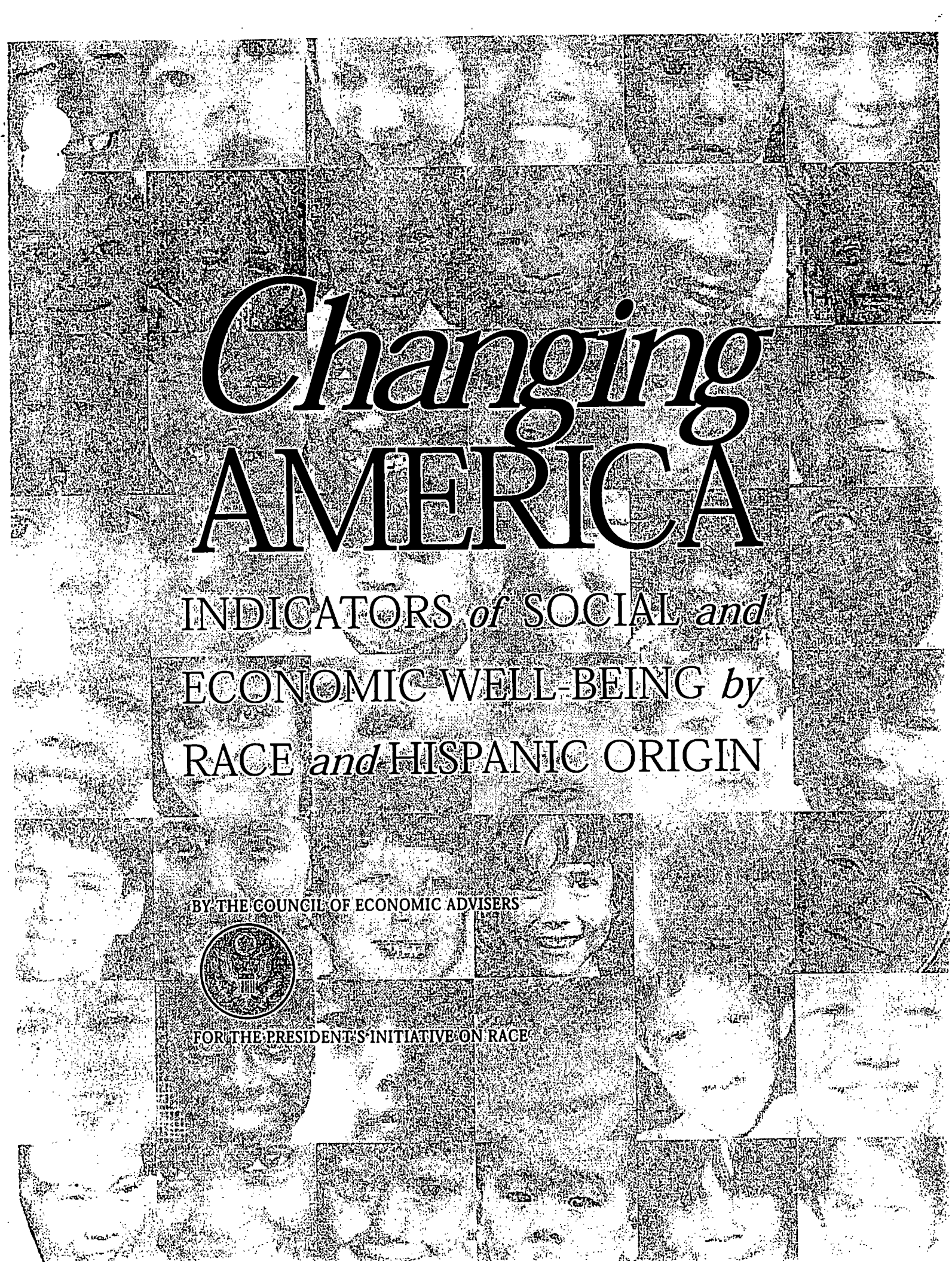




Changing AMERICA

INDICATORS *of* SOCIAL *and*
ECONOMIC WELL-BEING *by*
RACE *and* HISPANIC ORIGIN

BY THE COUNCIL OF ECONOMIC ADVISERS



FOR THE PRESIDENT'S INITIATIVE ON RACE

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September 1998

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- The National Center for Education Statistics
- The National Center for Health Statistics

We also thank the President's Initiative on Race and the Statistical Policy Office of the Office of Management and Budget for their extensive comments and assistance.

Presidential Foreword

As we approach the 21st century, America is once again a nation of new promise, with the opportunity to become the world's first truly multiracial, multiethnic democracy. In as few as 50 years, there may be no majority race in our nation. This rich and growing diversity should be a source of great pride and strength as we enter the new millennium.

In June 1997, I launched The President's Initiative on Race: One America in the 21st Century, in part to educate Americans about the facts surrounding the issue of race in America. I appointed an Advisory Board of seven distinguished Americans to help lead this national conversation. I also asked my entire Administration to participate in this effort and called upon all Americans to recognize the lingering problems and limitless possibilities of our diversity. We face a variety of racial challenges in our country, many of them deeply rooted in our history. If we are to harness the great opportunities within these challenges, we must better understand the contours and nature of racial issues.

By providing much needed information about racial disparities, this statistical chartbook provides the basis for an informed discussion about the problems faced by people of different races and backgrounds in America. There is much good news here, with improvements over the past 20 years for all Americans in education, in economic status, and in health. But in far too many areas, there are still troubling disparities between people of color and other Americans.

Understanding the disparities highlighted in this book is important, but to widen the circle of opportunity for all Americans, we must also continue to act. We must make sure that our federal, state, and local governments, our public schools, our health care system, and our courts deal fairly with all people and provide equal opportunities for every American to participate fully in our society. We must also reach out to our neighbors and co-workers of other races or ethnicities, for it is only by getting to know one another that we will realize that what unites us is far stronger than what divides us.

Only by honestly confronting the walls that continue to separate us, can we break down those walls and move closer to creating a community in which we recognize diversity as a source of strength rather than a cause of division. A decade from now, I hope that people will look back and see that this Initiative made a difference by supplying much needed information, encouraging conversation, and inspiring concrete actions to provide equal opportunity for all Americans. I hope that when we revisit the facts and trends presented in this book, we will see much progress in closing racial gaps. Above all, I hope we will continue to build on that progress, and continue to build one America in the 21st Century.

Bill Clinton

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I. Introduction

"I believe the greatest challenge we face . . . is also our greatest opportunity. Of all the questions of discrimination and prejudice that still exist in our society, the most perplexing one is the oldest, and in some ways today, the newest: the problem of race. Can we fulfill the promise of America by embracing all our citizens of all races? . . . In short, can we become one America in the 21st Century?"

President Clinton

President's Initiative on Race Announcement at the
University of California at San Diego Commencement, 1997

This chart book is intended to document current differences in well-being by race and Hispanic origin and to describe how such differences have evolved over the past several decades. It has been produced for the President's Initiative on Race by the Council of Economic Advisers in consultation with the Federal statistical agencies. The book is designed to further one of the goals of this initiative: to educate Americans about the facts surrounding the issue of race in America.

The charts included in this book show key indicators of well-being in seven broad categories: population, education, labor markets, economic status, health, crime and criminal justice, and housing and neighborhoods. This information provides a benchmark for measuring future progress and can highlight priority areas for reducing disparities in well-being across racial and ethnic groups, another goal of the President's Initiative on Race. The indicators in the charts were selected on the basis of their importance for economic and social well-being, as well as the quality and availability of data (for example, availability of longer time trends or information on more groups). A book of this size cannot encompass all important aspects of social and economic life. Instead, these charts are a place to begin. The appendix indicates how to access additional information on these topics from Federal government agencies.

The American record of the past 50 years has been one of tremendous progress in areas such as education, health and longevity, and economic growth, but deterioration in other areas, such as incarceration rates, divorce, and the likelihood that a child is born outside of marriage. Life expectancy at birth increased from 68 years to 76 years between 1950 and 1996, and the infant mortality rate has fallen from 29 per thousand live births to 7 over the same period. Per capita income, adjusted for inflation, has more than doubled since 1950. The proportion of American adults with a high school education increased from 34 percent in 1950 to 82 percent in 1996. The fraction of households living in inadequate housing fell from 10.2 percent in 1976 (the first year for which data are available) to 6.5 percent in 1995.

Although all racial and ethnic groups considered here have experienced substantial improvements in well-being over the second half of this century, disparities between groups have persisted or, in some cases, widened. Blacks, Hispanics, and American Indians continue to suffer disadvantages in opportunity and in material and physical well-being. These disadvantages appear in many arenas, but they are larger in some than in others. For example, although the Hispanic poverty rate is far higher than that of non-Hispanic whites, differences in infant mortality between Hispanics and non-Hispanic whites are relatively modest. Blacks have nearly closed the gap with non-Hispanic whites in the attainment of a high school degree, but the gap between blacks and non-Hispanic whites in the completion of a four-year college degree has widened.

Several themes emerge from the data presented in this document.

- Race and ethnicity continue to be salient predictors of well-being in American society. On average, non-Hispanic whites and Asians experience advantages in health, education, and economic status relative to blacks, Hispanics, and American Indians.
- Over the second half of the 20th century, black Americans have made substantial progress relative to whites in many areas. But this progress generally slowed, or even reversed, between the mid-1970s and the early 1990s. In many cases, large disparities persist.
- The relative economic status of Hispanics has generally declined over the past 25 years. However, the Hispanic population has grown rapidly, more than doubling in size between 1980 and 1997, in large part because of immigration. Thus, in interpreting trends in the relative well-being of Hispanics, it is important to keep in mind that the increasing representation of Hispanic immigrants with lower average levels of education and income has contributed to the decline in average Hispanic social and economic well-being.
- Asians and Pacific Islanders, on average, are nearly as well-off as non-Hispanic whites according to many indicators. There is great diversity within this population, however, and some subpopulations are quite disadvantaged. The fact that Asians have both a higher median income and a higher poverty rate than non-Hispanic whites, for example, illustrates the economic diversity of the Asian population.
- American Indians are among the most disadvantaged Americans according to many available indicators, such as poverty rate and median income, although comparable data for this group are sparse due to their small representation in the population.

The charts in this book generally show averages or medians of indicators for each race or Hispanic origin category and therefore do not attempt to capture the diversity within these groups. For instance, Cuban Americans have much higher median family income than Dominican Americans according to the 1990 census, but both are included in the "Hispanic" category. Median family income for Japanese Americans was more than twice that of Cambodian, Laotian, and Hmong Americans in 1990, but all are included in the "Asian and Pacific Islander" category. Diversity exists within all groups, including diversity across ethnic groups within the non-Hispanic white population. Unfortunately, this book does not have the space to present data for all subpopulations, nor do such data exist for many indicators. Nonetheless, the population categories shown here are among the most salient in America today.

The classification of individuals by race and ethnicity is a complex and controversial undertaking. The concepts of race and ethnicity lack precise and universally accepted definitions. Their economic and social significance depend on a variety of factors, including how individuals identify themselves racially or ethnically and how others identify and treat them. Most of the data collected by the Federal statistical agencies are classified by self-reported race and ethnicity. (Notable exceptions are mortality statistics.) Most of these data are collected through household surveys and the decennial censuses, in which respondents are asked to identify their race in one question and whether or not they are of Hispanic origin in a separate question. Whenever possible, data for the following five categories are presented:

- Hispanic, may be of any race,
- White, not of Hispanic origin,
- Black, not of Hispanic origin,
- Asian, including Pacific Islander,
- American Indian, including Alaska Native (Alaskan Eskimo and Aleut).

In this book, categories of race and Hispanic origin are labeled as they were labeled in most of the surveys at the time the data were collected. For example, the terms "black" and "Hispanic" are used rather than "African American" or "Latino." It should be noted, however, that the Office of Management and Budget revised the standards for classifying Federal data on race and ethnicity in October 1997. The new standards permit respondents to mark one or more race categories on survey questionnaires and other Federal reporting forms. In addition, the "Asian and Pacific Islander" category has been divided into two categories: "Asian" and "Native Hawaiian or Other Pacific Islander." The "black" category has been changed to "Black or African American." There will continue to be a separate question on Hispanic origin, which will have two categories: "Hispanic or Latino" and "Not Hispanic or Latino."

Published data are not always available for all of the groups described above. At times statistics are lacking because survey sample sizes are too small to yield reliable estimates for smaller populations such as American Indians or Asians. (In some cases, data from the 1990 census are presented for these groups.) In addition, statistical agencies tabulate published data using different classifications. For example, as noted above, Hispanics may be of any race. Some agencies tabulate data for Hispanics but also include Hispanics in tabulations for the categories white and black. In a few cases, agencies have changed the way they tabulate data over time as well. The labels and notes for each chart indicate these differences in data classification. (Unless otherwise noted, data for Asians include Hispanic Asians, and data for American Indians include Hispanic American Indians.)

This book is divided into seven sections. Each section begins with a brief introduction and an overview of the charts presented in that section. These introductions provide background information on the concepts addressed in the section, including references to some key research articles. In addition, each chart is accompanied by bullet points, which highlight the important information in the chart and also provide related information that may not appear in the charts. The appendix provides a list of other government publications and internet addresses where the reader can find more information on all of the topics covered in this book.

II. Population

The population of the United States is becoming increasingly diverse. In recent years, Hispanics and minority racial groups¹—non-Hispanic blacks, Asians, and American Indians—have each grown faster than the population as a whole (Population 1). In 1970 these groups together represented only 16 percent of the population. By 1998 this share had increased to 27 percent. Assuming current trends continue, the Bureau of the Census projects that these groups will account for almost half of the U.S. population by 2050. Although such projections are necessarily imprecise, they do indicate that the racial and ethnic diversity of the United States will grow substantially in the next century.

Immigration has played a major role in increasing diversity of the population by contributing to the rapid growth of the Asian and Hispanic populations since the 1960s. In 1997, 38 percent of the Hispanic population and 61 percent of the Asian population were foreign-born, compared with 8 percent of the white population, 6 percent of the black population, and 6 percent of the American Indian population (Population 2). The increased immigration of Asians and Hispanics over the past several decades is largely the result of changes in immigration policy. In particular, the 1965 Immigration Act ended the system of national origin quotas that had previously restricted immigration from non-European countries.² The Immigration Reform and Control Act of 1986 also contributed to the increase in the documented Asian and Hispanic populations by legalizing a large number of immigrants.

While immigration of Asians and Hispanics has increased, population growth has slowed dramatically for the nation as a whole, largely due to declining fertility rates among non-Hispanic blacks and non-Hispanic whites. As a result of this declining fertility, the non-Hispanic white share of the population has fallen since 1970, and the non-Hispanic black share of the population has increased only slightly.

Changes in racial and ethnic identification have also contributed to the increase in (measured) racial and ethnic diversity. These changes are most important for the American Indian population, which has increased more in recent years than can be accounted for by deaths, births, immigration, and improvements in census coverage. The increase in the American Indian population suggests that people are more likely to identify themselves as American Indian in the census than they were in the past.³

National changes in the composition of the population mask differences across and within regions. (Population 3). The geographical distribution of racial and ethnic groups is important because it influences the potential for social and economic interaction between them. According to Census Bureau projections, in 1995 the West had the highest concentration of minorities (36 percent), followed by the South (30 percent), the Northeast (23 percent), and the Midwest (15 percent). Non-Hispanic blacks are most likely to live in the South, while Asians, Hispanics, and American Indians are most likely to live in the West.

Racial composition also varies from the center cities of metropolitan areas, to the suburbs (metropolitan areas outside center cities), to nonmetropolitan areas. Hispanics, blacks, and Asians are more likely than non-Hispanic whites to live in central cities—in 1996 more than half of blacks and Hispanics and nearly half of Asians lived in central cities, compared with less than a quarter of non-Hispanic whites (Population 4). In contrast, over half of all non-Hispanic whites lived in the suburbs in 1996, as did 48 percent of Asians. American Indians are by far the most likely to live in nonmetropolitan areas; in 1990 nearly half of the American Indian population lived outside of metropolitan areas.

As the population becomes more diverse, opportunities for social interaction with members of other racial and ethnic groups should increase. Intergroup marriage (marriage between persons of different races or Hispanic origin) is one measure of social interaction (Population 5). The number of interracial married couples (marriage between persons of different races) has increased dramatically over the past several decades, more than tripling since 1960. However, interracial married couples still represented only about 2 percent, and intergroup couples 4 percent, of all married couples in 1990.⁴

Many demographic characteristics affect economic and social status and play some role in explaining differentials in well-being among the populations discussed in this book. For instance, immigration has lowered the relative socioeconomic status of the U.S. Hispanic population, since Hispanic immigrants tend to have lower levels of education and income than the Hispanic population as a whole.

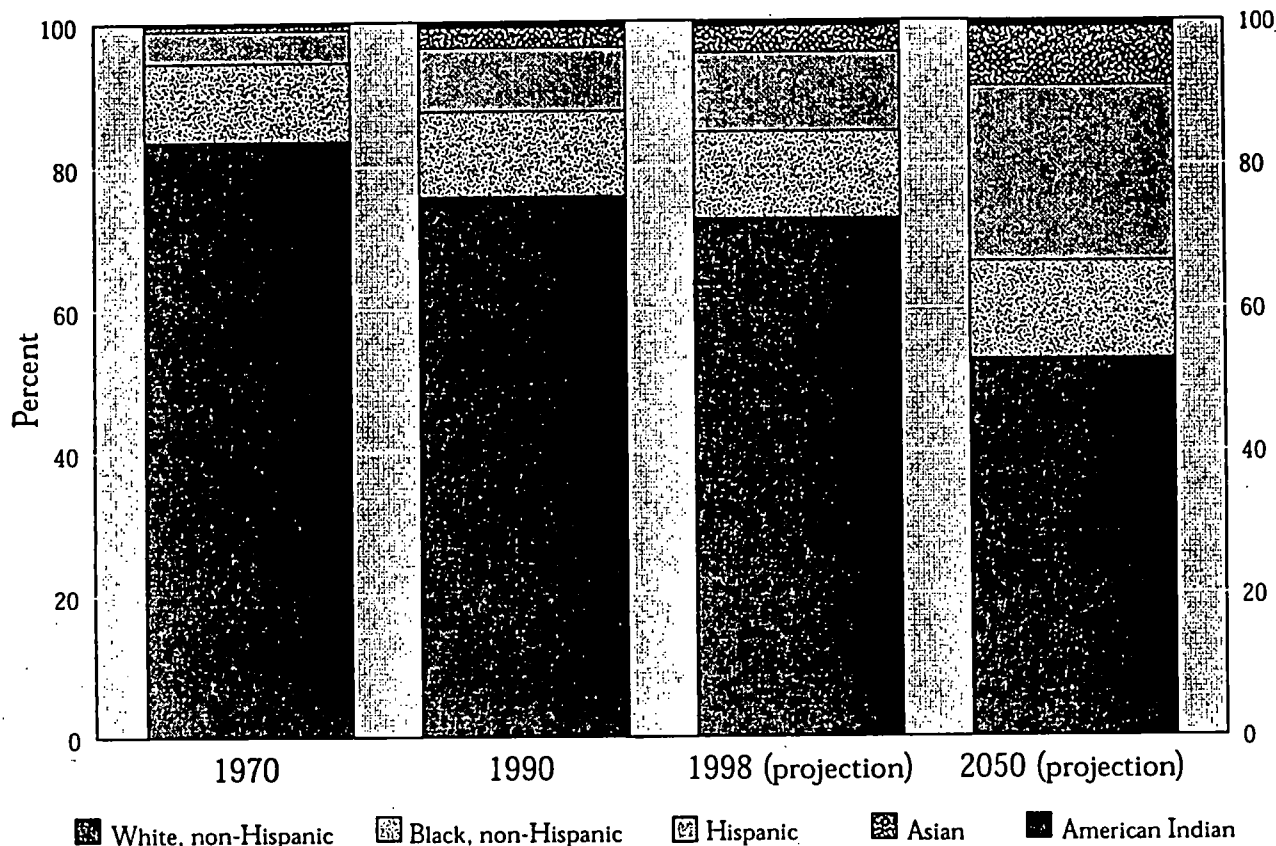
Other demographic characteristics with important effects on social and economic status include household structure and age distribution. In particular, growth of child poverty has often been associated with the rising share of single-parent families. Since 1970 the fraction of families maintained by a single parent has increased for all groups (Population 6) and is highest among blacks (38 percent), American Indians (26 percent), and Hispanics (26 percent). Household structure is also affected by economic status; for example, the greater tendency of the elderly to head their own households has been linked to their growing wealth.

Differences in the age distribution of populations (Population 7) may affect their rates of growth as well as differences in average economic and social well-being. For example, poverty rates are highest among children, and rates of criminal activity are highest among young adults. On average, the non-Hispanic white population is considerably older than the population as a whole. Only 24 percent of the non-Hispanic white population is below the age of 18, compared with about 30 percent of non-Hispanic blacks and Asians and about 35 percent of American Indians and Hispanics. Differences in age distributions between racial and ethnic groups reflect differences in death rates, fertility rates, rates of net immigration, and the age of immigrants.

1. For the purposes of this report, the term "minority" is used to refer to racial and ethnic groups that are less than 50 percent of the population.
2. Harrison, Roderick J. and Claudette E. Bennett. 1995. "Racial and Ethnic Diversity." In *State of the Union: America in the 1990s*, ed. Reynolds Farley. Vol. 2: Social Trends. New York: Russell Sage Foundation.
3. Passel, Jeffrey S. 1996. "The Growing American Indian Population, 1960-1990: Beyond Demography." In *Changing Numbers, Changing Needs: American Indian Demography and Public Health*, ed. Gary D. Sandefur, Ronald R. Rindfuss, and Barney Cohen. Washington, DC: National Academy Press.
4. Harrison and Bennett. "Racial and Ethnic Diversity."

