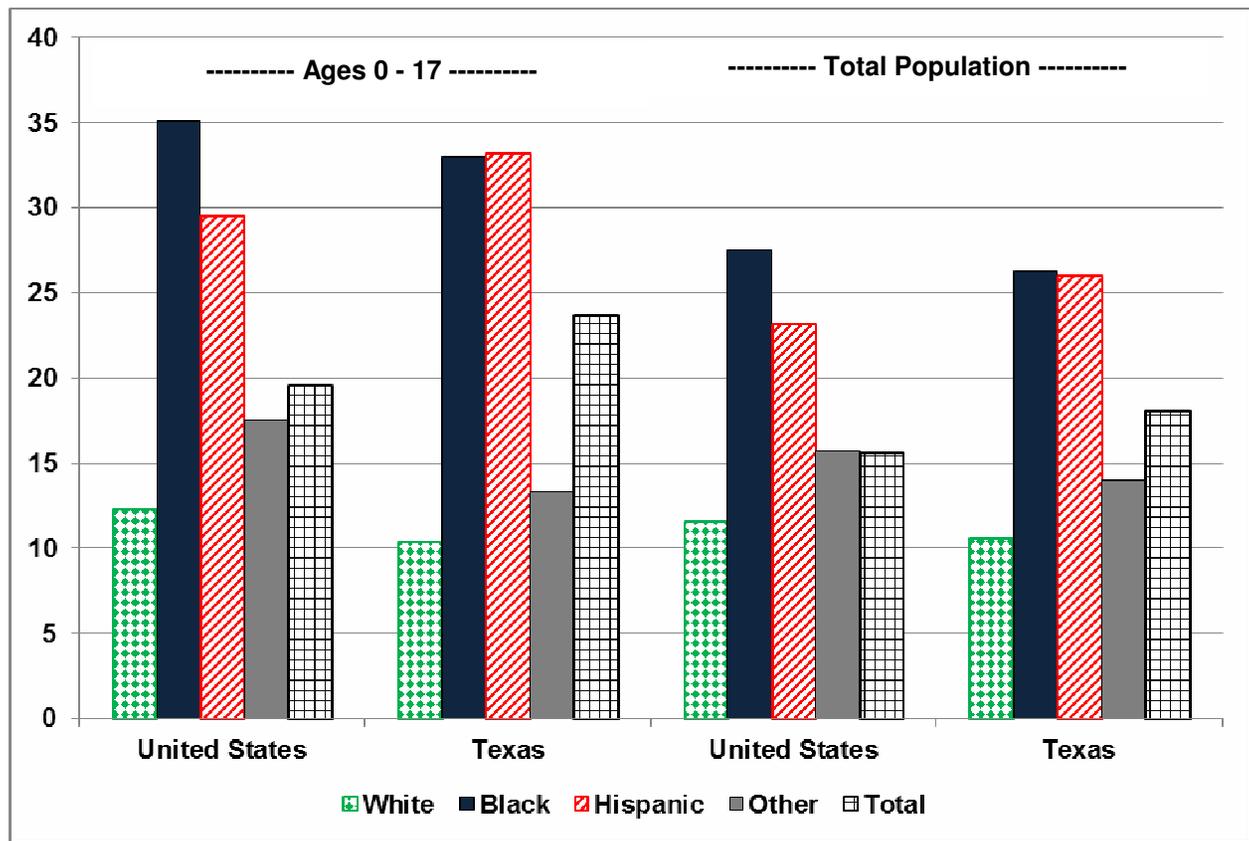


Figure 1: Percent of Children and Percent of the Total Population in the United States and Texas in Poverty in 2008 by Race/Ethnicity

similar data for Texas with Hispanic children accounting for 77.6 percent of all children in poverty by 2040 if the projected race/ethnicity composition of the population actually occurs in 2040. In sum, the data in Tables 5 and 6 show that unless steps are taken to reduce the poverty levels of minority children, especially Hispanic children, the total number of children in poverty will increase significantly and (when combined with expected demographic trends) lead to an even more significant increase in the number and percent of all children in poverty who are minority group members.