1. Racial/Ethnic Composition of the Population

Source: Bureau of the Census

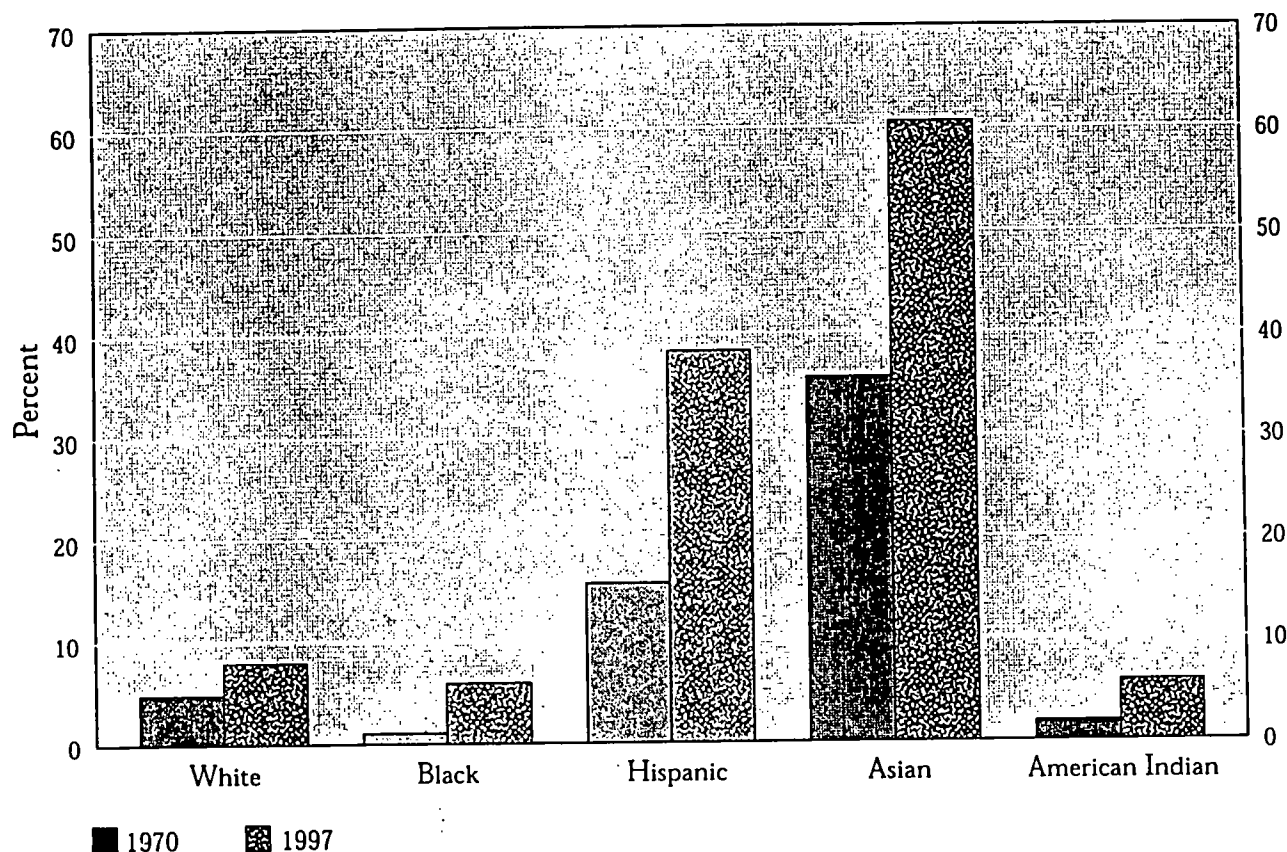


- The share of the U.S. population that is non-Hispanic black, Asian, Hispanic, and American Indian has increased since 1970. The American Indian population has grown more than can be accounted for by birth rates, death rates, and immigration, suggesting that a substantial portion of this increase has resulted from increased reporting of American Indian racial identification.
- If recent demographic trends continue, Asians, non-Hispanic blacks, Hispanics, and American Indians together will approach 50 percent of the population by the year 2050.
- Around the year 2005, Hispanics, who may be of any race, are projected to be the largest of the minority groups considered here.

Note: Data for Asians exclude Hispanic Asians, and data for American Indians exclude Hispanic American Indians. In 1970, data for Asians are for Japanese, Chinese, Filipinos, Koreans, and Hawaiians.

2. Foreign-Born Population

Source: Bureau of the Census

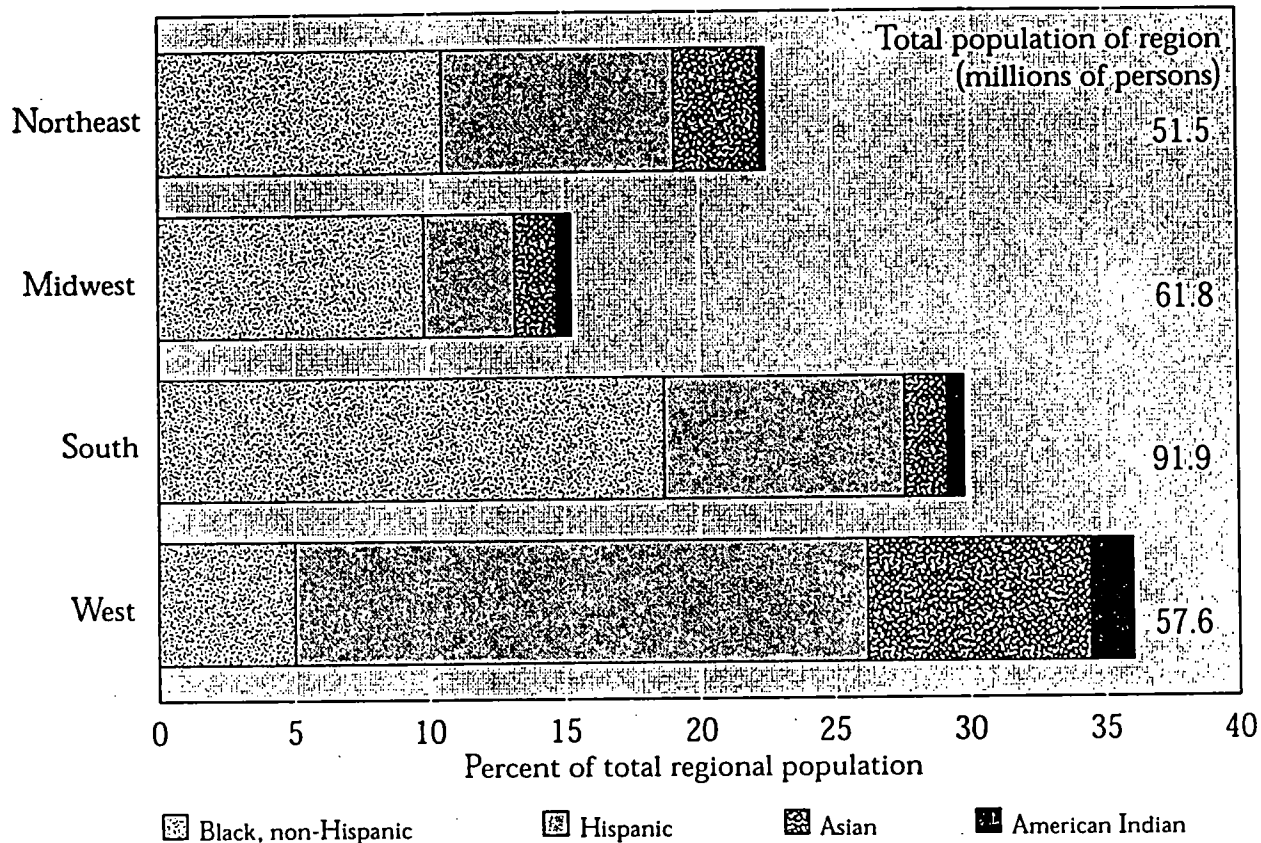


- Among all groups, the fraction of the population that is foreign-born increased between 1970 and 1997.
- As of 1997, 61 percent of the Asian population and 38 percent of the Hispanic population were foreign-born. In contrast, only 8 percent of whites, 6 percent of blacks, and 6 percent of American Indians were foreign-born.
- The immigrant population represents a wide range of social and economic backgrounds. On average, Asian immigrants are highly educated and have high incomes. Hispanic immigrants, along with immigrants from some Asian countries, have relatively low average levels of educational attainment and income.

Note: In 1970, data for Asians are for Japanese, Chinese, Filipinos, Koreans and Hawaiians.

3. Minority Population by Region, 1995

Source: Bureau of the Census

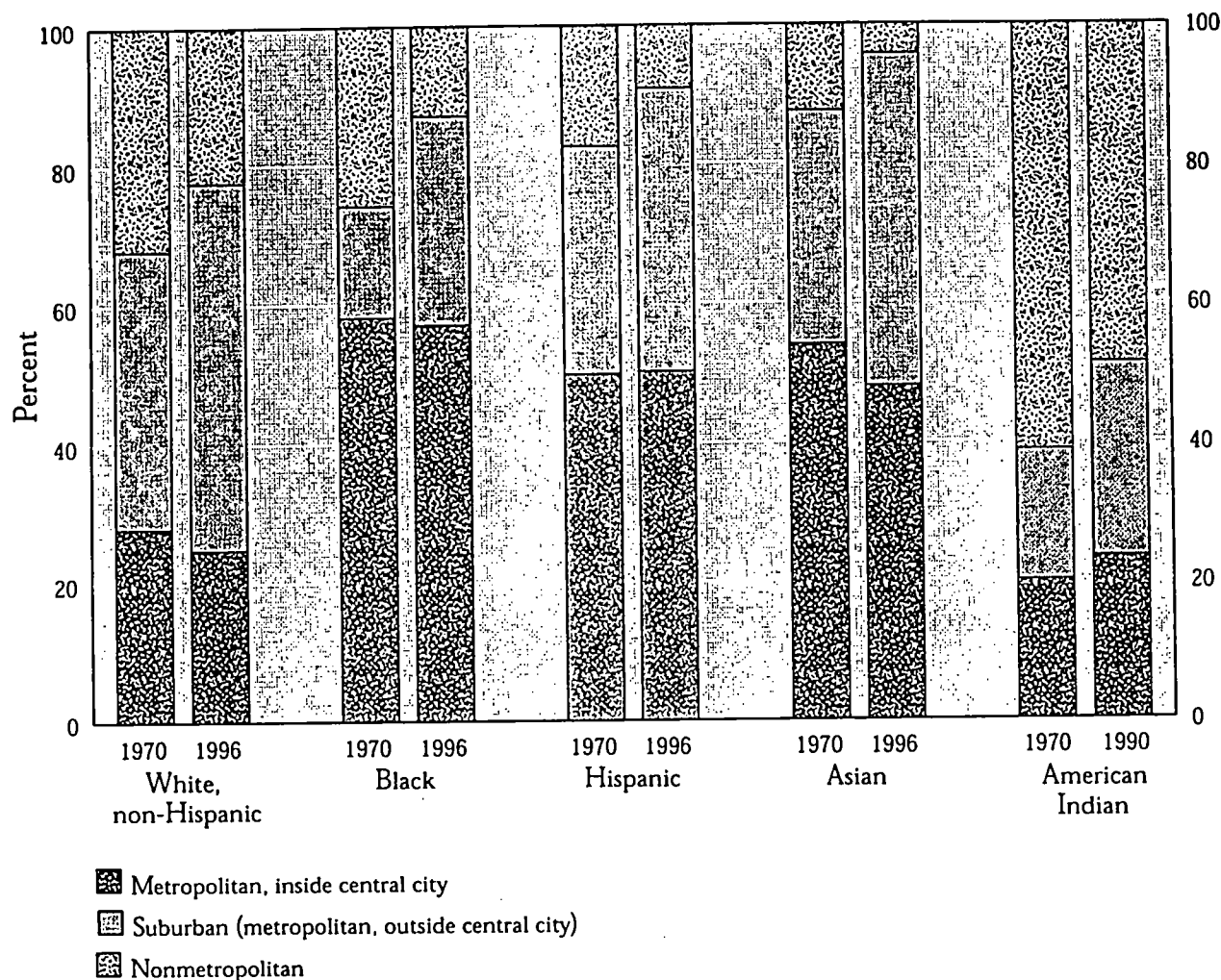


- Hispanics and members of racial minority groups are not evenly distributed across regions of the country. The differing distribution of these populations across regions may contribute to differences in individuals' experiences of racial and ethnic diversity.
- The highest concentration of Hispanics and members of racial minority populations is found in the West (36 percent), followed by the South (30 percent), the Northeast (23 percent), and the Midwest (15 percent).
- More than half of non-Hispanic blacks live in the South. About half of American Indians, Hispanics, and Asians live in the West.
- In general, the minority share of the population has increased in all four regions since 1970 (not shown in chart). The Hispanic population has grown considerably in the West and the South, and the Asian population has grown considerably in the West.

Note: Data for Asians exclude Hispanic Asians, and data for American Indians exclude Hispanic American Indians. Data are projections based on the 1990 census.

4. Metropolitan and Nonmetropolitan Residence

Source: Bureau of the Census

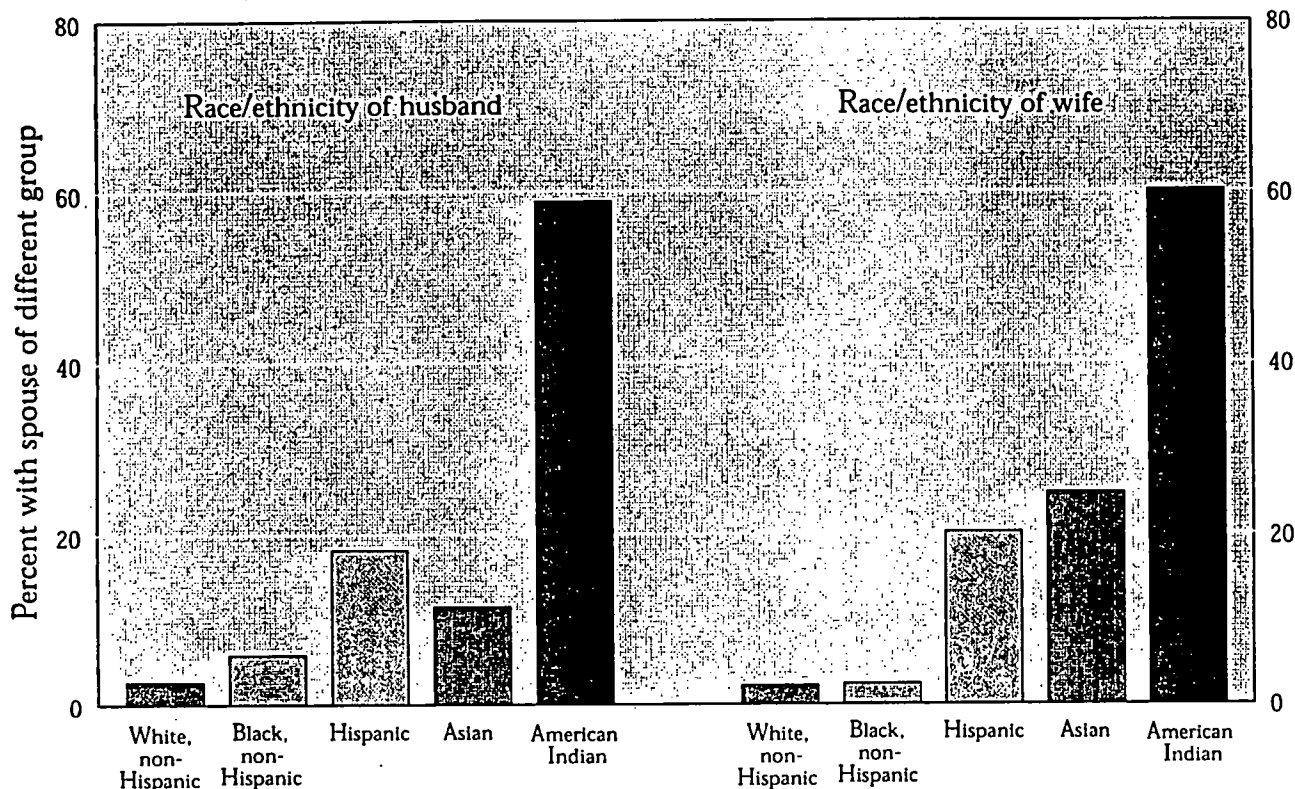


- Residents of nonmetropolitan, central city, and suburban areas may have different public service needs and different political interests.
- Blacks, Asians, and Hispanics are more likely to live in central cities of metropolitan areas than are non-Hispanic whites or American Indians.
- A large percentage of non-Hispanic whites and Asians live in suburbs. The fraction living in suburbs has increased since 1970 among all groups.
- Nearly half of American Indians in 1990, and nearly one quarter of non-Hispanic whites in 1996, lived outside of metropolitan areas. These nonmetropolitan proportions of the population are shrinking for all groups, however.

Note: In 1970, data for whites include Hispanic whites. In 1970, data for Asians are for Japanese, Chinese, and Filipinos. Data for 1996 are not available for American Indians.

5. Intergroup Married Couples, 1990

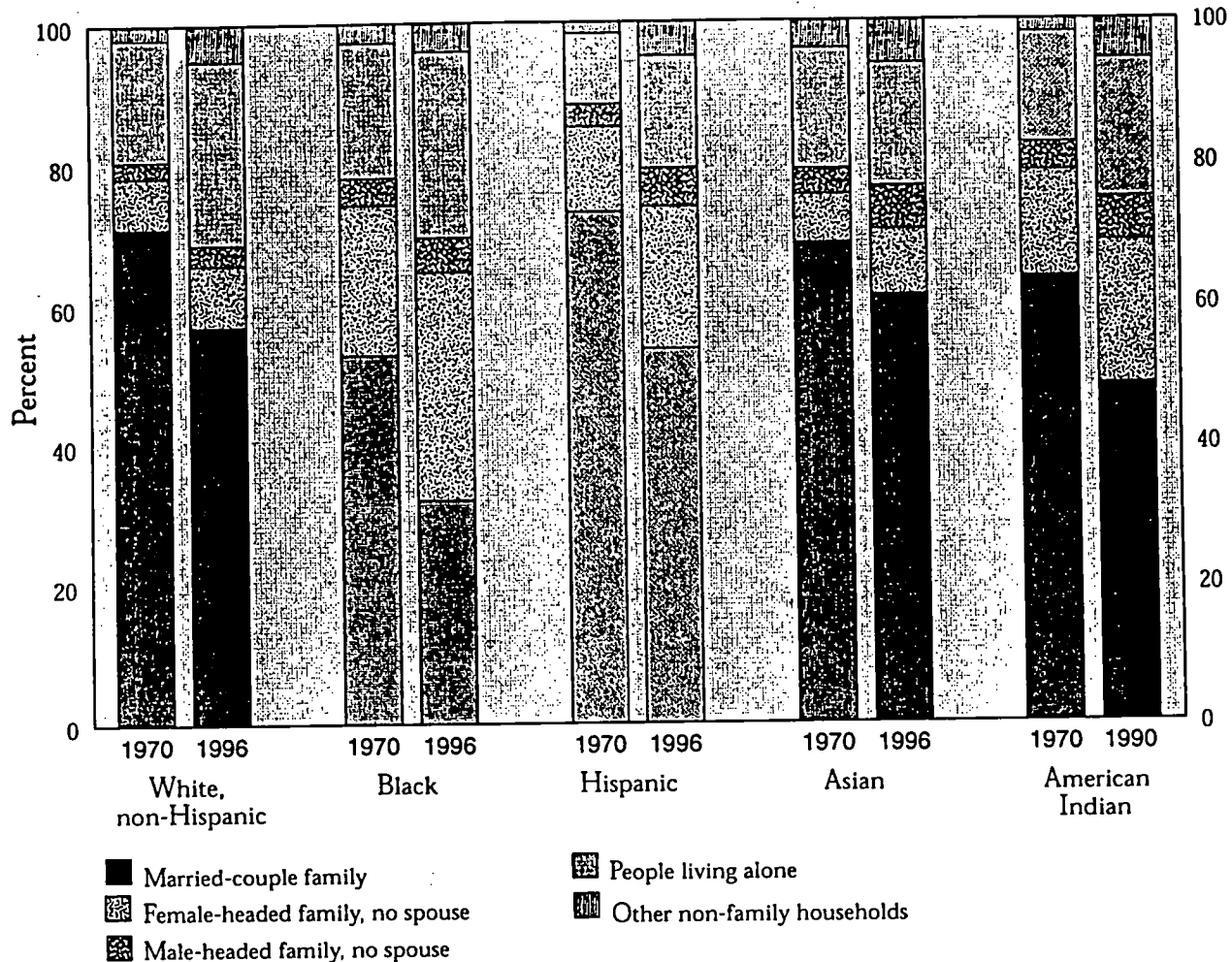
Source: Bureau of the Census



- Intergroup marriage (marriage between persons of different races or Hispanic origin) is an indicator of social integration. This chart shows on the left the percentage of married men who are members of intergroup couples and on the right the percentage of married women who are members of intergroup couples.
- Between 1960 and 1990, interracial married couples (not including marriages between Hispanics and non-Hispanics) more than tripled as a percentage of all married couples (not shown in chart). However, intergroup married couples still accounted for only 4 percent of all married couples in 1990.
- Non-Hispanic blacks and non-Hispanic whites are proportionately least likely to marry outside their groups. When non-Hispanic whites marry members of minority groups, they are least likely to marry non-Hispanic blacks (not shown in chart).

6. Household Structure

Source: Bureau of the Census

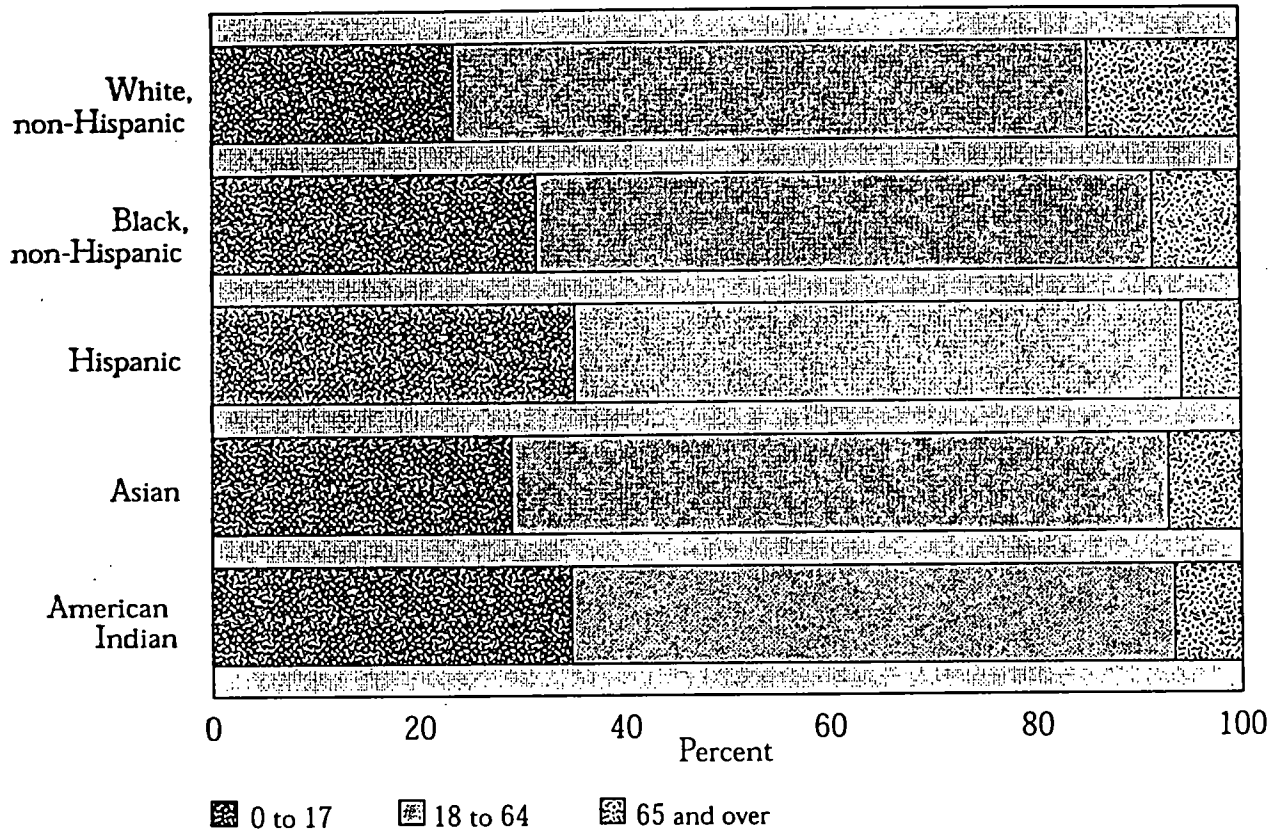


- Because resources can be pooled in households, household structure influences an individual's economic well-being. Changes in household structure may influence and be influenced by economic status. For example, child poverty is higher in single-parent families, and as the wealth of older persons has increased, they have become more likely to head their own households.
- Since 1970, the fraction of households maintained by a married couple has declined substantially; this decline has been greatest for blacks.
- The fraction of households maintained by a single parent has increased for all groups. The increase has occurred for both families maintained by single females and single males, although male-headed families with no spouse present make up less than one quarter of single-parent families.
- Since 1970, the fraction of households composed of only one person has increased for all groups. Other non-family households (unrelated individuals living together) have also increased as a fraction of all households for all groups over this period.

Note: In 1970, data for whites include Hispanic whites. In 1970, data for Asians are for Japanese, Chinese, and Filipinos. Data for 1996 are not available for American Indians.

7. Age Distribution, 1997

Source: Bureau of the Census



- Differences in age distributions between population groups reflect differences in death rates, fertility rates, rates of net immigration, and the age of immigrants. These age differences can contribute to differences in economic, health, or social status across racial and ethnic groups.
- The non-Hispanic white population is older, on average, than other groups. Less than 25 percent of non-Hispanic whites are below the age of 17, compared with nearly 30 percent of Asians and more than 30 percent of Hispanics, non-Hispanic blacks, and American Indians. In part, the young average age of Asians and Hispanics reflects the many children born to new immigrants in these groups, since new immigrants are likely to be of childbearing age.
- The school-aged population (persons aged 5 to 17, not shown separately in chart) is more racially and ethnically diverse than the population as a whole; the racial/ethnic composition of this population resembles the projected composition of the population as a whole for 2010.

III. Education

Educational attainment is one of the most important indicators of lifetime economic opportunities. Higher educational attainment is associated with lower unemployment and higher wages, higher family income, and better health for adults and their children. A substantial portion of gaps in well-being among racial and ethnic groups can be accounted for by differences in educational opportunities and attainment. Studies find that improvement in the economic status of blacks in the 1960s and early 1970s resulted in part from improvements in educational attainment and school quality, especially in the South.¹

Blacks, Hispanics, and American Indians continue to experience educational disadvantages. Black and Hispanic children are more likely than non-Hispanic white children to be poor (Economic Status 3) and to have parents with lower education levels. As a result, they often begin life with disadvantages related to family financial and educational resources. Research is mounting about the importance of a stimulating environment for early childhood development, starting in infancy. This education begins at home. It is not until age three that children typically enter preschools or Head Start programs designed to promote school readiness. The most important teachers for children under the age of five are family members. For example, reading to young children helps them learn to speak and, later, to read and write.²

Young non-Hispanic black and Hispanic children are less likely than their non-Hispanic white counterparts to be read to by family members or to be told a story (Education 1). Because reading to children increases sharply with parent's educational attainment,³ some differences in reading to children across racial and ethnic groups are likely to be related to parental education.

Some social policies attempt to improve educational opportunities by providing enriched early childhood educational opportunities through programs such as Head Start, the largest federal program for early childhood education of economically disadvantaged children. Partly as a result of such policies, non-Hispanic black children aged four are significantly more likely than non-Hispanic white children to be enrolled in a preschool program (Education 2). Research has found that Head Start and other preschool programs promote children's cognitive development and achievement. Some research has found that the effects of Head Start are largest for Hispanics, perhaps because it provides an advantage in English language acquisition for children from homes where English is not the primary language spoken. The research literature is unsettled on the question of whether the beneficial effects of preschool interventions persist or fade as children age. One recent study reported that gains found for black children in the Head Start program fade if the children enter poor quality elementary schools but persist if their elementary schools are of good quality.⁴

Computing skills are valued in the labor market, and demand for workers with computer skills has increased markedly over the past 25 years.⁵ Computer use by children, whether at home or at school, grew between 1984 and 1993 (Education 3). However, the increase in use at home was greatest for non-Hispanic whites, and in 1993 non-Hispanic blacks and Hispanics were considerably less likely to use a computer at home or at school than non-Hispanic whites. Lower levels of computer usage among non-Hispanic black and Hispanic children are probably related to lower income levels among these groups; in general, children from families with higher incomes were more likely to have used a computer at home or at school than children from families with lower incomes.

Higher scores on math and reading proficiency tests are associated with higher future educational attainment; they are also associated with future success in the labor market, even among individuals with similar levels of education.⁶ Non-Hispanic black and Hispanic children score lower on achievement tests, on average, than non-Hispanic white children at similar ages (Education 4 and 5). Like many other indicators of educational progress, however, between-group differences in achievement test scores may be influenced by differences in a variety of social and economic factors, including school quality, parental education, and family income.

Higher educational attainment is associated with improved socioeconomic status, higher wage rates, and better health. In addition, parents' education is associated with better health, development, and educational attainment for their children. Educational attainment has been steadily increasing (Education 6). The fraction of the population aged 25 and older who completed high school (or equivalent) exceeded 50 percent for all groups in 1997 and is 75 percent or higher for blacks, non-Hispanic whites, and Asians. The increase in attainment has been faster among blacks, non-Hispanic whites, and Asians than among Hispanics. Attainment has increased markedly among blacks since the 1940s, and between 1980 and 1997 the fraction of blacks who did not complete high school dropped from nearly half to one quarter. Nonetheless, in 1997 blacks were considerably less likely than non-Hispanic whites to have completed a college, professional, or doctoral degree. Asians have by far the highest level of educational attainment of any of these groups. Generally, Asians' educational attainment increased since 1980 as more attended and completed college.

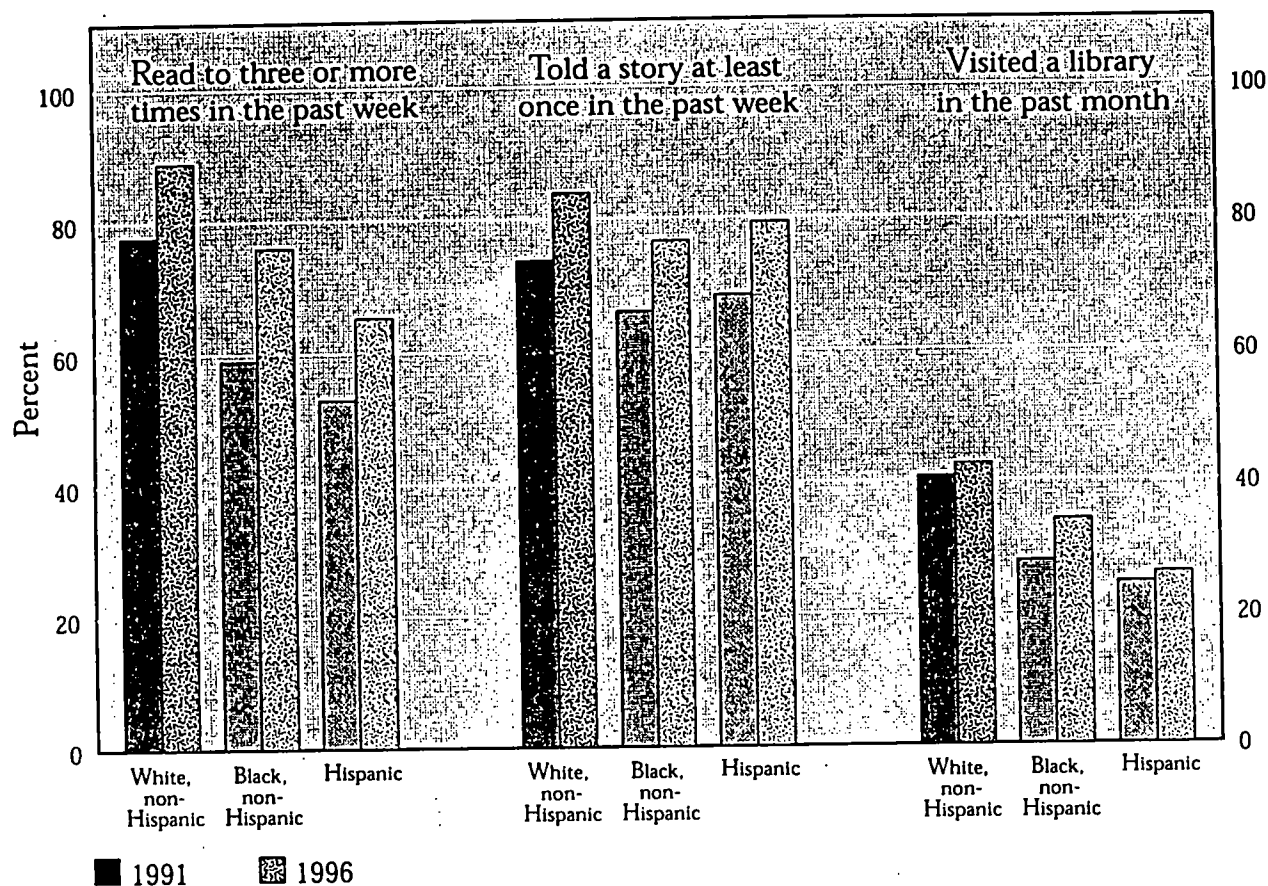
In 1997, about 45 percent of Hispanic adults 25 and older had not completed high school. High school attainment of Hispanic adults has improved only slowly over the past 15 years (Education 6), and progress has also been slow among Hispanics aged 25 to 29 (Education 7). Among those who have completed high school, however, the fraction completing at least some college rose from 31 percent in 1971 to 54 percent in 1997. Educational attainment has increased faster for native-born Hispanics than for the Hispanic population as a whole. In 1990 the high school completion rate of native-born Hispanics was comparable to that of non-Hispanic blacks, whereas that of Hispanic immigrants was considerably lower.⁷ Thus, the slow increase in average educational attainment of Hispanics is at least partly due to the increasing representation of immigrants with lower educational attainment in the Hispanic population.

Since education is usually completed at younger ages, data on attainment among younger adults provide a better sense of current educational opportunities and conditions. The percentage of 25- to 29-year olds with a high school diploma is nearly as high among non-Hispanic blacks as among non-Hispanic whites (Education 7). However, Hispanics aged 25 to 29 continue to have lower rates of high school completion. And, although young blacks are attending college at increasing rates, the gap in college completion between young non-Hispanic blacks and non-Hispanic whites did not narrow appreciably over the 1980s (Education 8).

1. Donohue, John J. III and James Heckman. 1991. "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks." *Journal of Economic Literature* 29 (December):1603-43.
2. Wells, Gordon. 1985. "Preschool Literacy-Related Activities and Success in School." In *Literacy, Language, and Learning: The Nature and Consequences of Literacy*, ed. David R. Olson, Nancy Torrance, and Angela Hildyard. Cambridge, England: Cambridge University Press.
3. Federal Interagency Forum on Child and Family Statistics. 1997. *America's Children: Key National Indicators of Well-Being*. Washington, DC: U.S. Government Printing Office.
4. Currie, Janet and Duncan Thomas. 1996. "Does Head Start Help Hispanic Children?" RAND Labor and Population Working Paper No. 96-17; Currie and Thomas. 1995. "Does Head Start Make a Difference?" *American Economic Review* 85 (3):341-64; Currie and Thomas. 1998. "School Quality and the Longer-Term Effects of Head Start." National Bureau of Economic Research Working Paper No. 6362.
5. Autor, David H., Lawrence F. Katz, and Alan B. Krueger. 1997. "Computing Inequality: Have Computers Changed the Labor Market?" National Bureau of Economic Research Working Paper No. 5956.
6. Neal, Derek A., and William R. Johnson. 1996. "The Role of Premarket Factors in Black-White Wage Differences." *Journal of Political Economy* 104 (5):869-95.
7. Mare, Robert D. 1995. "Changes in Educational Attainment and Social Enrollment." In *State of the Union: America in the 1990s*, ed. Reynolds Farley. Vol. 1: Economic Trends. New York: Russell Sage Foundation.

1. Participation in Literacy Activities with a Parent or Family Member by Children Aged Three to Five

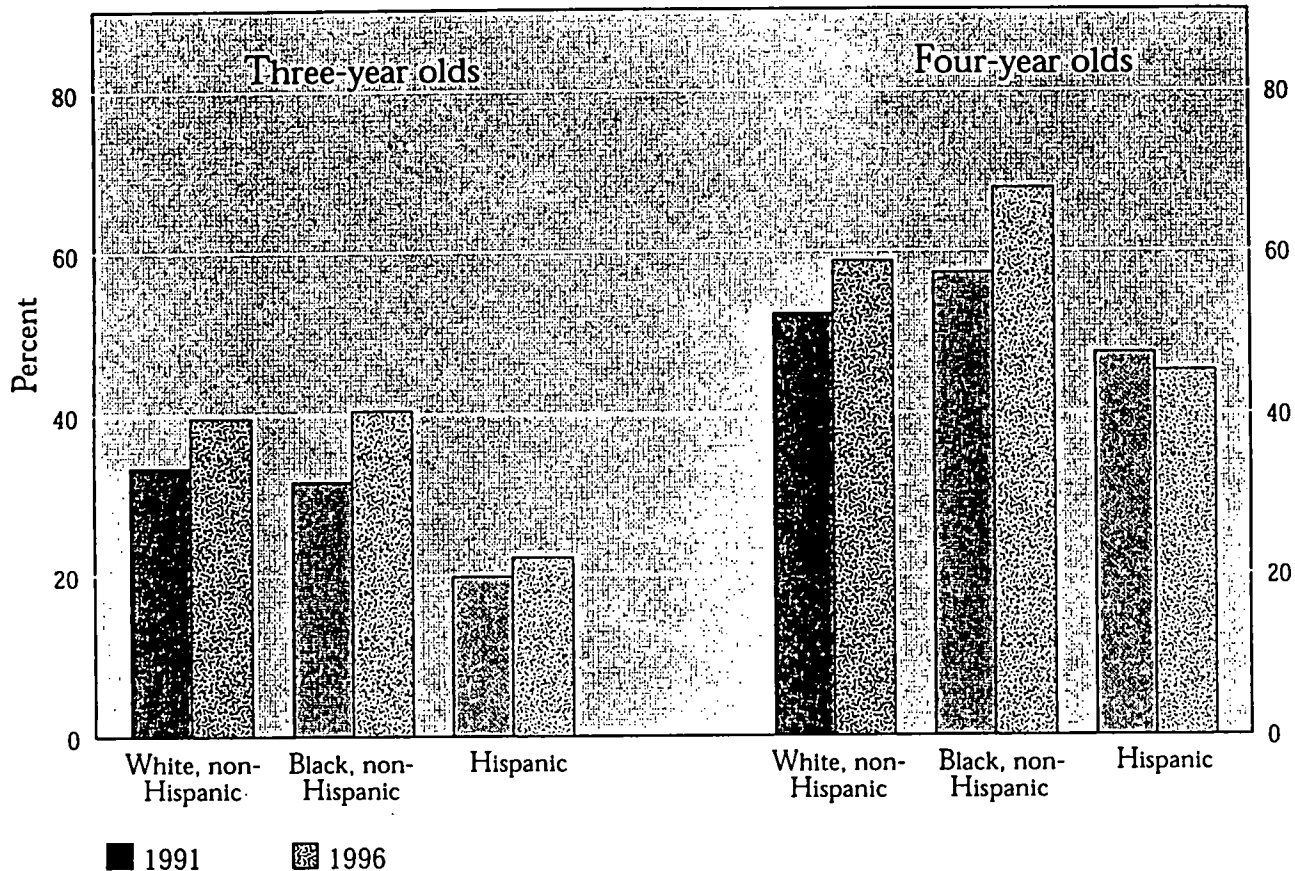
Source: National Center for Education Statistics



- Young children's interactions with others are critical to their development. Reading to children or telling them stories helps them learn to read and improves their verbal communication skills. This chart shows children's reported participation in various literacy activities with a parent or family member.
- In 1996, non-Hispanic white children were more likely to have been read to than their non-Hispanic black or Hispanic counterparts, and they were also more likely to have been told a story and to have visited a library in the past month. Some of these differences likely reflect the higher levels of educational attainment of parents in the non-Hispanic white population.
- Parents in all groups shown above were more likely to report that they participated in these literacy activities with their children in 1996 than in 1991.

2. Children Aged Three to Four Enrolled in Center-Based Programs or Kindergarten

Source: National Center for Education Statistics

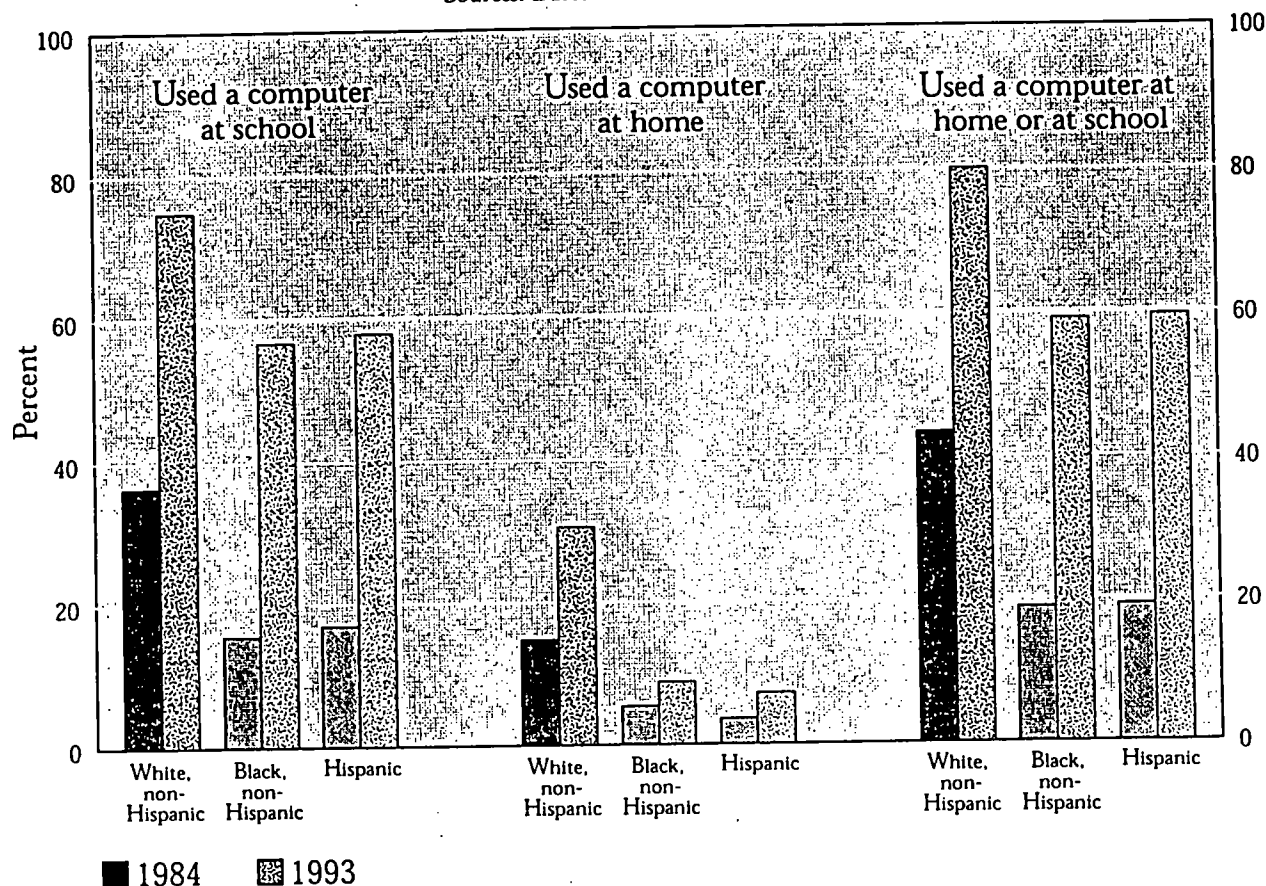


- Enrollment in prekindergarten programs and kindergarten is generally correlated with greater progress in the early years of elementary school.
- In 1996, non-Hispanic black children aged three and four were more likely than non-Hispanic white children to be enrolled in center-based learning programs or kindergarten. Hispanic children were less likely than non-Hispanic blacks or non-Hispanic whites to be enrolled.
- Enrollment in these programs increased for nearly all groups between 1991 and 1996.

Note: Center-based programs are nursery schools, prekindergarten, and Head Start.

3. Computer Use by Children in First through Sixth Grade

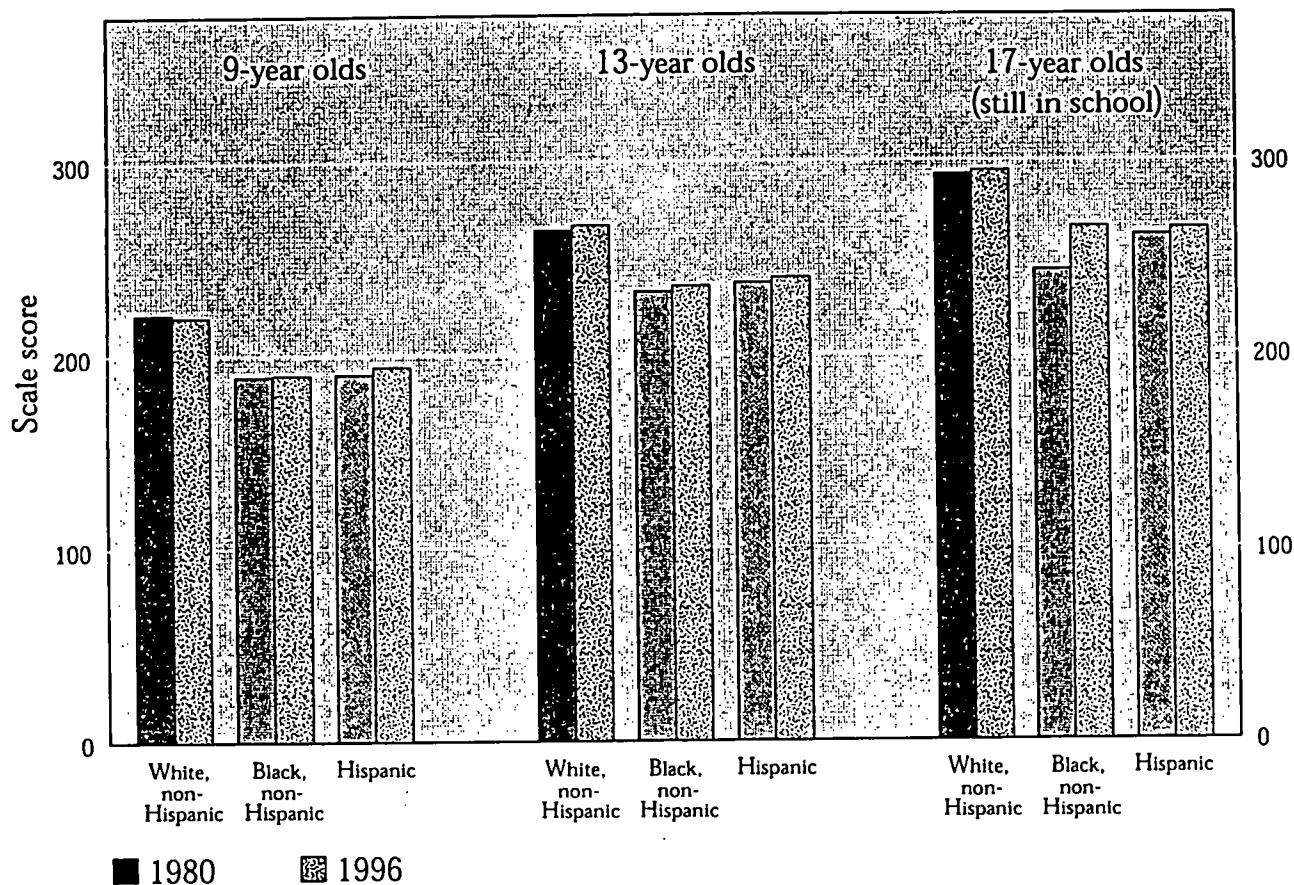
Sources: Bureau of the Census and National Center for Education Statistics



- Familiarity with computers is increasingly important at school and at work.
- Computer use increased markedly from 1984 to 1993 for all groups. In both years, non-Hispanic whites were more likely than non-Hispanic blacks or Hispanics to have used a computer both at home and at school.
- Relatively few non-Hispanic black and Hispanic children used a computer at home in 1993. However, over 55 percent of non-Hispanic blacks and Hispanics and about 75 percent of non-Hispanic whites used a computer at school.
- Lower levels of computer usage at home among non-Hispanic black and Hispanic children are probably related to lower income levels among these groups. In general, children from higher income families are more likely to have used a computer at home or at school than children from families with lower incomes.