Effects on Educational Attainment

The data in Tables 7 and 8 show the population of children in poverty in households by the educational levels of the householders. The data in these tables indicate that racial and ethnic disparities in educational attainment are extensive. Thus, among non-Hispanic Whites in the United States, 20.7 percent of children in poverty have householders who have less than a high school education and in Texas that percentage is 22.1 percent but the percentage of Hispanic children in poverty living with householders without a high school level of education was 52.5 percent in 2008 in the United States as a whole and 56.0 percent in Texas. Whether viewed as a cause or an effect of poverty it is evident that levels of educational attainment among householders in households with children in poverty are reflective of non-competitive levels of education.

The data in Tables 9 and 10 suggest what the effects of poverty are if the rates of educational attainment by race/ethnicity and poverty continue. If one examines the numerical difference by educational level the results show the expected decrease in the number of non-Hispanic Whites in the population resulting from the slow growth of this population segment and the rapid increase in the number of minorities, particularly Hispanics at all levels.

What is most startling, however, is the effect on the level of educational attainment resulting from the racial and ethnic change. In Table 9 for the United States as a whole the total number of children in poverty under the 2008 composition is 18,481,090 while the total under the projected composition is 20,304,043, a difference of 1,880,379. Of this difference, the percentage of it due to the increase in the number of children in households with householders with less than a high school level of education is 1,552,859 or 83.7 percent. That means that the effects of the demographic changes would be to further increase the number and the proportion of the least educated householders and their children in impoverished populations. This results in an increase from 32.6 percent in the less than high school education category under the 2008 composition

Table 7: Child Population in Poverty by Race/Ethnicity of the Child and Educational Attainment of the Householder for the United States in 2008

Educational Attainment of Householder	White	Black	Hispanic	Other	Total
Estimated Population in Poverty					
< H.S. Diploma	1,059,875	945,272	2,490,892	247,722	4,743,761
H.S. Grad./GED	1,771,579	1,268,945	1,148,183	281,225	4,469,932
Some College	1,694,776	1,162,280	782,852	334,018	3,973,926
Bachelor's or More	593,940	301,604	322,630	151,273	1,369,447
Total	5,120,170	3,678,101	4,744,557	1,014,238	14,557,066
Percent of Poverty Population					
< H.S. Diploma	20.7	25.7	52.5	24.4	32.6
H.S. Grad./GED	34.6	34.5	24.2	27.7	30.7
Some College	33.1	31.6	16.5	33.0	27.3
Bachelor's or More	11.6	8.2	6.8	14.9	9.4
Total	100.0	100.0	100.0	100.0	100.0

Source: Calculated by Authors from American Community Survey, Public Use Microdata Sample³⁰

Table 8: Child Population in Poverty by Race/Ethnicity of the Child and Educational Attainment of the Householder for Texas in 2008

Educational Attainment	White	Black	Hispanic	Other	Total
	Estimated Population in Poverty				
< H.S. Diploma	56,987	59,201	579,288	7,751	703,227
H.S. Grad./GED	85,610	92,147	234,818	10,460	423,035
Some College	83,547	83,396	163,442	16,530	346,915
Bachelor's or More	31,717	22,651	56,894	11,954	123,216
Total	257,861	257,395	1,034,442	46,695	1,596,393
	Percent of Poverty Population				
< H.S. Diploma	22.1	23.0	56.0	16.6	44.1
H.S. Grad./GED	33.2	35.8	22.7	22.4	26.5
Some College	32.4	32.4	15.8	35.4	21.7
Bachelor's or More	12.3	8.8	5.5	25.6	7.7
Total	100.0	100.0	100.0	100.0	100.0

Source: Calculated by Authors from American Community Survey, Public Use Microdata Sample³⁰

Table 9: Child Population in Poverty by Educational Attainment of Householder in the United States in 2040 Assuming 2008 Poverty Rates and U.S. Census Bureau Projected Population Compared to a Projected 2040 Population Assuming 2008 Demographic Composition and 2008 Poverty Rates