4. Average Reading Proficiency Scores

Source: National Center for Education Statistics

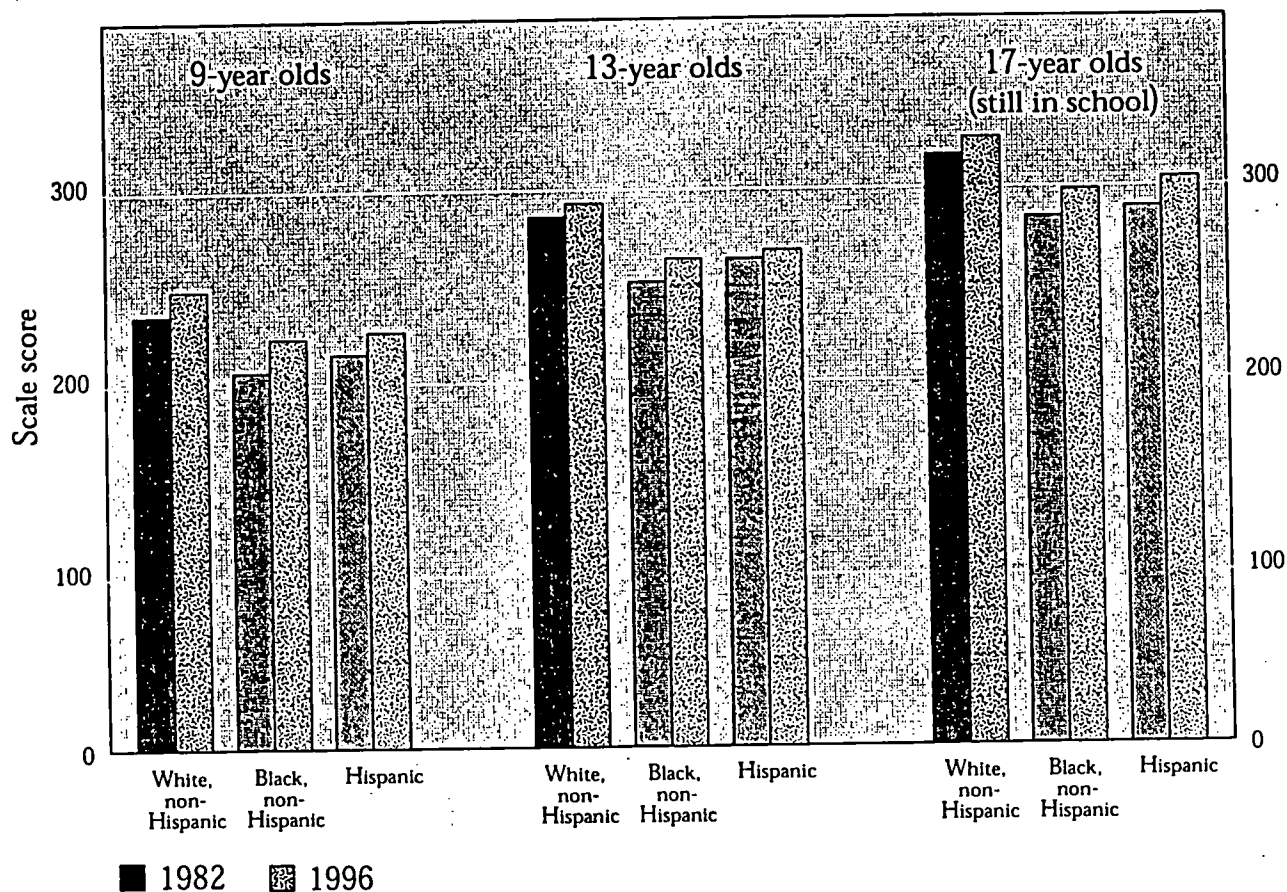


- This chart presents data on reading proficiency scores from the National Assessment of Educational Progress. This survey is designed to monitor the knowledge, skills, and performance of the nation's children and youth.
- On average, non-Hispanic white children score higher than non-Hispanic black or Hispanic children in reading proficiency at each age.
- Non-Hispanic black 17-year olds made substantial progress in reading proficiency between 1980 and 1996. Reading proficiency changed little among other groups and ages from 1980 to 1996.

Note: A reading score of 300 means the student can understand complicated information. A score of 250 means the student can interrelate ideas and make generalizations. A score of 200 means the student has partially developed skills and understanding.

5. Average Mathematics Proficiency Scores

Source: National Center for Education Statistics

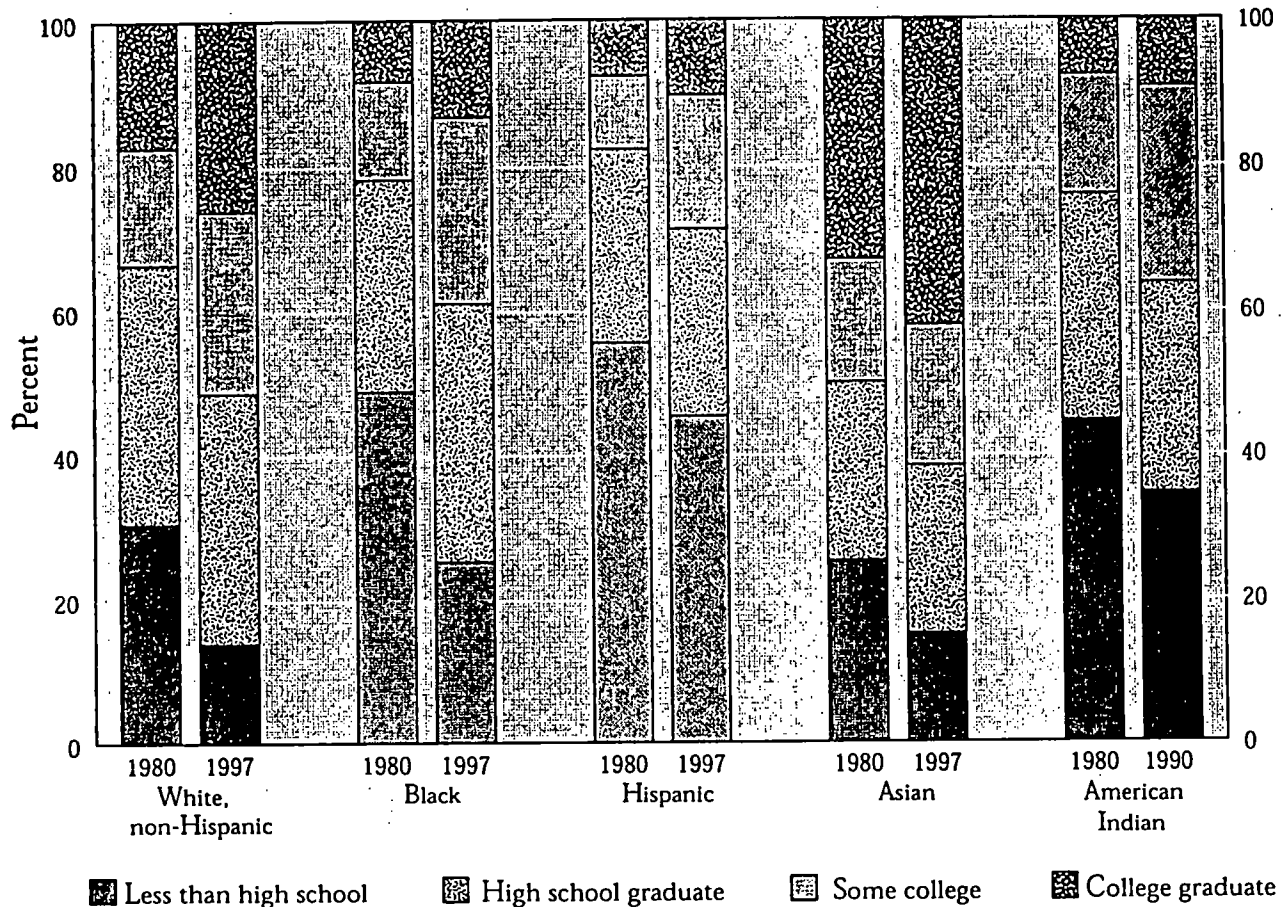


- This chart shows mathematics proficiency scores from the National Assessment of Educational Progress.
- On average, non-Hispanic whites tend to score higher on tests of mathematics proficiency than non-Hispanic blacks or Hispanics at each age.
- Mathematics proficiency scores generally increased between 1982 and 1996 at all ages among all groups shown above.

Note: A mathematics score of 300 means a student can do moderately complex procedures and reasoning. A score of 250 indicates a student can do basic operations and beginning problem solving. A score of 200 demonstrates a student's beginning skills and understanding of math.

6. Educational Attainment of Adults Aged 25 and Over

Source: Bureau of the Census

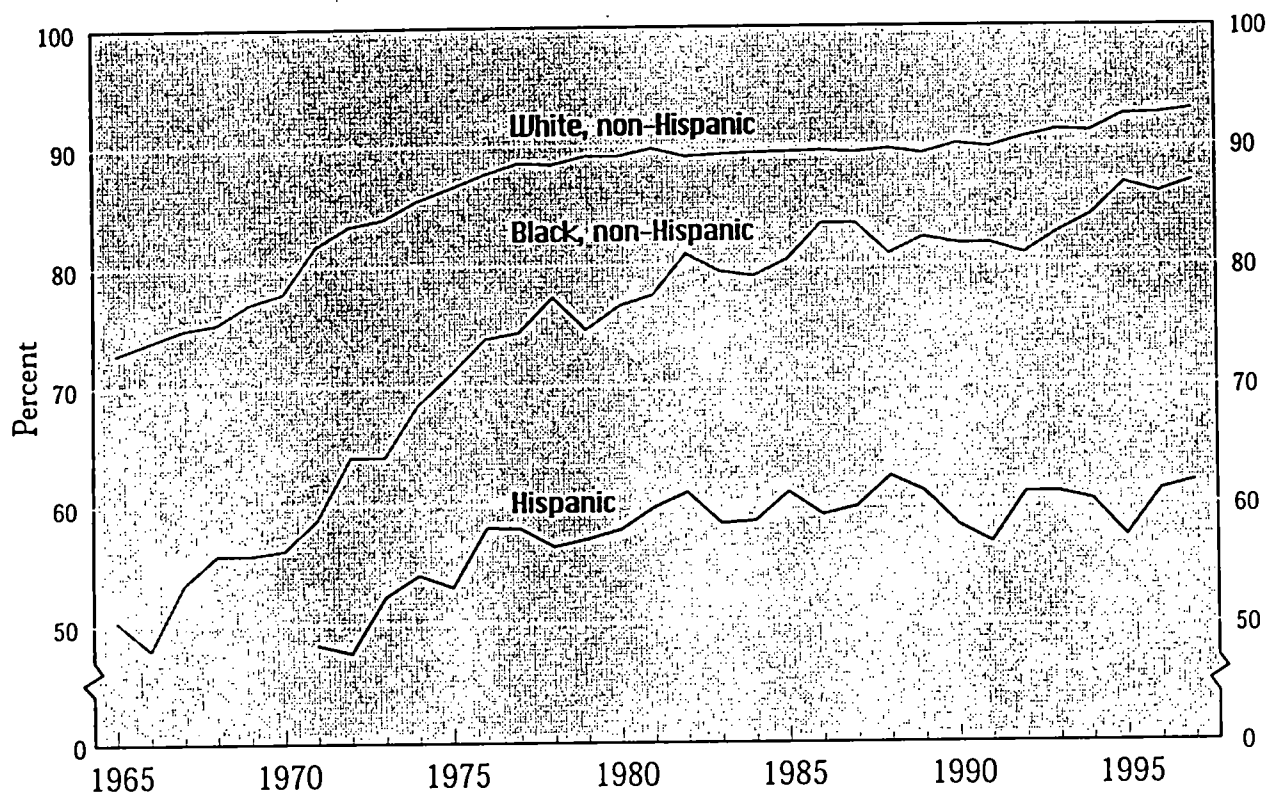


- Educational attainment is predictive of economic status and health.
- Asians and non-Hispanic whites are more likely to have completed education beyond high school than are blacks, Hispanics, and American Indians. In 1997, nearly half of Hispanics aged 25 and older had not completed high school.
- Educational attainment has increased for all groups since 1980. Increases for blacks have been most marked. Increases for Hispanics have been relatively small.
- In 1997, 9 percent of non-Hispanic whites and 15 percent of Asians held master's, professional, or doctoral degrees, compared with 4 percent of blacks and 3 percent of Hispanics and American Indians (not shown in chart).

Note: Data for 1980 are based on years of school completed, rather than on the highest diploma or degree received. In 1997, high school graduates include those with a GED or equivalent. Data for 1997 are not available for American Indians.

7. Persons Aged 25 to 29 with a High School Degree or Equivalent

Sources: Bureau of the Census and National Center for Education Statistics

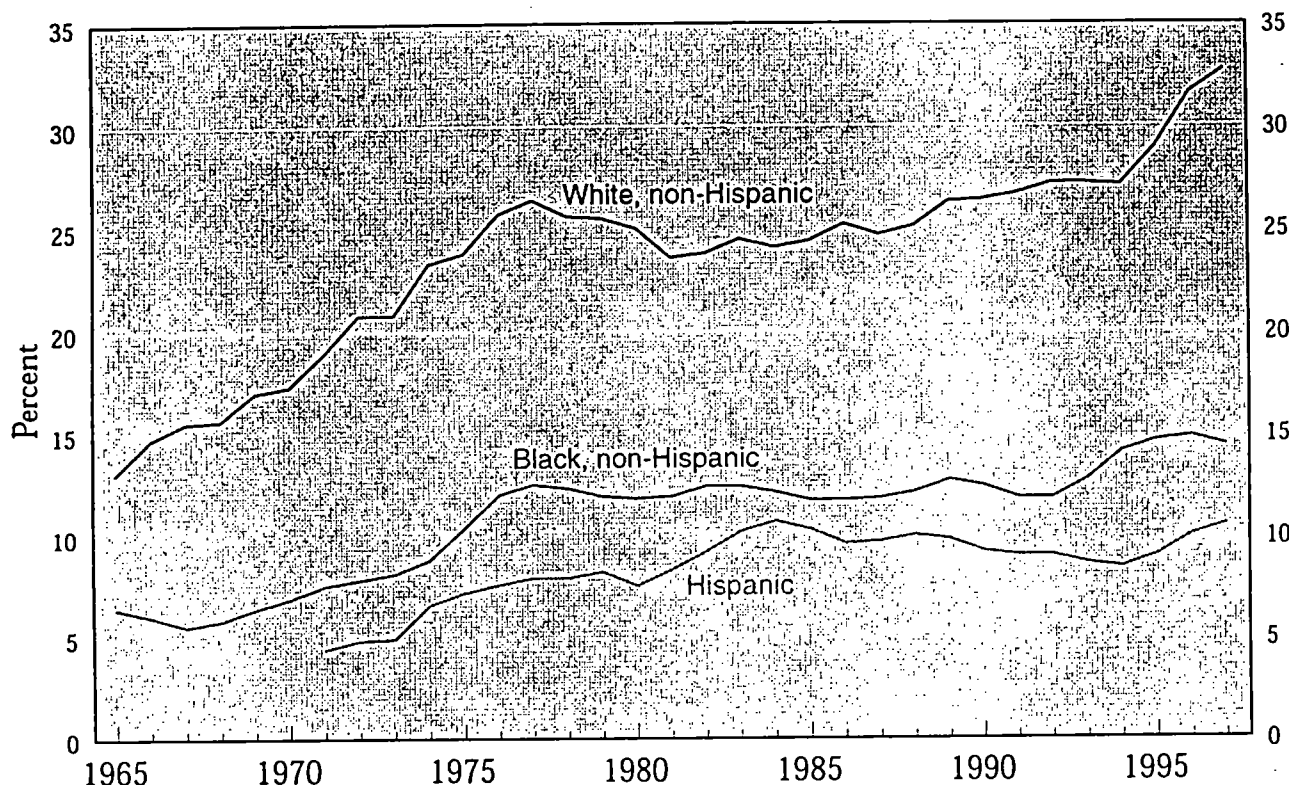


- High school completion rates for 25- to 29-year olds provide a sense of change in educational attainment over time, since education is usually completed at younger ages.
- High school completion rates have increased for 25- to 29-year olds in all groups over the past 30 years. However, rates for Hispanics have grown little since the early 1980s.
- The percentage of non-Hispanic blacks aged 25 to 29 who have completed high school (87 percent) is nearly as high as that of non-Hispanic whites (93 percent). Hispanic 25- to 29-year olds continue to have considerably lower rates of high school completion (62 percent), however. The lower rates among Hispanics primarily reflect the lower average levels of education among Hispanic immigrants; completion rates of native-born Hispanics (not shown separately in chart) are comparable to those of non-Hispanic blacks.

Note: Prior to 1971, data for whites include Hispanic whites, and data for blacks include Hispanic blacks. Prior to 1992, data are for persons having completed four or more years of high school; data for 1992 and beyond include persons with a GED or equivalent.

8. Persons Aged 25 to 29 with a Four-Year College Degree or Higher

Sources: Bureau of the Census and National Center for Education Statistics



- Completion of a four-year college degree has become increasingly associated with economic status and success in the labor market.
- The percentage of 25- to 29-year olds who have completed college increased sharply in the 1960s and early 1970s for non-Hispanic whites and non-Hispanic blacks. Between the mid-1970s and the early 1990s, college completion rose more slowly for all groups shown above. College completion appears to have picked up again in the mid-1990s.
- Non-Hispanic whites are more than twice as likely as non-Hispanic blacks and Hispanics to have completed a four-year college degree. Nearly 33 percent of non-Hispanic whites had completed a four-year college degree in 1997, compared with only about 14 percent of non-Hispanic blacks and 11 percent of Hispanics.

Note: Prior to 1971, data for whites include Hispanic whites, and data for blacks include Hispanic blacks. Data for non-Hispanic blacks and Hispanics are three-year centered averages. Prior to 1992, data are for persons having completed four or more years of college.

IV. Labor Markets

Earnings from the labor market are the primary source of income for the majority of families. Labor market earnings are determined by labor force participation, the unemployment rate among labor force participants, the number of hours worked per year, and hourly wage rates.

In general, labor force participation rates are higher for men than women, although over the past 30 years female participation rates have greatly increased, while those of men have declined (Labor Markets 1). Historically, black women had higher participation rates than white women, but since 1990, these rates have been roughly equal. Hispanic women's participation rates are lower than those of black or white women. Hispanic men's participation rates are higher than those of black men and approach those of white men.

Unemployment rates—the percentage of the labor force without jobs but actively seeking work—of blacks have been roughly twice those of whites for many years (Labor Markets 2). Black average annual unemployment rates have been over 10 percent for more than 20 years. (However, the black unemployment rate fell below 10 percent in mid-1997 and was below 9 percent in mid-1998.) Unemployment rates for Hispanics are generally between those of blacks and whites. Black and Hispanic unemployment rates also rise more in recessions and fall more in recoveries than do white rates.

Investment in labor market skills—either through schooling, training, or experience on the job—tends to be most intensive at young ages. One reason is that investing in these skills early in life allows workers to reap the “returns” to their investments over a greater number of years. When young people are neither in school nor employed, there is concern about their current activities as well as about their future employment and earnings prospects.

About 20 percent of young black men are neither in school nor working, compared with 14 percent of young Hispanic men and 9 percent of young white men (Labor Markets 3). The percentage of young men who are in this situation has not fallen substantially over the past 10 years. The percentage of young women neither enrolled in school nor employed has fallen over the 1990s, however, particularly among young black women. Much of this decline is the result of increased school enrollment. However, the interpretation of these numbers is less clear cut for young women than for young men, as many young women who are neither employed nor in school are taking care of children.

Wages of white men continue to exceed those of all other groups of workers (Labor Markets 4, 5, and 6). Studies indicate that black men's wages rose relative to white men's between the early 1960s and the mid-1970s, especially in the South.¹ But this trend reversed sometime in the mid- to late 1970s, and black men's relative pay declined for at least 10 years.² The evidence of the last 10 years is mixed, with one data series showing continued deterioration or little change in relative pay for black men, and another showing improvement.³ Pay of Hispanic men has fallen relative to both white and black men's pay, at least in part as a result of falling relative educational attainment among Hispanics, combined with increased demand for more highly educated workers. Wage levels for all groups have risen in recent years.

After reaching near parity in the mid-1970s, black women's wages have fallen relative to those of white women. (White women have gained considerably relative to white men in this period.) Young, college-educated black women reached pay parity with their white counterparts in the early 1970s but have seen their relative wages fall about 10 percentage points since then (Labor Markets 5 and 7).

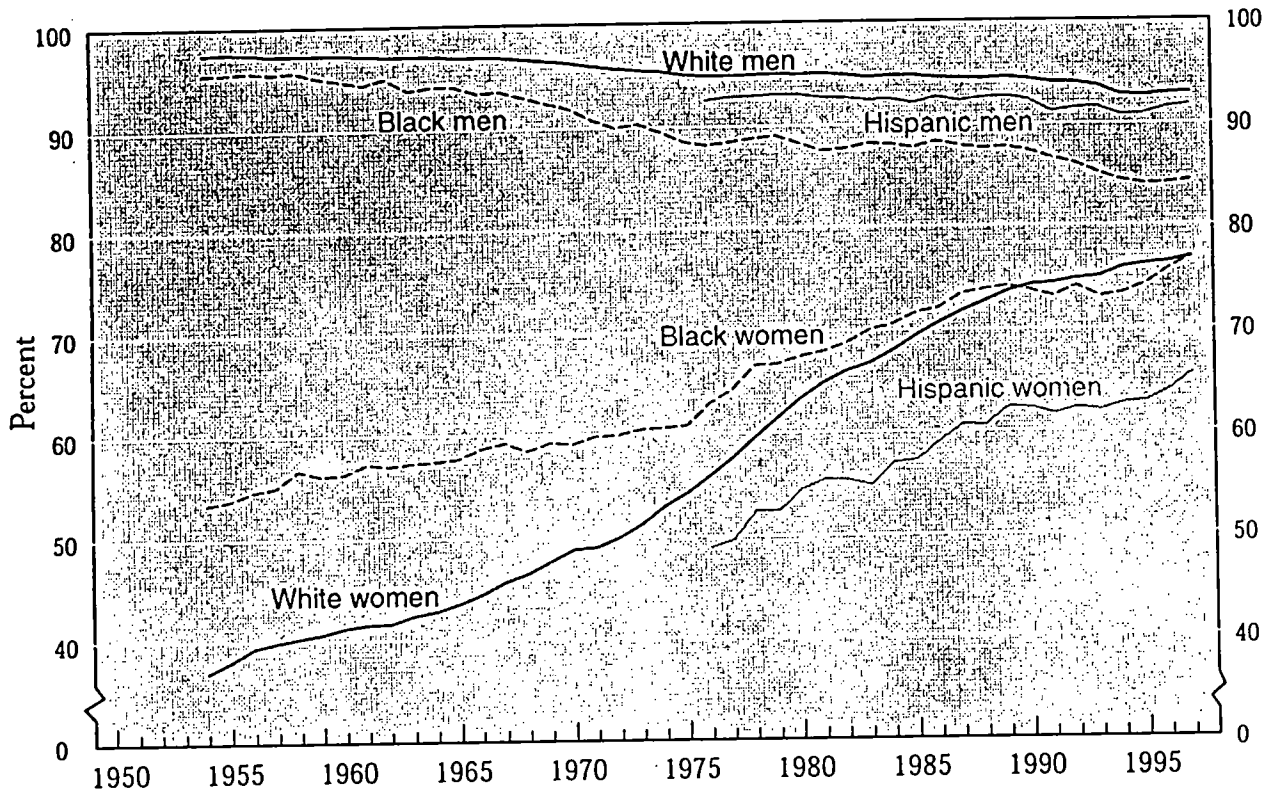
The median wages of Hispanic men and women are lower than those of their black and white counterparts. (For each group, half of workers have wages below and half have wages above the median.) Hispanics' relative wages have also fallen since 1979. The median wage of college-educated Hispanic women, however, is about 90 percent of that of white women and is slightly higher than that of black women. The median wage of college-educated Hispanic men is about 80 percent of that of college-educated white males and is about 10 percent higher than the wages of equivalent black males. For males, differences in educational attainment explain a much larger portion of the wage differences between Hispanics and whites than between blacks and whites.

Some of the differences in wages across racial and ethnic groups are linked to occupational differences (Labor Markets 8). Occupation is an alternative indicator of socioeconomic status that may capture aspects of status that are not reflected in employment or wages. Asian and white employees are far more likely than black, Hispanic, and American Indian employees to work in professional and managerial occupations and are less likely to work in "blue collar" occupations. Within blue collar occupations, black, Hispanic, and American Indian employees are more likely to be found in the lower-paying, "lower-skilled" occupations of operators, fabricators, and laborers rather than the higher-paying precision production and craft occupations. Black, Hispanic, and American Indian women are more likely than their non-Hispanic white counterparts to be employed in service occupations.

1. Donohue, John J. III and James Heckman. 1991. "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks." *Journal of Economic Literature* 29 (December):1603-43.
2. Bound, John and Richard Freeman. 1992. "What went wrong? The Erosion of Relative Earnings and Employment Among Young Black Men in the 1980s" *Quarterly Journal of Economics* 107 (1): 201-232
3. According to the series for median annual earnings of full-time, year-round workers, black men's earnings have risen relative to white men's earnings in the 1990s, and the black-white ratio of median wages for men reached a new high in 1996 at about 0.80. However, the black-white ratio of median usual weekly earnings of full-time workers fell between 1990 and 1996 and in 1997 returned to its 1990 level.

1. Labor Force Participation Rates of Persons Aged 25 to 54

Source: Bureau of Labor Statistics

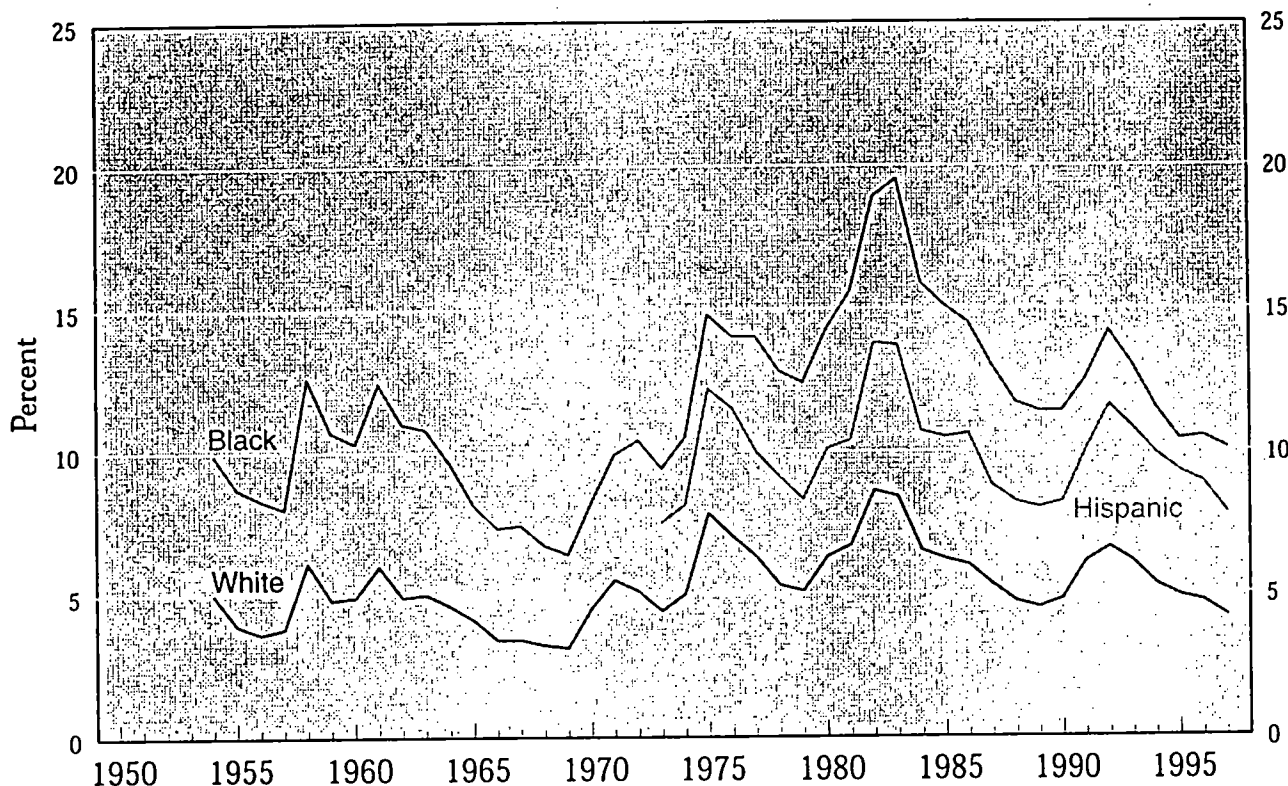


- The labor force participation rate is the percentage of the population that is either employed or actively seeking work. Participation in the labor force has long been the norm for men aged 25 to 54. Participation among women is often seen as an indicator of women's economic independence or, alternatively, as a response to family financial stress resulting from low male wages or unemployment.
- Over the second half of the 20th century, labor force participation rates have risen sharply for all groups of women and have fallen for men.
- Participation rates of black women historically exceeded those of white women, but participation rates for white women surpassed those of black women in the late 1980s. In the mid-1990s, the increase in the rate for white women has slowed, whereas the rate for black women has continued to increase. Participation rates of Hispanic women are lower than those of black and white women.
- Participation rates for white men exceed those of black and Hispanic men. Participation rates have fallen more rapidly among black men than among white and Hispanic men. The decline in male labor force participation has been concentrated among men with lower levels of educational attainment.

Note: Prior to 1972, data for blacks include all non-whites.

2. Unemployment Rates of Persons Aged 16 and Over

Source: Bureau of Labor Statistics

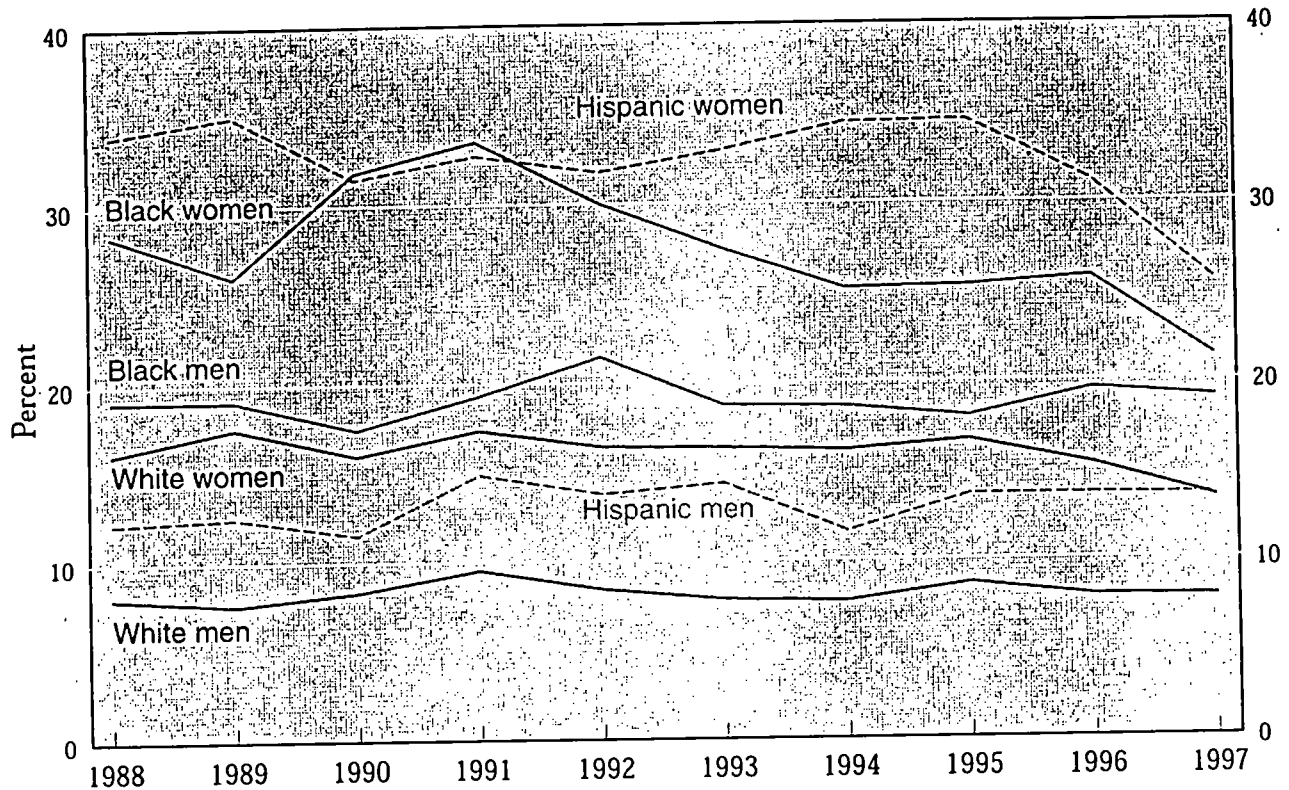


- The unemployment rate is a widely reported indicator of labor market distress. It is defined as the percentage of the labor force without a job but actively seeking work. (Persons who are not employed but not seeking a job are not included in the labor force and are therefore classified as neither employed nor unemployed.)
- Unemployment rates for Hispanics and blacks are higher than those for whites; they also tend to rise more in economic recessions and fall more in expansions.
- The unemployment rate for blacks has been twice that of whites for more than 20 years. It was above 10 percent from 1974 to 1997 (but below 9 percent by mid-1998). In part, this disparity reflects differences in educational attainment. However, substantial differentials persist even among blacks, whites, and Hispanics with similar levels of education, which may reflect discrimination.

Note: Data are annual averages of monthly unemployment rates. Prior to 1972, data for blacks include all non-whites.

3. Persons Aged 16 to 24 Who Are Not in School and Not Employed

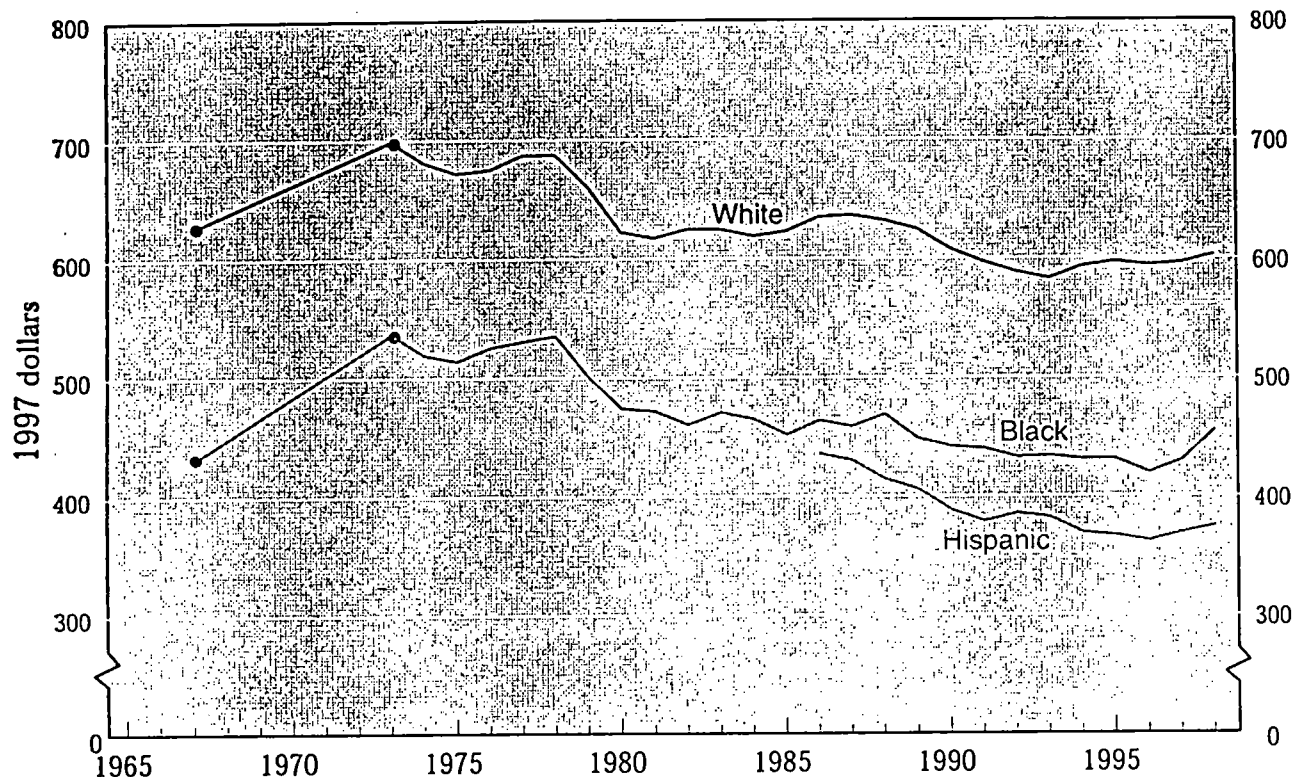
Source: Bureau of Labor Statistics



- When young adults are neither employed nor in school, there is concern about their current status and activities as well as about their future earnings prospects. Women in this situation may be raising children.
- The percentage of black and Hispanic young adults who are neither employed nor in school exceeds that of white young adults. For young men of all groups, the percentage that is neither enrolled in school nor employed has been relatively flat since 1988.
- The percentage of young women who are neither employed nor in school has fallen substantially in the 1990s, especially since 1995. For black and Hispanic women, much of the decrease over the 1990s can be accounted for by increases in school enrollment.

4. Median Usual Weekly Earnings of Male Full-Time Workers

Source: Bureau of Labor Statistics

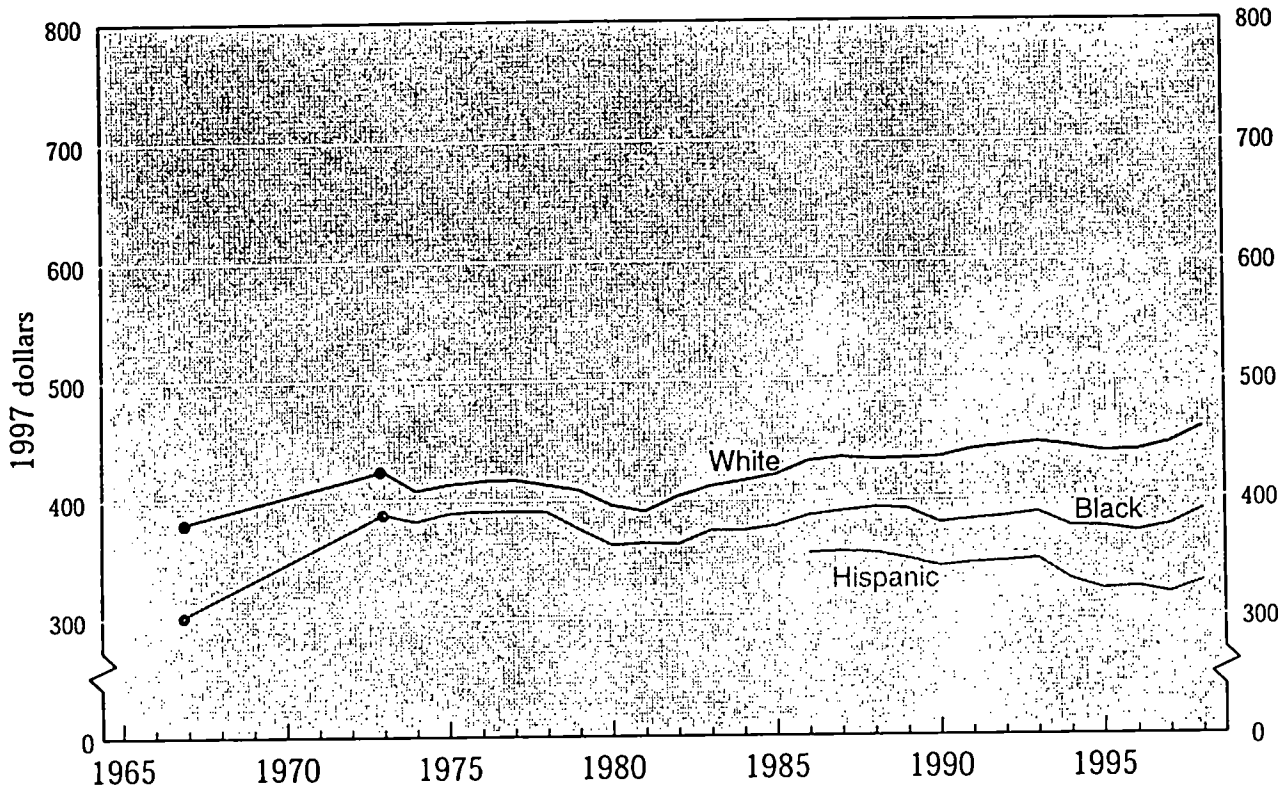


- Male labor market earnings are the largest source of household income.
- Median wages of black and Hispanic men are substantially lower than those of white men.
- Adjusted for inflation, median wages of men generally declined from 1970 to 1990, but have risen in more recent years. The gap in pay between whites and blacks has changed little over this period. The gap between whites and Hispanics has widened, however, in part due to the widening gap in educational attainment between these two groups.

Note: Straight line between dots indicates data are not available for intervening years. Prior to 1979, data for blacks include all non-whites. Data for 1998 are from the first two quarters.

5. Median Usual Weekly Earnings of Female Full-Time Workers

Source: Bureau of Labor Statistics

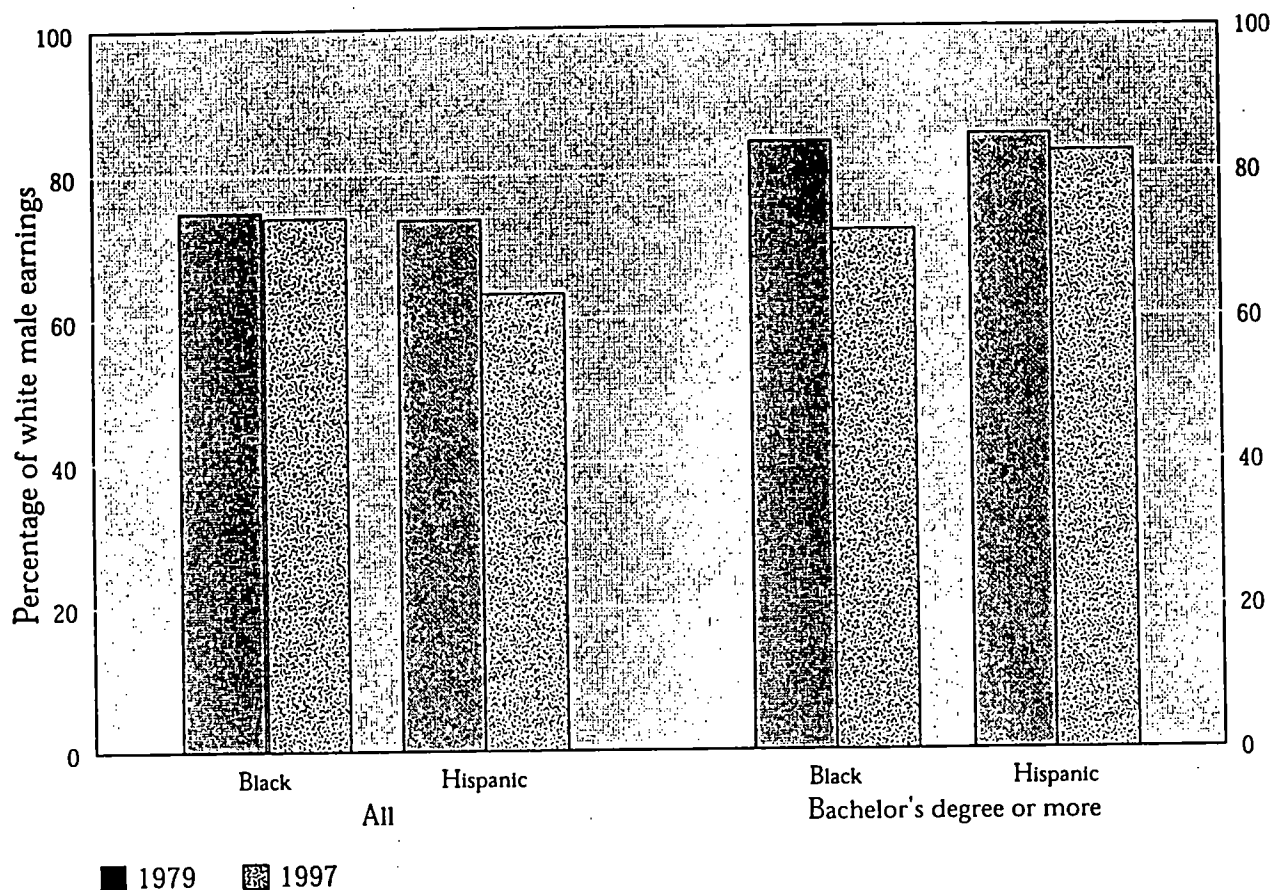


- Women's earnings constitute a rising share of household income. Earnings of women are particularly important for understanding differences between the economic status of black families and those of other racial and ethnic groups. Black married-couple families have typically relied more heavily on women's earnings than other families, and the fraction of single-parent, female-maintained families is highest among black families.
- After adjusting for inflation, weekly earnings of black and white women were higher in 1997 than in 1967. The black-white gap in pay narrowed in the 1960s and early 1970s but has widened since the early 1980s.
- Hispanic women's full-time earnings have fallen in real terms over the past decade.
- Although, on average, male earnings (chart 4) are higher than female earnings, white female median weekly earnings have risen relative to men's and surpassed Hispanic male earnings in 1989 and black male earnings in 1992.