Race / Ethnicity	< H.S.	H.S./ GED	Some College	Bachelor's or More	Total
2008 Composition					
White	1,345,707	2,249,345	2,151,830	754,116	6,500,998
Black	1,200,483	1,611,544	1,476,081	383,034	4,671,142
Hispanic	3,158,206	1,455,782	992,579	409,063	6,015,630
Other	315,887	358,608	425,927	192,898	1,293,320
Total	6,020,283	5,675,279	5,046,417	1,739,111	18,481,090
Projected Composition					
White	1,001,117	1,673,365	1,600,820	561,012	4,836,314
Black	997,451	1,338,989	1,226,436	318,252	3,881,128
Hispanic	5,132,295	2,365,743	1,613,007	664,754	9,775,799
Other	442,279	502,094	596,350	270,079	1,810,802
Total	7,573,142	5,880,191	5,036,613	1,814,097	20,304,043
Numeric Difference					
White	-344,590	-575,980	-551,010	-193,104	-1,664,684
Black	-203,032	-272,555	-249,645	-64,782	-790,014
Hispanic	1,974,089	909,961	620,428	255,691	3,760,169
Other	126,392	143,486	170,423	77,181	517,482
Total	1,552,859	204,912	-9,804	74,986	1,822,953
Percent Difference					
White	-25.6	-25.6	-25.6	-25.6	-25.6
Black	-16.9	-16.9	-16.9	-16.9	-16.9
Hispanic	62.5	62.5	62.5	62.5	62.5
Other	40.0	40.0	40.0	40.0	40.0
Total	25.8	3.6	-0.2	4.3	9.9

Table 10: Child Population in Poverty in Texas in 2040 by Educational Attainment of Householder Assuming 2008 Poverty Rates and Texas State Data Center Projected Population Compared to a Projected 2040 Population Assuming 2008 Demographic Composition and 2008 Poverty Rates

Race / Ethnicity	< H.S.	H.S./ GED	Some College	Bachelor's or More	Total
2008 Composition					
White	76,596	115,068	112,295	42,630	346,589
Black	79,231	123,325	111,613	30,315	344,484
Hispanic	776,601	314,801	219,112	76,273	1,386,787
Other	10,443	14,091	22,269	16,104	62,907
Total	942,871	567,285	465,289	165,322	2,140,767
Projected Composition					
White	44,686	67,130	65,513	24,871	202,200
Black	64,169	99,880	90,394	24,551	278,994
Hispanic	1,063,470	431,085	300,051	104,448	1,899,054
Other	11,148	15,042	23,773	17,191	67,154
Total	1,183,473	613,137	479,731	171,061	2,447,402
Numeric Difference					
White	-31,910	-47,938	-46,782	-17,759	-144,389
Black	-15,062	-23,445	-21,219	-5,764	-65,490
Hispanic	286,869	116,284	80,939	28,175	512,267
Other	705	951	1,504	1,087	4,247
Total	240,602	45,852	14,442	5,739	306,635
Percent Difference					
White	-41.7	-41.7	-41.7	-41.7	-41.7
Black	-19.0	-19.0	-19.0	-19.0	-19.0
Hispanic	36.9	36.9	36.9	36.9	36.9
Other	6.8	6.7	6.8	6.7	6.8
Total	25.5	8.1	3.1	3.5	14.3

to 37.3 percent in that category in the projected composition scenario and to decreases in the percentage of children in households that are in all other educational categories. For Texas 240,602 (79.2 percent) of the total increase of 306,635 is due to racial/ethnic change in the less than high school category leading to an increase of all children in households in this category from 44.1 percent to 48.4 percent. In both the United States as a whole and in Texas, this difference is largely a result of the addition of the large number of Hispanics assuming that they continue to have the low levels of education that prevailed in Hispanic poverty households in 2008.