Note: Straight line between dots indicates data are not available for intervening years. Prior to 1979, data for blacks include all non-whites. Data for 1998 are from the first two quarters.

6. Black and Hispanic Male Earnings as a Percentage of White Male Earnings

Source: Bureau of Labor Statistics

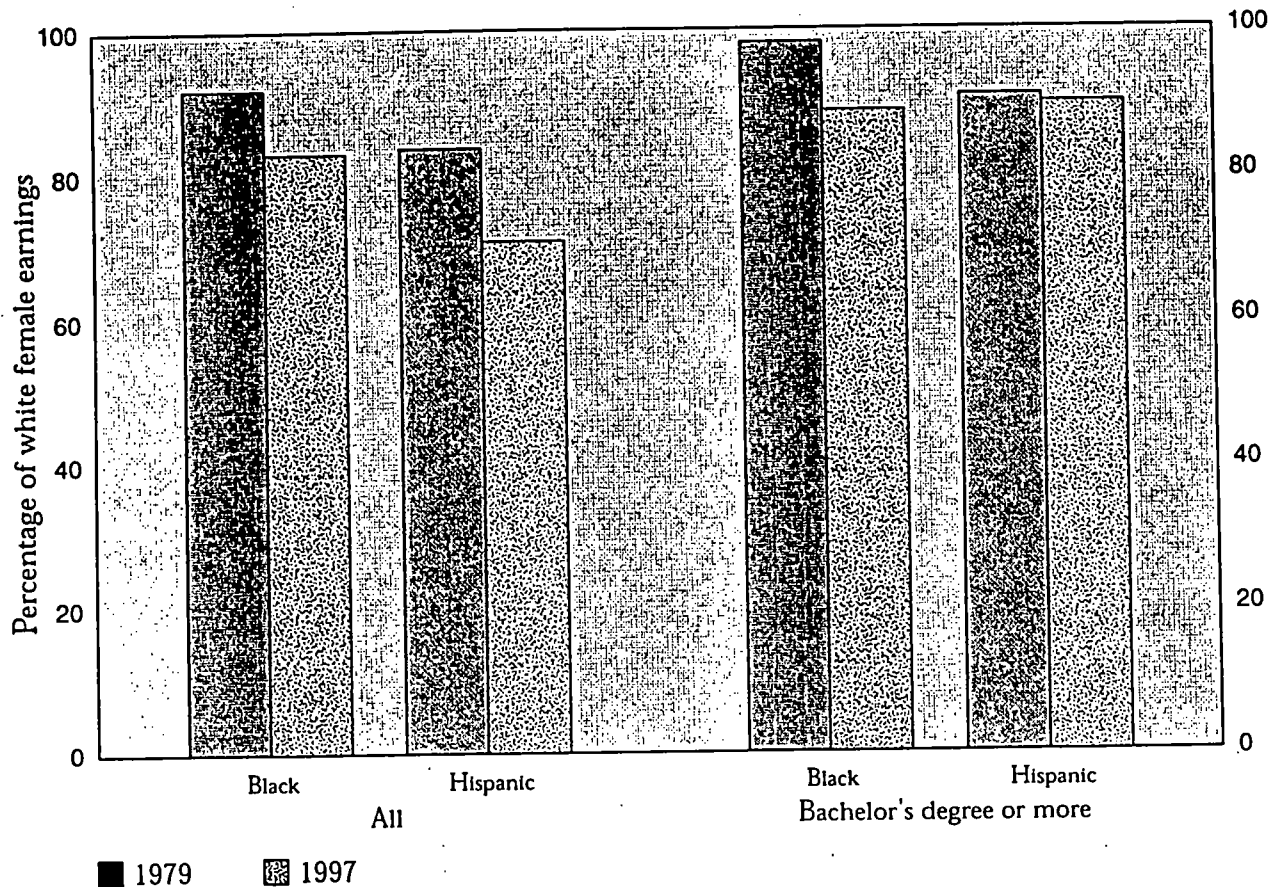


- Disparities in wages paid to workers with similar education may provide information about the extent of pay discrimination, although disparities in pay within education categories can also result from differences in other characteristics such as labor market experience or school quality.
- Differences in pay between whites on the one hand, and blacks and Hispanics on the other, are larger for men than for women (compare charts 6 and 7). The median black male worker earns 74 percent, and the median Hispanic male worker earns 63 percent, of the median for white men.
- The median wage of all black men has changed little relative to that of all white men since 1979. However, the relative pay of college-educated black men has fallen by more than 10 percentage points.
- Since 1979, median wages of Hispanic men have fallen relative to white men, reflecting the growing gap in educational attainment. However, college-educated Hispanic men have lost little ground relative to white men and now earn substantially more than college-educated black men.

Note: Percentages are for median usual weekly earnings of full-time workers aged 25 and over on their main job. Educational attainment categories for 1979 are based on the number of years of school completed rather than the highest diploma or degree received.

7. Black and Hispanic Female Earnings as a Percentage of White Female Earnings

Source: Bureau of Labor Statistics

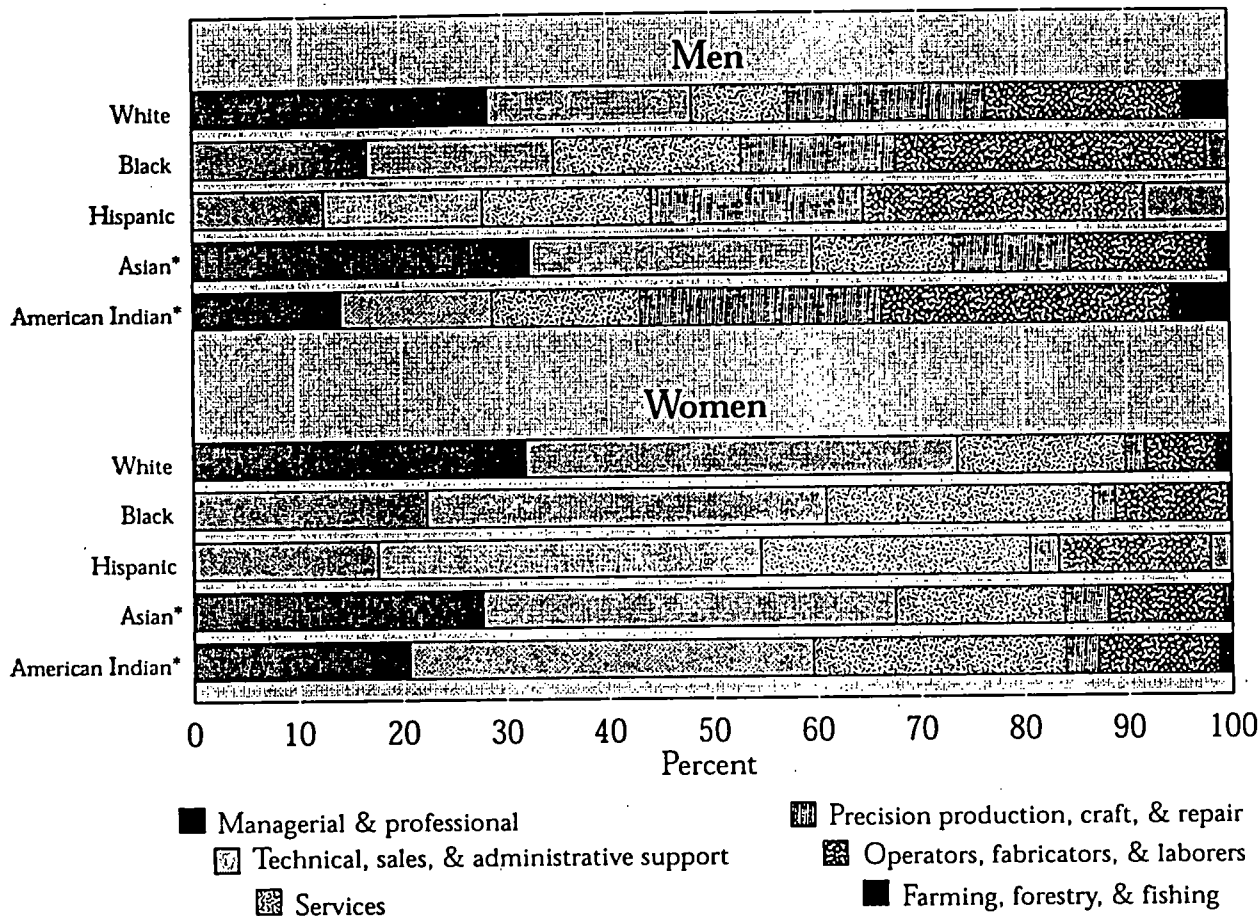


- Between 1979 and 1997, the pay of black women relative to that of white women fell by nearly 10 percentage points. In 1979 the median wage of black women with a college degree was 98 percent of that of college-educated white women, but by 1997 their earnings had fallen to only 89 percent of the earnings of college-educated white women.
- Hispanic women's wages have also fallen relative to white women's wages. However, the decline in Hispanic women's relative pay is much smaller for women with similar education levels. Differences in educational attainment have grown increasingly important for Hispanic-white differences in pay among women.

Note: Percentages are for median usual weekly earnings of full-time workers aged 25 and over on their main job. Educational attainment categories for 1979 are based on the number of years of school completed rather than the highest diploma or degree received.

8. Occupations of Employed Persons, 1997

Source: Bureau of Labor Statistics and Bureau of the Census



- Occupation is an alternative indicator of socioeconomic status that may capture aspects of status that are not reflected in employment or wages.
- Relatively high percentages of white and Asian men are employed in managerial and professional occupations, whereas black, Hispanic, and American Indian men tend to be concentrated in the "lower-skilled," lower-paid occupations of operators, fabricators, and laborers.
- Women of all groups are most likely to be employed in technical, sales, and administrative support occupations. A high percentage of white and Asian women are also employed in managerial and professional occupations, and a high percentage of black, Hispanic, and American Indian women are employed in service occupations.
- Between 1980 and 1997, the fraction of women employed in managerial and professional occupations grew considerably, especially among white women. The fraction of black men in these occupations also grew significantly; however, black men are still far less likely than white and Asian men to be employed in these occupations.

*Data for Asians and American Indians are for 1990.

V. Economic Status

No single indicator can adequately capture all facets of economic status for entire populations, but measures such as median or average annual income are the most often used. The economic status of most individuals, especially children, is better reflected by the pooled resources of family or household members than by their individual earnings or income.

The average income of American families has increased markedly over the past 50 years. Between the mid-1970s and the early 1990s, however, the median family incomes of blacks and Hispanics were stagnant, whereas the median income of non-Hispanic whites generally increased (Economic Status 1). The income of non-Hispanic white and Asian families is nearly twice that of black and Hispanic families. Since the early 1990s, black family income has risen, but Hispanic income fell and only recently began to rise. As a result, the ratio of black to non-Hispanic white median family income is about the same today as it was 30 years ago, whereas the ratio of Hispanic to non-Hispanic white income has fallen markedly since the early 1970s.

The decline in the relative position of Hispanics is due, at least in part, to immigration of Hispanics with relatively low levels of education and income. The lack of relative progress among black families is in part due to the large rise in single parent families among blacks (Population 6). However, even if family structure had not changed since 1967, the gap in average family income between blacks and whites in 1996 would be reduced by only about one-fifth.¹ Other factors contributing to differences in family income include differences in educational attainment, unemployment rates, and wage rates. Median family income of Asians is slightly higher than that of non-Hispanic whites, consistent with Asians' high levels of educational attainment and the higher percentage of Asian families with two or more earners.

Differences in median incomes provide only a partial description of differences in the income distributions of groups. A second indicator is the poverty rate: the proportion who lack the economic resources needed to purchase a minimally acceptable standard of living. There is no scientifically adequate method for determining the minimally acceptable living standard: this will vary from society to society and over time as living standards and social norms change. The poverty rates presented here are based on the Office of Management and Budget's official definition. Alternative measures reveal similar disparities in poverty rates among racial and ethnic groups.²

Despite their higher median income, the rate of poverty among Asians in the United States is more than 50 percent higher than the poverty rate of non-Hispanic whites (Economic Status 2). This reflects the economic and educational diversity of the Asian population. Blacks, Hispanics, and American Indians have much higher rates of poverty than non-Hispanic whites and Asians. The Hispanic poverty rate has generally risen since the 1970s and surpassed the rate for blacks in the early 1990s. Although still very high, the black poverty rate has declined since the early 1990s and reached an all-time low in 1996. According to the 1990 census, in 1989 the poverty rate for American Indians was higher than that of any other group.³

Poverty among children is of particular concern. Child poverty not only reflects current economic problems among poor families with children, but it is also associated with inequality of opportunity, risks to health and child development, and long-term economic disadvantage. Although child poverty rates exceed overall individual poverty rates, differences between racial and ethnic groups in child poverty mirror those in overall poverty. Black, Hispanic, and American Indian children have higher poverty rates than non-Hispanic white and Asian children (Economic Status 3).

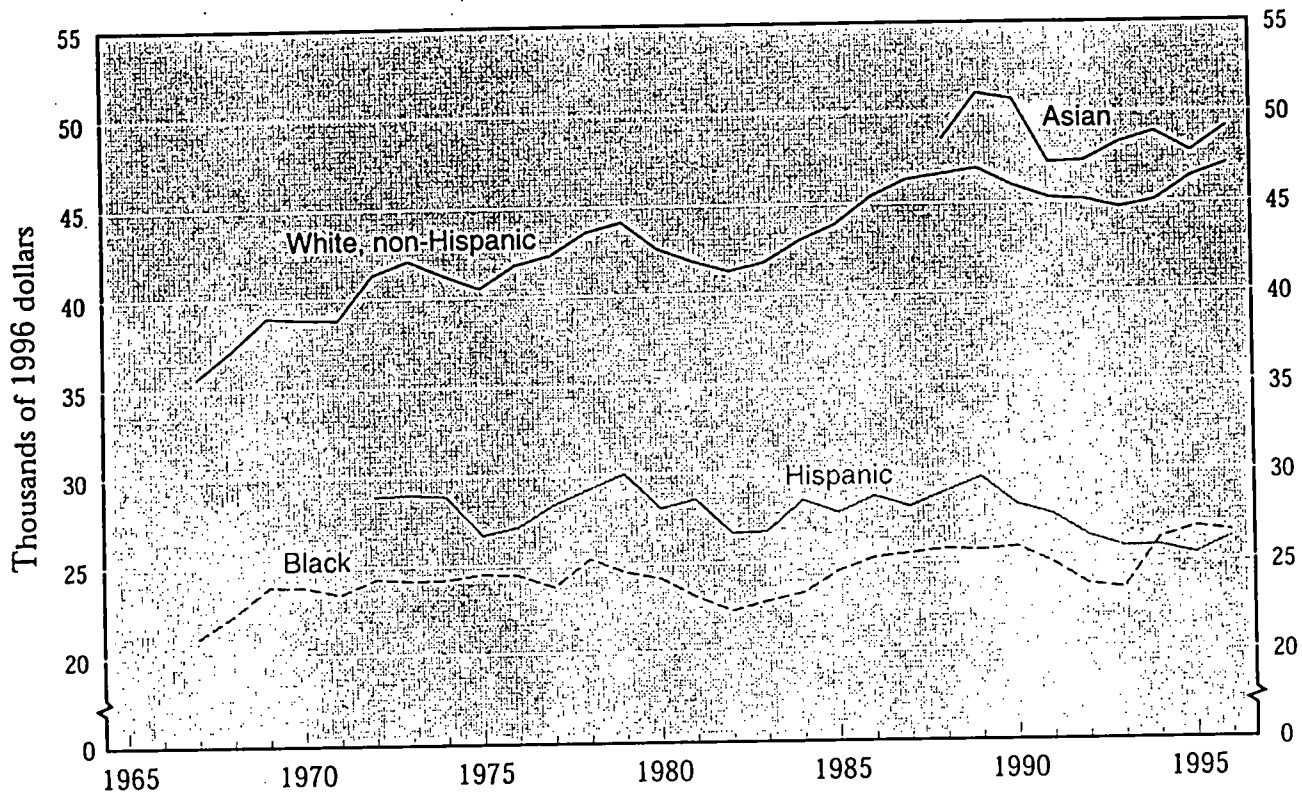
Some of the disparities in poverty rates between racial and ethnic groups can be explained by differences in factors such as age distribution, family structure, and educational attainment. However, substantial differentials between groups exist even among individuals with similar characteristics (Economic Status 4). For example, poverty rates among the elderly are considerably higher among blacks and Hispanics than among whites and Asians. Similarly, although poverty rates are relatively high for all children in single-parent families maintained by women, they are considerably higher for Hispanic and black children than for white children in such families. Among persons aged 25 and over without a high school degree, poverty rates for blacks, Hispanics, and Asians are well above those of whites.

Asset holdings are another important indicator of economic well-being. Greater wealth allows a household to maintain its standard of living when income falls because of job loss, health problems, or family changes such as divorce or widowhood. Wealth also provides resources that can be used to finance education or to start a business. Disparities in asset holdings across racial and ethnic groups are large and exceed disparities in income (Economic Status 5). In 1993, the net worth (assets minus liabilities) of households maintained by whites was about 10 times that of households maintained by blacks or Hispanics. Even among households with similar monthly incomes, net asset holdings are far higher among whites than blacks or Hispanics.⁴

1. Council of Economic Advisers. 1998. *Economic Report of the President*. Washington, DC: U.S. Government Printing Office.
2. Citro, Constance F. and Robert T. Michael, eds. 1995. *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press.
3. U.S. Bureau of the Census. 1993. *1990 Census of Population: Social and Economic Characteristics, United States*. Washington, DC.
4. Eller, T.J. and Wallace Fraser. 1995. *Asset Ownership of Households: 1993*. U.S. Bureau of the Census. Current Population Reports, P70-47. Washington, DC: U.S. Government Printing Office.

1. Median Family Income

Source: Bureau of the Census

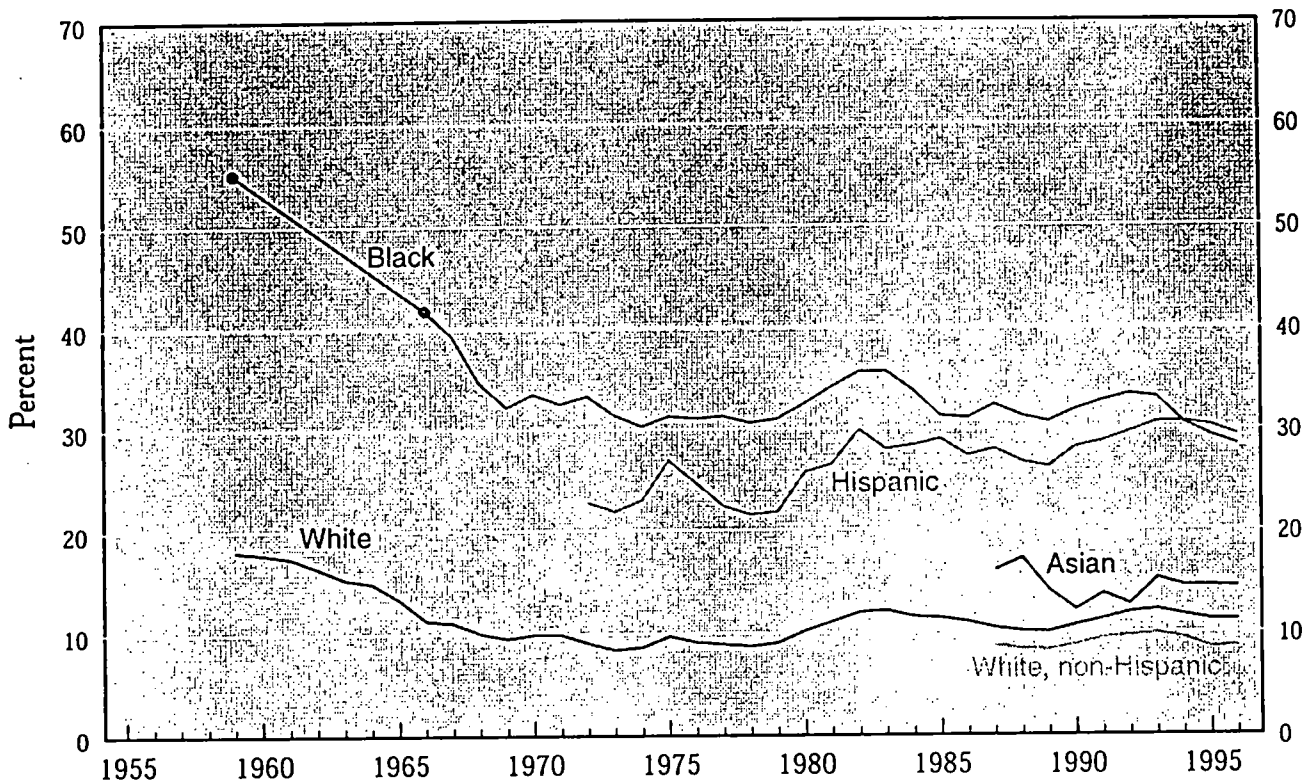


- Median annual family income is a commonly used indicator of current family economic status.
- Asian and non-Hispanic white families have much higher median incomes than black or Hispanic families. The median income of black families as a percentage of non-Hispanic white median family income was about the same in 1997 as in 1967, at less than 60 percent. Hispanic median family income has fallen in absolute terms (and relative to that of non-Hispanic whites) since 1972, in part due to the increasing representation of immigrants in the Hispanic population.
- There are great differences in income among Asian subgroups. For example, according to the 1990 census, the median family income of Japanese Americans exceeded that of non-Hispanic white families, whereas the income of Cambodian American families was lower than that of black families.
- According to the 1990 census, the median family income of American Indians (not shown in chart) was lower than that of blacks.

Note: Prior to 1972, data for whites include Hispanic whites.