Effects on Health Conditions

Effects on health conditions resulting from the changing demographic composition of children are shown in Figure 2. These values use different age delineations of childhood which are adjusted for the United States and Texas to indicate the number of children experiencing each condition in both the United States as a whole and in Texas.

The data in Figure 3 show the impacts of the change in the racial/ethnic composition on the number of children with selected health conditions. In this figure, the difference in the number with selected conditions for the 2008 and 2040 compositions are shown for the United States and Texas.

When one examines the numerical differences between the two scenarios in Figure 3 the impacts of the change in racial/ethnic composition are evident. For all conditions, the changing race/ethnicity composition of the child population increases the total number of persons with the condition. The largest increases for both the United States and Texas are the number of children with untreated cavities which increase by 10.8 percent for the United States and 14.9 percent for Texas.

The data in Figure 3 also show increases in the number of children experiencing each condition in Texas. These are increases directly attributable to the racial/ethnic change expected by 2040. These changes indicate that in Texas, as in the United States, the increases in the population that are largely attributed to minority, particularly Hispanic, population growth will lead to disproportionate increases in the number of children with negative health conditions.

Summary and Implications

This article has examined the effects of demographic change, in particular the effects of the change in the racial/ethnic diversity of future populations, in the United States and Texas, on the socioeconomic, educational and health conditions of the child population. The demographic,

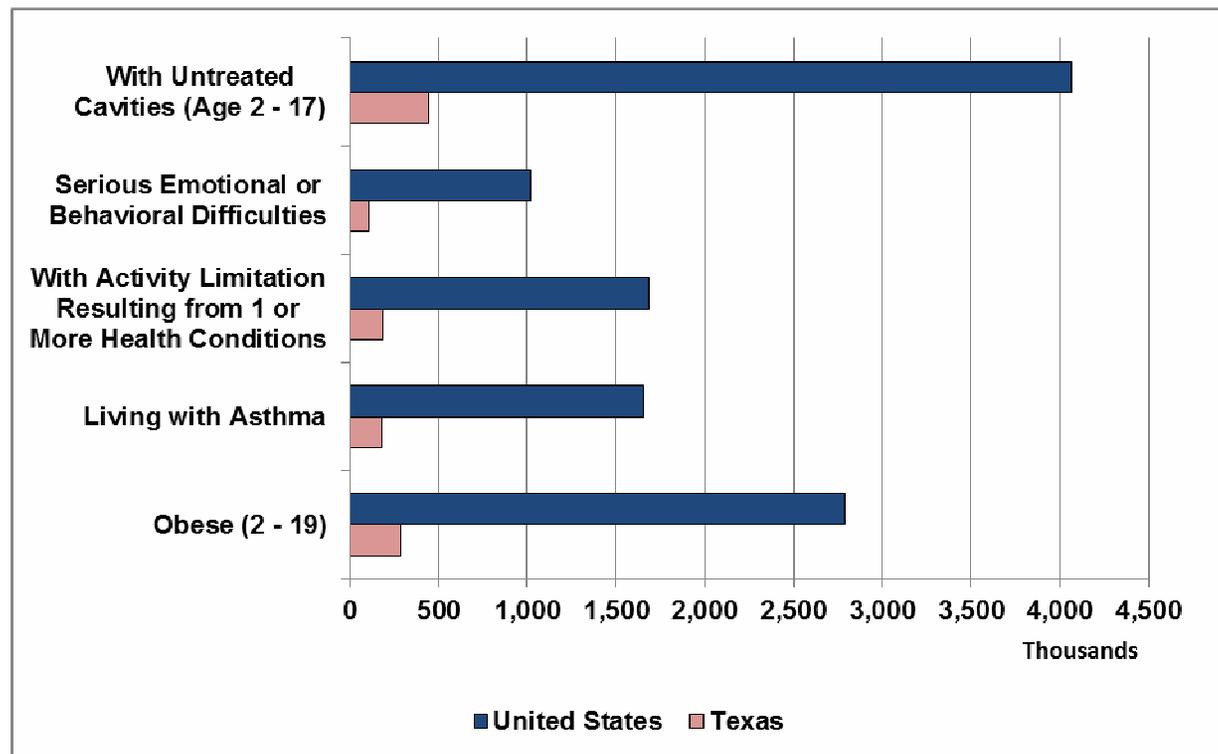


Figure 2: Estimated Number of Children in the United States and Texas in Poverty with Selected Health Conditions in 2008

Source: U.S. Center for Disease Control^{31,32}

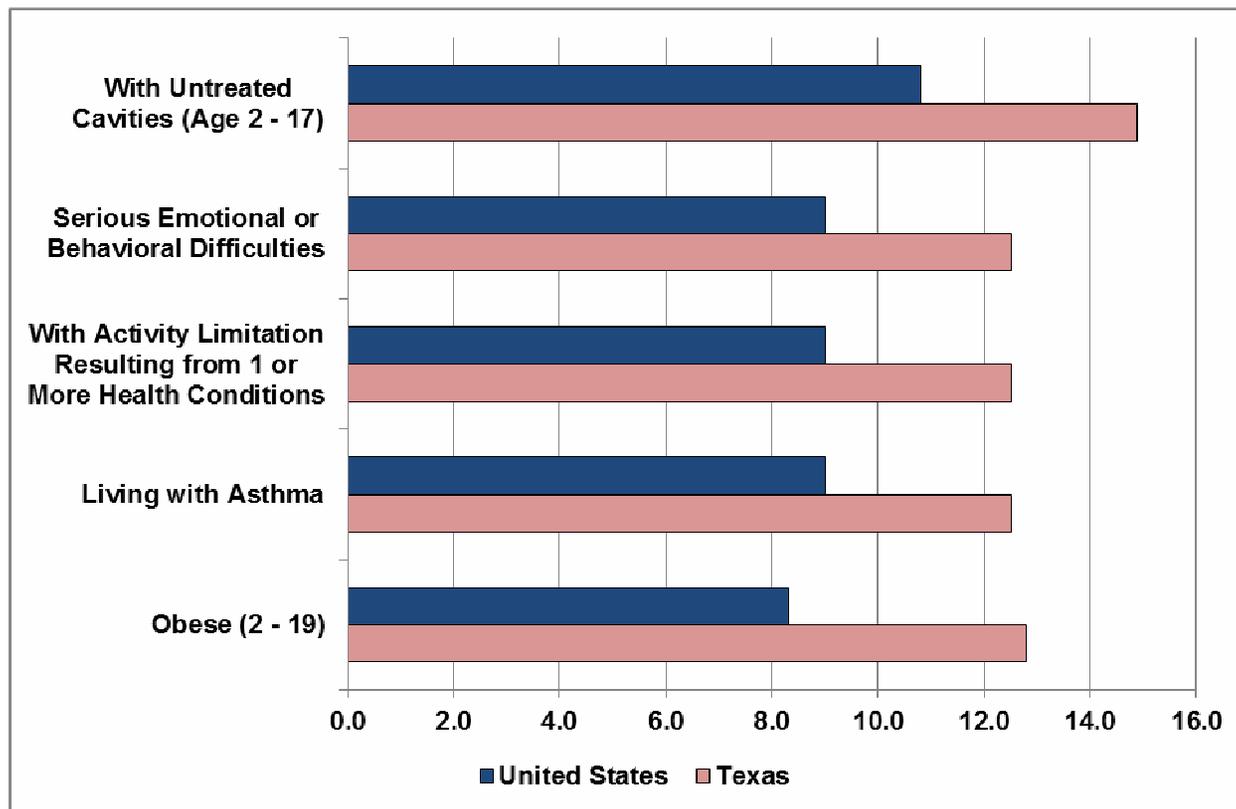


Figure 3: Percent Difference in the Incidence of Selected Health Conditions for Children in Poverty in the United States and Texas Due to Change in the Racial/Ethnic Composition of the Populations in the United States and Texas

socioeconomic, educational, and health conditions of children in the United States examined here form an interrelated set of conditions which jointly and interactively affect child well-being. We demonstrate through demographic simulations employing direct standardization techniques the effects of projected demographic trends in racial and ethnic composition in the absence of change in the socioeconomic, educational and health characteristics that are associated with minority population status. We document the effects of United States and Texas demographic change if nothing changes in the related socioeconomic conditions of the minority populations of children. We describe such patterns for the United States to demonstrate where the nation is headed in the absence of change and examine Texas as an example of a large, diverse, and rapidly growing state with a rapidly growing child, particularly Hispanic child population.