2. Poverty Rates for Individuals

Source: Bureau of the Census

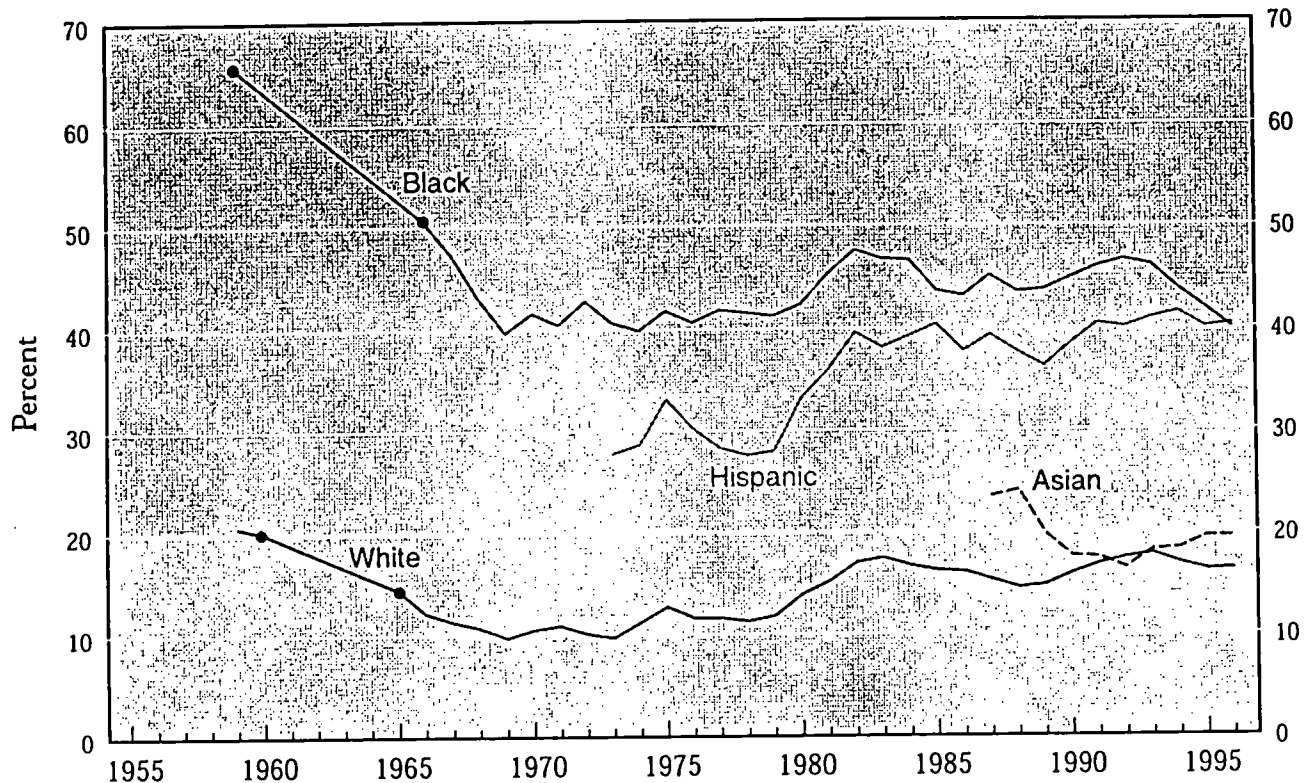


- The poverty rate—a widely used indicator of economic disadvantage—measures the proportion of a population whose cash income is below the official poverty line. The poverty line is adjusted for family size. In 1996 the poverty line for a family of four was \$16,036.
- Poverty rates for all racial and ethnic groups fell over the 1960s and early 1970s but improved little over the next 20 years. Poverty rates have fallen since 1993, however, particularly among blacks.
- The poverty rate for non-Hispanic whites remains well below that of Asians, blacks, and Hispanics. According to the 1990 census, the poverty rate for American Indians was the highest among the five racial and ethnic groups. The poverty rate for Hispanics increased from the 1970s until the early 1990s, and it has been above the rate for blacks since 1994. The increase in Hispanic poverty is partly the result of the lower educational and economic attainment of many Hispanic immigrants.
- Although their median family income exceeds that of non-Hispanic whites, Asians are more likely than non-Hispanic whites to be poor. This combination of relatively high poverty and high median income reflects the great economic diversity of the U.S. Asian population.

Note: Straight line between dots indicates data are not available for intervening years.

3. Poverty Rates for Children

Source: Bureau of the Census

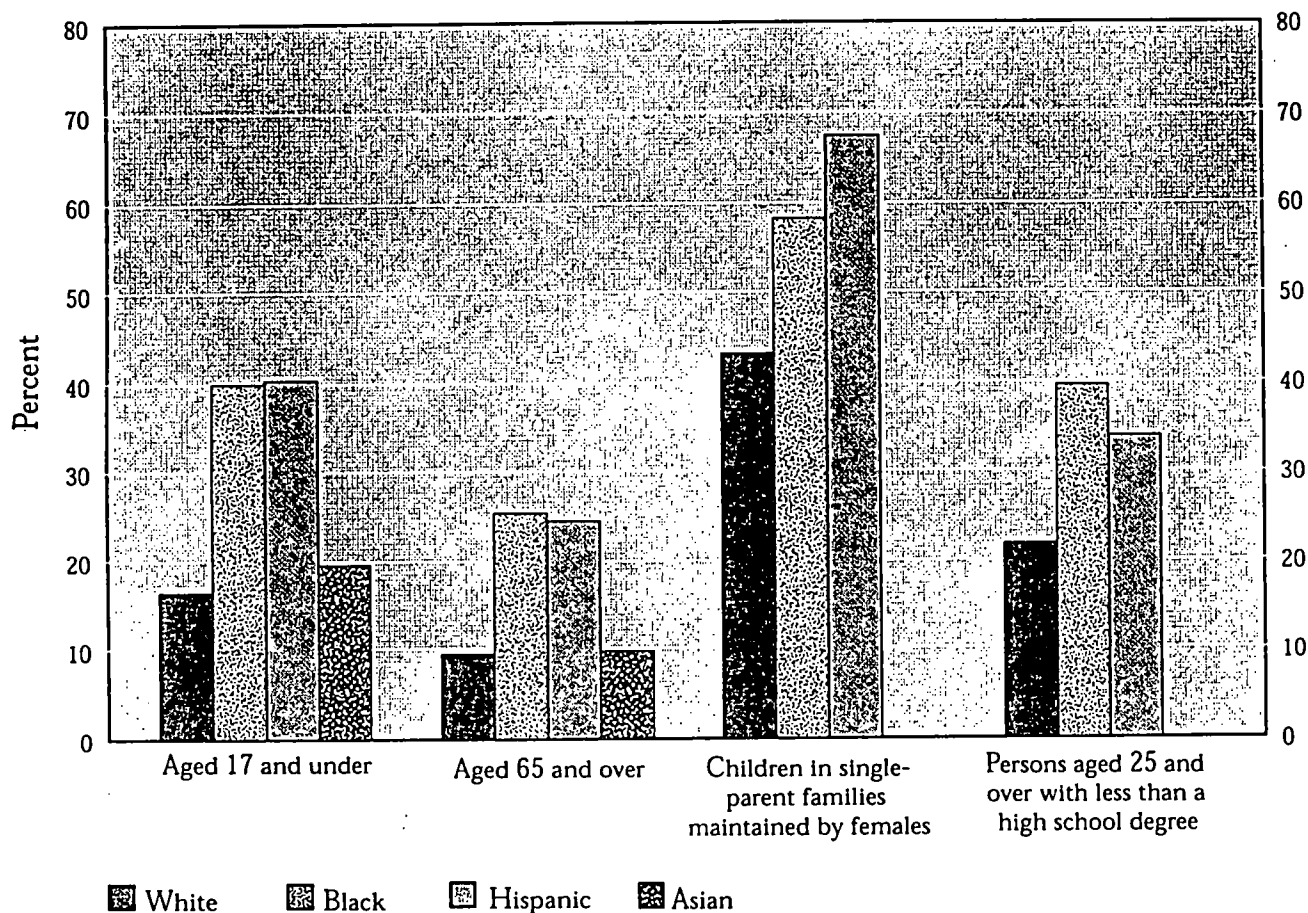


- Child poverty measures current economic hardship among families with children. Poverty in childhood is also associated with higher risk for poor child health, delayed cognitive development, and poverty in adulthood. As such, it is an indicator of inequality of opportunity and a predictor of long-term economic disadvantage.
- Child poverty rates for all groups declined sharply in the 1960s. Since then, child poverty rates have fluctuated with the economy and edged up for whites, blacks, and Hispanics over the 1970s and 1980s. Child poverty has fallen since the early 1990s for blacks and whites.
- The poverty rate for Hispanic children has increased more rapidly than for other groups and is currently about equal to that of black children. According to the 1990 census, American Indian children (not shown in chart) had a poverty rate second only to that of black children.

Note: Straight line between dots indicates data are not available for intervening years. Prior to 1974 for whites and blacks, and prior to 1976 for Hispanics, poverty rates are for related children in families.

4. Poverty Rates by Selected Individual Characteristics, 1996

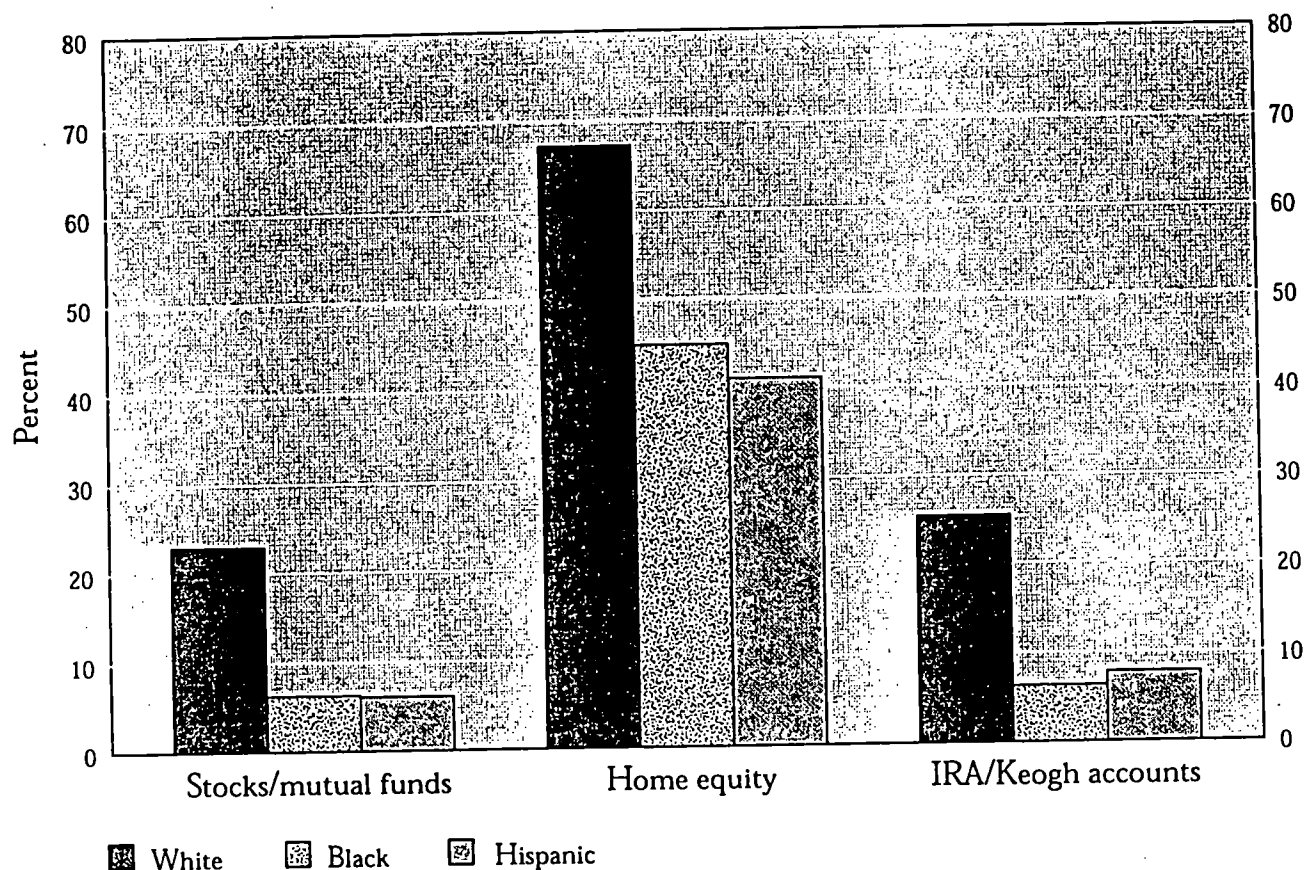
Source: Bureau of the Census



- The higher poverty rates of blacks and Hispanics are in part related to educational attainment, the age distribution, and the prevalence of single-parent families for those groups. However, even among individuals with similar characteristics, poverty rates are higher for blacks and Hispanics than for whites. Lower wages and higher unemployment play a role in these differences.

5. Households Owning Selected Assets, 1993

Source: Bureau of the Census



- Net worth (assets minus liabilities) is a better indicator of permanent economic status than is income in a single year. Such wealth can provide a cushion against temporary economic hardship.
- In 1993, households maintained by whites were more likely than those maintained by blacks or Hispanics to own stocks or mutual funds, have equity in their home, or hold assets in a retirement savings account such as an individual retirement account (IRA) or Keogh account.
- Differences in stock ownership in 1993 are notable because the value of equity shares has increased markedly since that time; for example, the Standard and Poor's 500 Index has more than doubled in value since 1993.
- Among those who own assets of each type shown above, the median value (not shown in chart) of assets held by whites is higher than that of assets owned by blacks and Hispanics. In 1993, the median net worth of households maintained by whites was about 10 times that of households maintained by blacks or Hispanics.

VI. Health

Advances in public health practice and medical technology have contributed to dramatic improvements in the longevity of the U.S. population. On average, Americans in 1900 could not expect to live to the age of 50. By 1996 they could expect to live past the age of 76. Although all racial and ethnic groups have experienced gains in life expectancy, differences between groups in longevity and in many other measures of health status have been apparent for as long as these measures have been collected separately by race. This is true for measures of health status at the beginning, middle, and end of the life span. For some groups and some measures, these differences are persistently large. For others, the differences are small.

In general, blacks fare worse than any other group, and American Indians and Hispanics are often disadvantaged in health status relative to whites. On average, Asians fare as well as and sometimes better than non-Hispanic whites on most measures of health. While many of the observed differences are large, average differences between racial and ethnic groups may mask important differences within the society. For instance, there is evidence that blacks who live in very poor urban areas suffer extreme health disadvantages not only relative to non-Hispanic whites but also relative to blacks who live in poor rural areas or middle class urban neighborhoods.¹ In addition, health differences by national origin, socioeconomic status, and age, particularly within the Hispanic and Asian populations, are not apparent when statistics are reported at this level of aggregation. For example, there is some evidence that the health status of younger cohorts of Hispanics may be declining,² and among Asian/Pacific Islanders, those with low incomes and those with origins in south and southeast Asia are disadvantaged relative to other Asian groups and non-Hispanic whites.³

Infant mortality is often used to compare the health and well-being of populations across countries as well as within countries. Although the United States has a lower rate of infant mortality than a typical developing country, it has long had one of the highest infant mortality rates among the industrialized countries. Within the United States, blacks and American Indians have higher infant mortality rates than other groups, and although infant mortality rates have been falling for all groups, differences between groups have persisted (Health 1).

Declines in infant mortality and infectious diseases among the young contributed much to the increase in overall life expectancy in the early part of the 20th century. In the latter part of the century, the large declines in chronic disease death rates among the middle aged and older groups have led to an acceleration of life expectancy. However, differences in life expectancy between whites and blacks have persisted throughout the period, and, among men, they actually grew in the 1980s (Health 2).

Childhood infectious diseases, once a significant cause of illness and death among children, have largely been conquered through widespread use of vaccination. Mandatory vaccination requirements for enrollment in most schools in the United States virtually assure vaccination by age five. However, a large majority of children in the United States receive vaccinations much earlier, following the recommended schedule that begins at birth and is largely complete by 18 months. Whether or not a child aged 19 to 35 months is up to date with this schedule is a key indicator of access to and use of basic medical care. Although there are differences among racial and ethnic groups in the United States, these are largely a reflection of differences in their economic status (Health 3).

Smoking contributes to nearly 400,000 cancer and heart disease deaths annually, and reducing smoking has been an important goal of public health efforts for many years.⁴ Because of the addictive property of nicotine, and because most current smokers began smoking at young ages, efforts to reduce smoking have focused on youth. Between 1965 and 1990, there were large reductions in smoking among 18- to 24-year olds, especially for blacks (Health 4). Since 1990, however, there is concern that this decline has stopped. Rates of smoking among 18- to 24-year olds are higher for whites than for blacks and Hispanics. Data for this age group are not available for Asians and American Indians; however, among persons aged 18 to 34, smoking rates for Asians are lower than those for all other groups, and rates for American Indians are higher than those of all other groups.⁵

The other major areas of concern for adolescent and young adult health are unintentional injuries (primarily motor vehicle injuries), homicides, suicides, and HIV (Human Immunodeficiency Virus, the virus that causes AIDS). There are also racial and ethnic differences within this age group. American Indians face much higher death rates due to suicides and unintentional injuries than any other group, while blacks face much higher rates of homicide than any other group (Health 5). Hispanics and American Indians also face higher than average homicide rates. HIV disease kills black and Hispanic young adults at significantly higher rates than non-Hispanic whites, Asians, or American Indians.

At middle age, chronic diseases are among the most important indicators of health. Heart disease and cancer are the two leading causes of premature death for those aged 45 to 64, and much of this mortality is directly attributable to smoking.⁶ Asians in this age range face the lowest death rates due to heart disease (Health 6). Blacks, on the other hand, are at greater risk of mortality from these chronic diseases than any other group in this age range. These differences in death rates from chronic diseases are responsible for a majority of the disparity between blacks and whites in the probability of survival to age 65.⁷

There is also evidence that health differences persist into old age, although these data are not presented in this book. Black and Hispanic elderly are more likely to have disabilities and chronic diseases than white elderly, but to some extent these differences are explained by differences in socioeconomic status.⁸

Research into the reasons for health differences between racial and ethnic groups has focused largely on differences in socioeconomic status.⁹ On average, white Americans have better access to the social and economic resources necessary for healthy environments and lifestyles and better access to preventive medical services. Other research suggests that discrimination and racism create stress leading to poorer health among members of racial minority groups.¹⁰ For instance, the higher prevalence of hypertension among blacks relative to whites has been linked to personal experiences of discrimination.¹¹

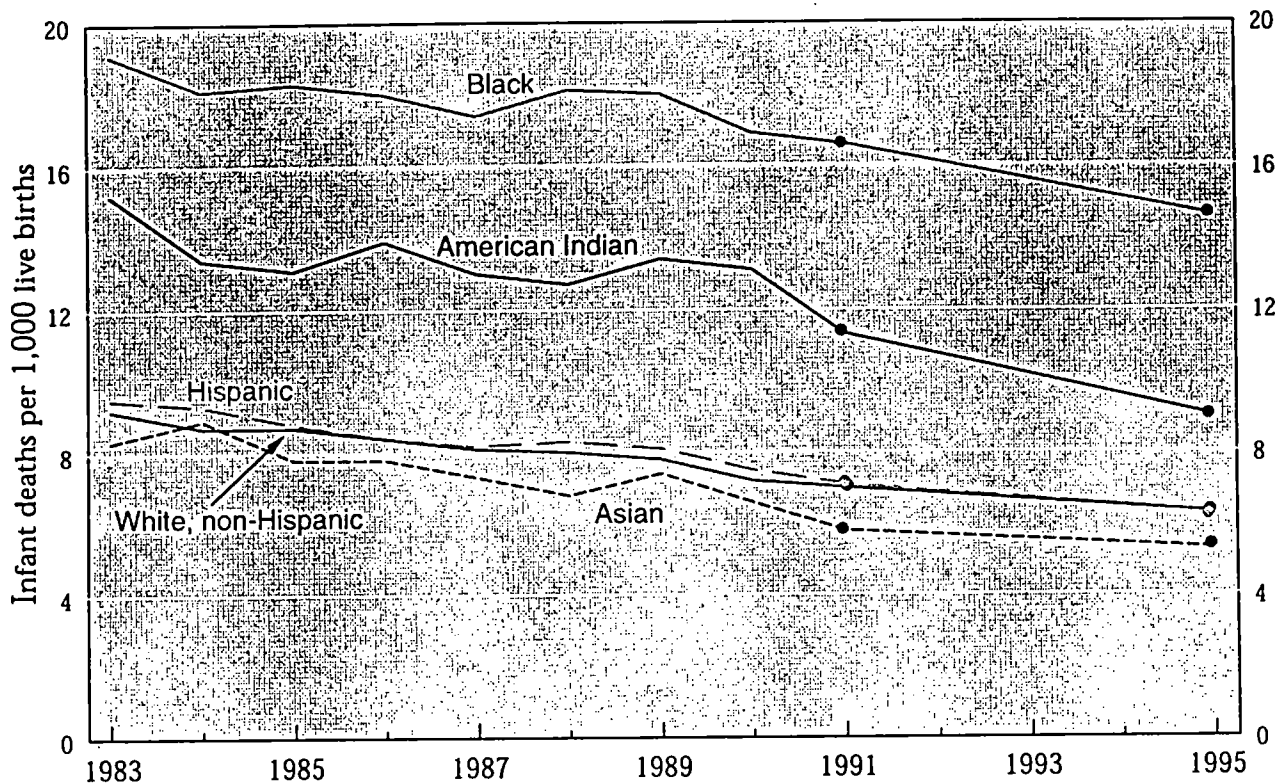
To the extent that access to medical care can prevent the onset of disease or ameliorate its effects, the portion of the population without health insurance (either public or private) will be correlated with ill health. Especially among men, Hispanics and blacks are less likely to have health insurance than non-Hispanic whites (Health 7). Insurance coverage is highly correlated with income, however, and the difference in insurance coverage between white and black men (though not the difference between Hispanic and non-Hispanic white men) can be almost entirely explained by differences in income.

Disparities in health status also have economic consequences. For example, poor health can lead to high expenditures on medical care at the expense of other goods (for example, housing or education). Perhaps more important, poor health can also reduce earning potential and lower quality of life. Thus, the disparities observed in health between racial and ethnic groups in the United States are tied to differences in many other economic and social realms.