The results show that 2000 to 2008 patterns of change indicate relatively extensive population growth in the United States and in Texas. In both, however, a dominant pattern is that of very rapid racial/ethnic diversification in the population, particularly among children. Thus, whereas the non-Hispanic White population of children in the United States decreased by nearly 2.8 million from 2000 to 2008 and the non-Hispanic Black population declined by nearly 265,000, the non-Hispanic Other population increased by nearly 930,000 and the number of Hispanic children increased by nearly 3.8 million. Similarly, the number of non-Hispanic White children in Texas declined by nearly 48,000, and the number of non-Hispanic Black children increased by less than 42,000, but the non-Hispanic Other population of children increased by almost 116,000 and the number of Hispanic children increased by more than 729,000. As a result, the proportion of the United States child population that was Hispanic increased from 17.1 to 21.8 percent while the percentage that was non-Hispanic White decreased from 61.3 percent to 56.2 percent and in Texas the percentage of all children that were Hispanic increased from 40.5 percent in 2000 to 46.3 percent in 2008 while the percent of all children who were non-Hispanic White decreased from 42.9 percent in 2000 to 36.8 percent in 2008. The post-2000 period has witnessed rapid diversification in both the child population of the United States and that in rapidly growing states such as Texas.

Both the United States and Texas child populations are projected to grow extensively but they are projected to grow more slowly than the populations in other age groups because of the projected levels of change in the older population as well as the effects of immigration and (in the case of Texas) domestic in-migration as well. However, the child population of the United States is still projected to increase by more than

21.6 million from 2000 to 2040 and in Texas the child population will increase by more than 3.1 million. These represent projected increases of 30.0 percent in the child population of the United States from 2000 to 2040 compared to a total population increase of 44.1 percent while the child population of Texas is projected to increase by 53.6 percent and the total population by 115.2 percent from 2000 to 2040.

Racial/ethnic diversification is extensive in both areas with the percentage of all children who are non-Hispanic White in the United States declining from 61.3 percent in 2000 to 41.7 percent in 2040 and the percentage of children who are non-Hispanic Black declining from 14.9 to 11.8 percent while the percentage of non-Hispanic Other children increasing from 6.7 percent of the child population in 2000 to 11.0 percent of all children in 2040 and the percentage of all children who are Hispanic is projected to increase from 17.1 percent in 2000 to 35.5 percent of all children by 2040.

In Texas, the 2000 to 2040 changes show the percent of all children who are non-Hispanic White declining from 42.9 of the child population in 2000 to 21.5 percent in 2040, the percentage of children who are non-Hispanic Black declining from 12.6 to 9.4 percent, the percentage of children who are non-Hispanic Other children increasing from 4.0 to 5.6 percent and the percent of children who are Hispanic increasing from 40.5 percent of all children in Texas in 2000 to 63.5 percent of all Texas children in 2040.

As a basis for examining the effects of demographic change on poverty we examined patterns of child poverty by race/ethnicity for the United States and Texas which in 2008 showed high rates of poverty for non-Hispanic Black and Hispanic children of roughly 30 to 35 percent for both groups in both the United States and Texas with rates of 10 to 12 percent for non-Hispanic Whites and 13 to nearly 18 percent for non-Hispanic Other populations. The analysis of the impacts of race/ethnicity change in Tables 5 and 6 shows both a substantial increase in the number of children in poverty, an additional 1.8 million for the United States and more than 306,000 for Texas. They also show marked increases in the proportion that are minority, from 64.8 percent in 2008 to 76.2 percent by 2040 for the Nation and from 83.8 percent in 2008 to 91.7 percent minority in 2040 for Texas. Equally dramatic is the fact that, by 2040, 48.2 percent of all children in poverty in the United States will be Hispanic and 77.6 percent of all children in poverty in Texas will be Hispanic. If the projected changes occur in race/ethnicity and the relationship of minority status to poverty does not change the projected population change will not only increase the number of children in poverty but also the proportion of

children in poverty who are members of minority populations, particularly Hispanic populations.

The next section examined the effects of race/ethnicity change on educational change assuming that householders with children in poverty continue to have the same school completion levels as in 2008 in 2040. These data (in Table 7 for the United States and Table 8 for Texas) show already high rates of concentration of children in poverty in households where householders have low levels of education. Nearly 33 of all such householders in the United States and nearly 44 percent of such children in Texas had less than a high school level of education.

When such data are combined with projections with differentials in assumed rates of racial/ethnic change (compared to 2008 from none [current] to actual projected compositions) the results show a marked decrease in the educational attainment of the householders in households with children in poverty. In the United States (Table 9) the projected race/ethnicity change leads to a more than 1.8 million increase in the number of children in such poverty households with nearly 1.6 million of that increase being a result of increases in children living with householders with less than a high school level of education and with a majority of these children from the increases in the number of Hispanic children. In Texas (Table 10) the results show smaller overall increases but of the roughly 307,000 increase in the number of Texas children in poverty households roughly 245,000 of them would be living with householders with less than a high school level of education and most would be Hispanic.

The final factor examined is health status of the population. Selected indicators of health status are examined relative to children living in poverty in both the United States and Texas. The data for 2008 show substantial percentages of children with obesity, asthma, chronic health conditions, as well as problems such as untreated dental cavities. The number with such conditions exceeds 1 million for all conditions examined in the United States with as many as 4 million for the condition of untreated cavities and with at least 100,000 in all categories for Texas with as many as 443,000 needing dental care. The analysis comparing projected to the 2008 composition shows that, as with poverty and educational attainment, the projected change in both the United States and Texas populations will increase the number of children with health conditions requiring treatment, especially the number of Hispanic children needing care for such conditions.

Conclusions

We draw several overall conclusions. First, it is evident that most of the conditions that will impact minority children will primarily impact Hispanic children. Throughout the analysis the central role played by Hispanic children is evident. They are the dominant minority population and will come to form more than one-third of all children in the United States as a whole by 2040 and account for nearly two of every three children in Texas by 2040. In addition, they are particularly disadvantaged relative to income (with very high rates of poverty), education (with the highest percentage of children living with householders with less than a high school education), and have high rates of negative health outcomes. Addressing the needs of the nation's children and those child populations in states such as Texas will primarily require addressing the needs of Hispanic children. This, in turn, will require that one take into account language, a possible lack of familiarity with American practices and culture, and the need for substantial assistance in establishing a minimum economic base. The fact that so many of the children in need are those with the most dire levels of need, makes addressing the needs of Hispanic children especially important if we are to improve the conditions for all of America's children.

In sum, the results of this analysis are both clear and compelling. The demographic patterns projected for the United States and for rapidly growing states such as Texas are not only ones of increased population size but also of increasing racial/ethnic diversity with expansion in the numbers and proportions of minority children, particularly Hispanic children. Minority status is strongly associated with increased levels of poverty, decreased educational attainment and increased incidence of untreated health conditions. Unless this set of interrelated factors is altered so that they are not associated with minority status, the projected demographic patterns are ones that will lead to an increasingly impoverished, more poorly educated and less healthy population. The link between minority status and these factors must be broken by concerted actions because taking no action will cause simple demographic change to compound and concentrate the problems of poverty, the lack of adequate educational attainment and poor health among America's children. Doing nothing to improve the conditions of minority children will ensure not that the conditions of America's children will remain as they are but that they, in fact, will deteriorate.

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