1. Geronimus, Arline, et al. 1996. "Excess Mortality among Blacks and Whites in the United States." *New England Journal of Medicine* 335 (21):1552-58.
2. Liao, Youlian, et al. 1998. "Mortality Patterns among Adult Hispanics: Findings from the NHIS, 1986-1990." *American Journal of Public Health* 88 (2):227-32.
3. Tanjasiri, Sora P., Steven P. Wallace, and Kazue Shibata. 1995. "Picture Imperfect: Hidden Problems among Asian Pacific Islander Elderly." *The Gerontologist* 35 (6):753-60; Klatsky, Arthur L., et al. 1994. "The Risk of Hospitalization for Ischemic Heart Disease among Asian Americans in Northern California." *American Journal of Public Health* 84 (10):1672-75.
4. Centers for Disease Control and Prevention. 1997. "Smoking-Attributable Mortality and Years of Potential Life Lost—United States, 1984." *Morbidity and Mortality Weekly Report* 46 (20):444-51.
5. U.S. Department of Health and Human Services. 1998. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services.
6. Centers for Disease Control and Prevention. 1993. "Cigarette Smoking-Attributable Mortality and Years of Potential Life Lost—United States, 1990." *Morbidity and Mortality Weekly Report* 42 (33):645-48.
7. Geronimus, et al. "Excess Mortality among Blacks and Whites in the United States."
8. Schoenbaum, Michael and Timothy Waidmann. 1997. "Race, Socioeconomic Status, and Health: Accounting for Race Differences in Health." *Journals of Gerontology* 52B (Special issue):61-73; Smith, James P. and Raynard Kington. 1997. "Demographic and Economic Correlates of Health in Old Age." *Demography* 34 (1):159-70.
9. Williams, David R. 1990. "Socioeconomic Differentials in Health: A Review and Redirection." *Social Psychology Quarterly* 53 (2):81-99.
10. Williams, David R., Risa Lavizzo-Mourey, and Rueben C. Warren. 1994. "The Concept of Race and Health Status in America." *Public Health Reports* 109 (1):26-41.
11. James, Sherman A. 1994. "John Henryism and the Health of African-Americans." *Culture, Medicine, and Psychiatry* 18:163-82; Krieger, Nancy and Stephen Sidney. 1996. "Racial Discrimination and Blood Pressure: The CARDIA Study of Young Black and White Adults." *American Journal of Public Health* 86 (10):1370-78.

1. Infant Mortality Rates

Source: National Center for Health Statistics

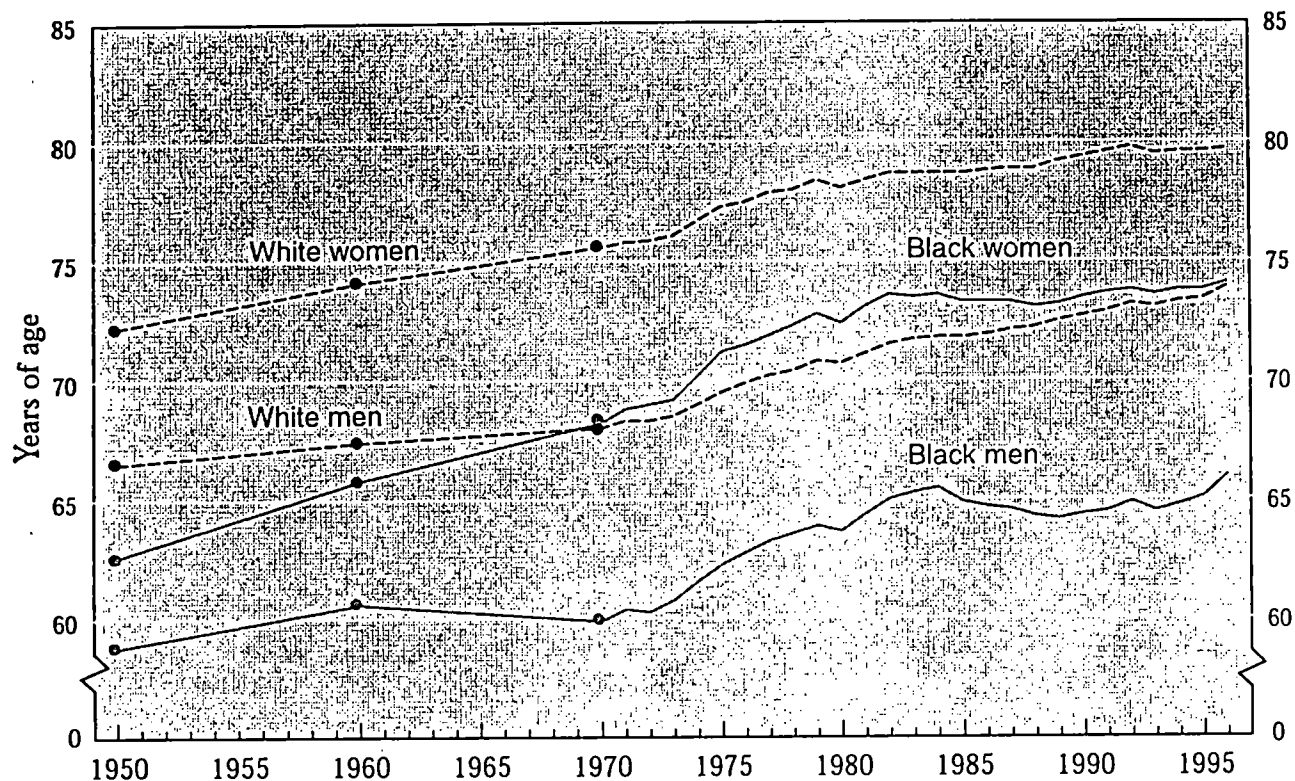


- The infant mortality rate is often used as a primary indicator of the overall health status of a population. It is defined as the number of deaths that occur before a child's first birthday per 1,000 live births. Rates presented here are categorized by race and Hispanic origin of mother.
- Although infant mortality rates have fallen over time for all racial and ethnic groups, differences between groups have persisted for many years. In 1950, for example, white infants died at a rate of approximately 27 per thousand, while black infants died at a rate of nearly 44 per thousand (not shown in chart).
- Wide disparities in infant mortality among racial and ethnic groups remain. In 1995 the rate for blacks was more than twice the rate for non-Hispanic whites, Hispanics, and Asians. American Indians also had relatively high rates. It is notable that Hispanic infant mortality rates are equivalent to those of non-Hispanic whites, despite the considerably lower socioeconomic status of Hispanics.
- For most groups, the infant mortality rate is much higher for babies born to teenage mothers (not shown in chart). The notable exception is black mothers, for whom the infant mortality rate is no higher for teenage mothers than for other mothers. This means that higher teenage birth rates do not account for the higher overall black infant mortality rate.

Note: Straight line between dots indicates data are not available for intervening years.

2. Life Expectancy at Birth

Source: National Center for Health Statistics

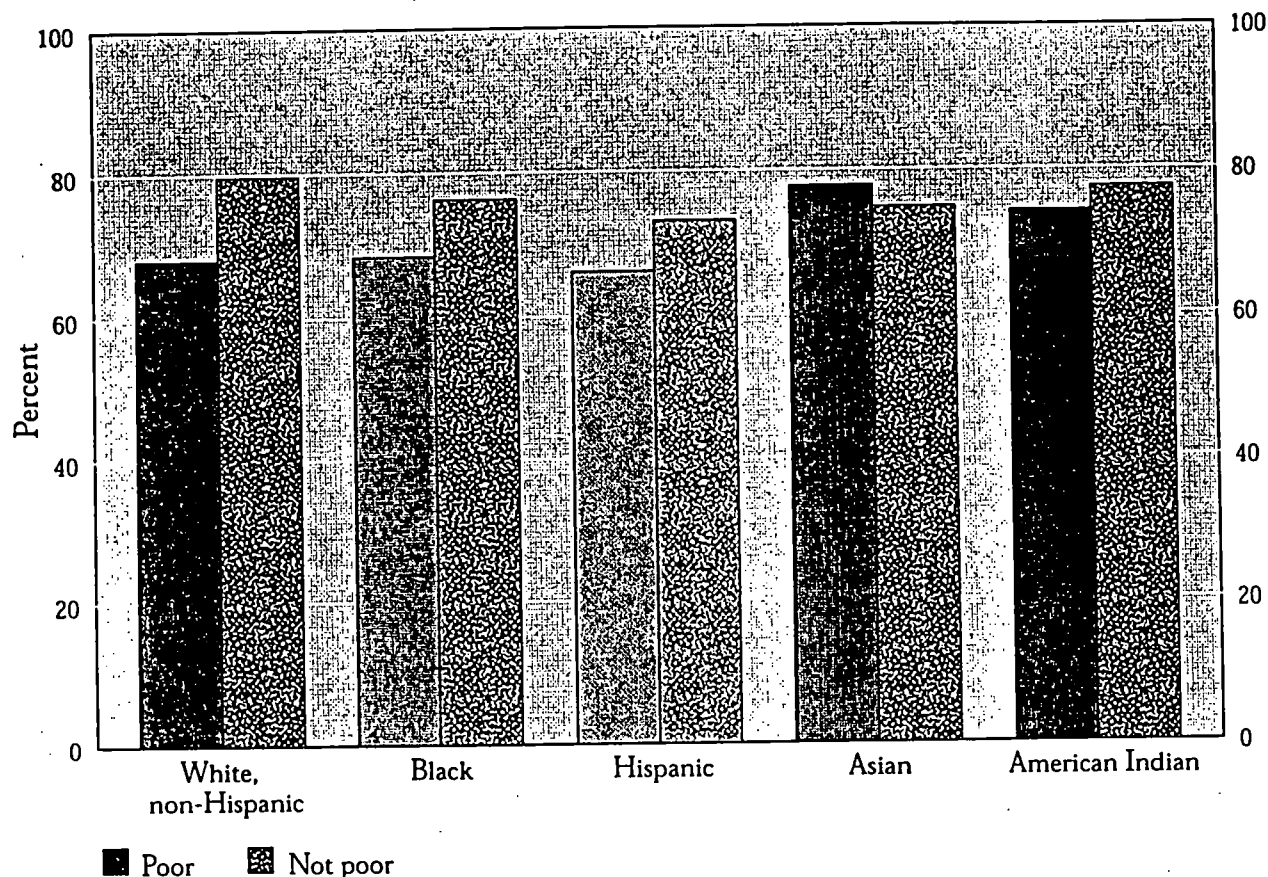


- A key summary measure of mortality risk is life expectancy at birth. This represents the average length of time that a baby born today would live if current death rates at each age remained constant.
- For both men and women, whites can expect to live longer than blacks.
- Women of both race groups can expect to live longer than their male counterparts.
- Although life expectancy has increased substantially for all groups, the differences between groups increased during the 1980s, particularly among men. Recently, however, the gap has narrowed slightly.

Note: Straight line between dots indicates data are not shown in intervening years.

3. Children Aged 19 to 35 Months Who Are Up to Date with Recommended Vaccinations, 1995–96

Source: National Center for Health Statistics

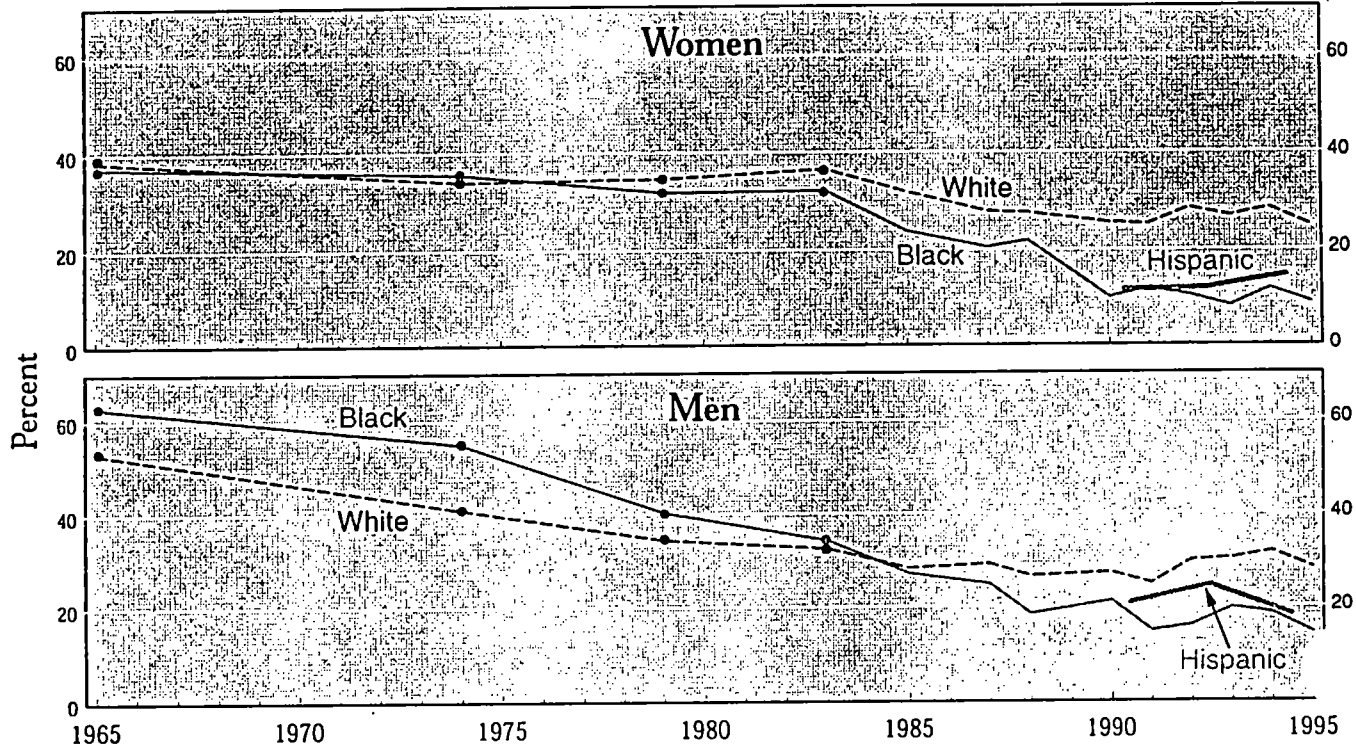


- Immunization is a fundamental component of regular medical care for children. In addition to measuring the extent to which children are protected from childhood diseases, this measure also indicates whether children have at least some access to medical care. This chart shows the percentage of children aged 19 to 35 months who were up to date with the recommended schedule of vaccinations in 1995 and 1996.
- Non-Hispanic white, black, and Hispanic children who live in poverty are significantly less likely than nonpoor children to be up to date with recommended vaccinations.
- Among children in similar economic circumstances, there are relatively small differences between racial and ethnic groups. Non-Hispanic white, black, and Hispanic children in poverty have roughly equal chances of being currently vaccinated.

Note: Data for 1995 and 1996 are averaged to provide more reliable estimates.

4. Prevalence of Smoking Among Persons Aged 18 to 24

Source: National Center for Health Statistics

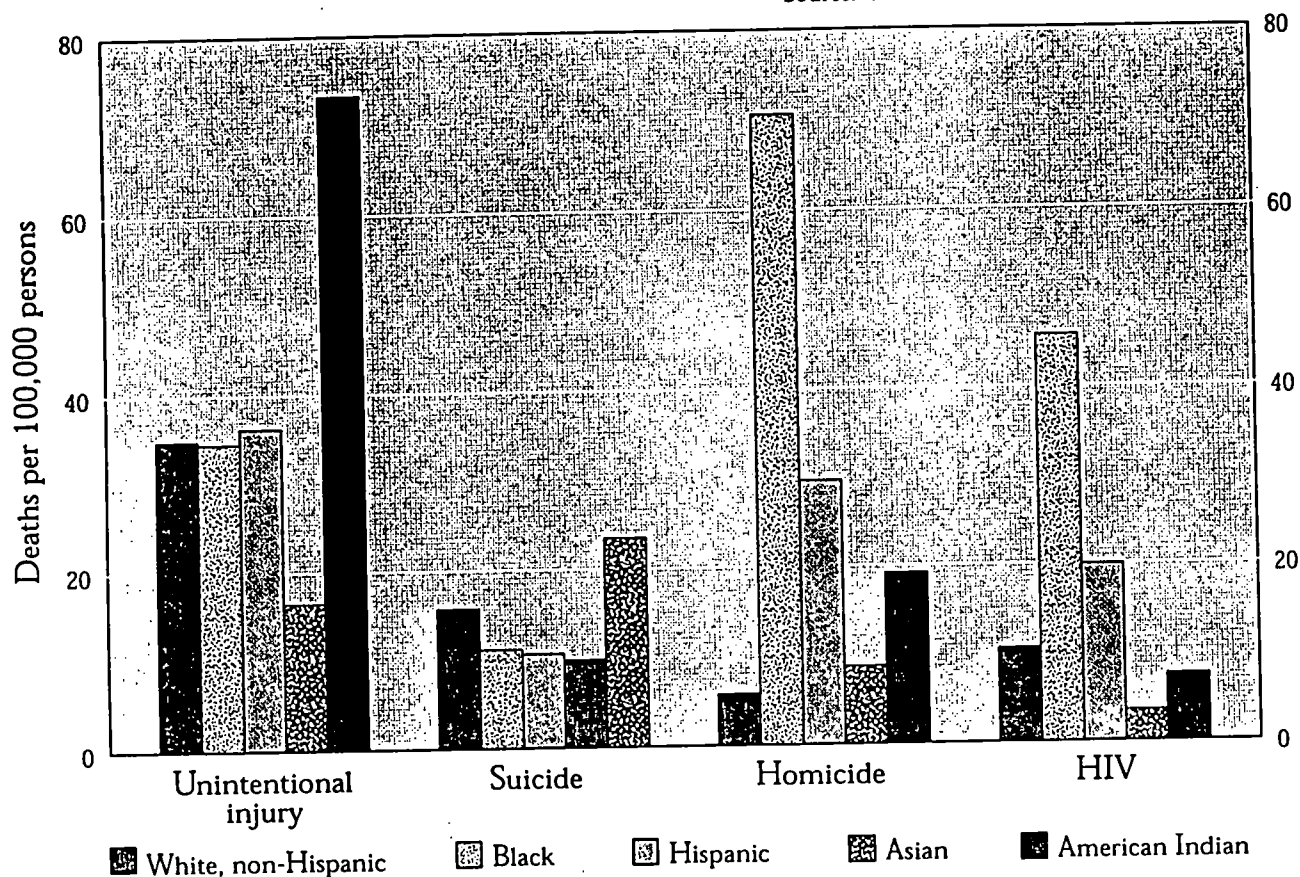


- Cigarette smoking is one of the most important public health concerns in the United States, contributing to nearly 400,000 deaths each year. Most smokers begin smoking early in life, and much effort to reduce smoking has been focused on young people.
- Smoking rates for white young persons exceed rates for black and Hispanic young persons. Black females have the lowest smoking rates. For men, and for black men in particular, smoking rates have fallen substantially since 1965, when more than 60 percent of black males and more than 50 percent of white males smoked. Reductions in smoking have been much greater for black than for white women.
- Since the mid-1980s, smoking prevalence among black young adults has fallen faster than among whites.
- Data for Hispanics are only available beginning in 1990-91. Smoking is less prevalent among Hispanics than among whites but is slightly more prevalent than among blacks.

Note: Straight line between dots indicates data are not available for intervening years. Data for Hispanics are for 1990-91, 1992-93, and 1994-95.

5. Death Rates by Cause for Persons Aged 15 to 34, 1994-95

Source: National Center for Health Statistics

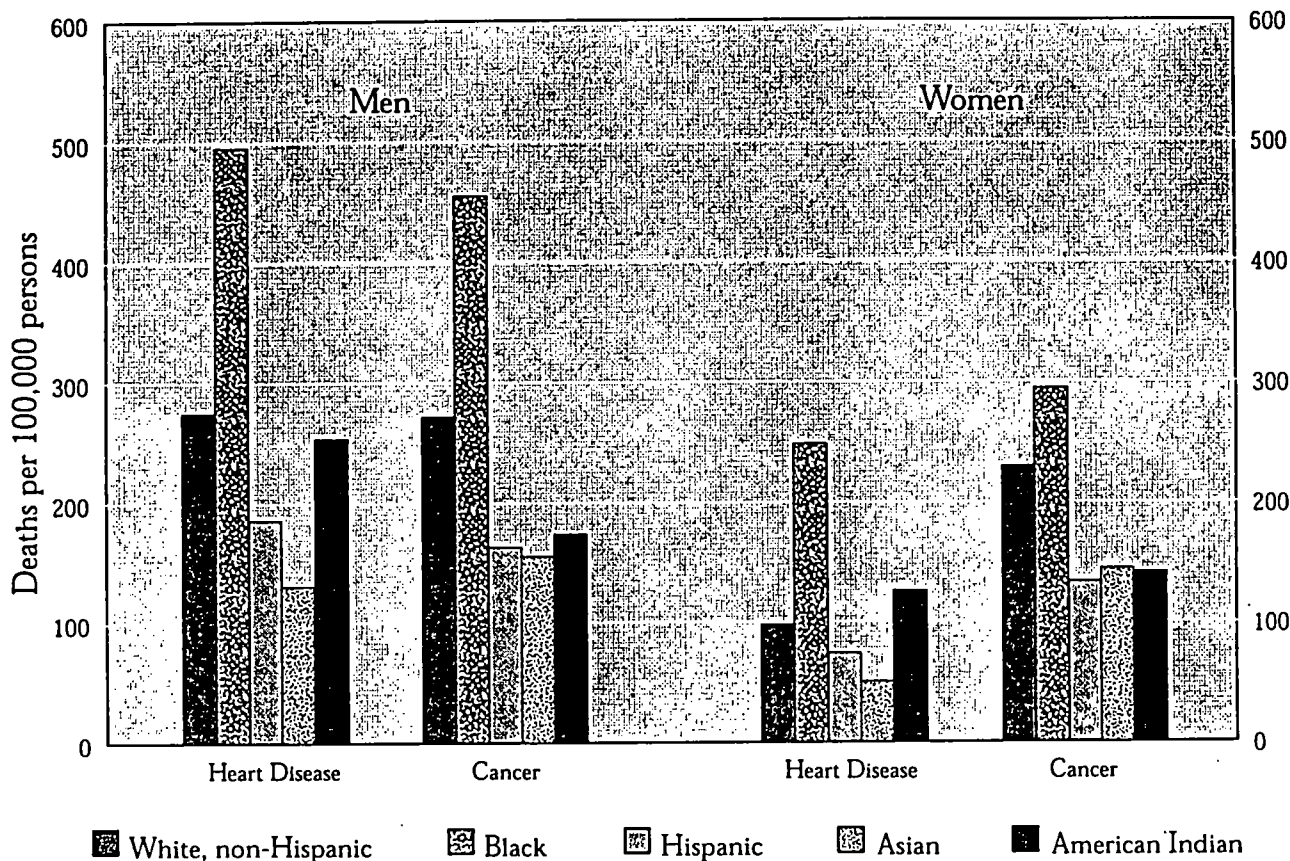


- Although deaths among adolescents and young adults are rare relative to deaths among older adults and the elderly, several causes of death are particularly important for this age group. The most common cause of death in this group is not disease but injury, either intentional or unintentional (accounting for more than half of deaths). The one fatal disease that affects this age group significantly is HIV.
- Deaths due to injuries (unintentional and intentional) are more prevalent among men than women in all age groups (not shown in chart), but this difference is particularly apparent for persons between the ages of 15 and 34. In this group, nearly 80 percent of injury deaths are to men.
- American Indians are much more likely than members of other groups to die as the result of an unintentional injury (the most common cause is motor vehicle-related injuries) or to commit suicide. Blacks are much more likely than members of any other group to be victims of homicide. Blacks and Hispanics are also more likely to die from HIV-related diseases than members of other groups. Asians have the lowest rates of death due to injuries and HIV in this age group.

Note: Data for 1994 and 1995 are averaged to provide more reliable estimates. HIV data on American Indians are for 1993-95.

6. Death Rates by Cause for Persons Aged 45 to 65, 1995

Source: National Center for Health Statistics

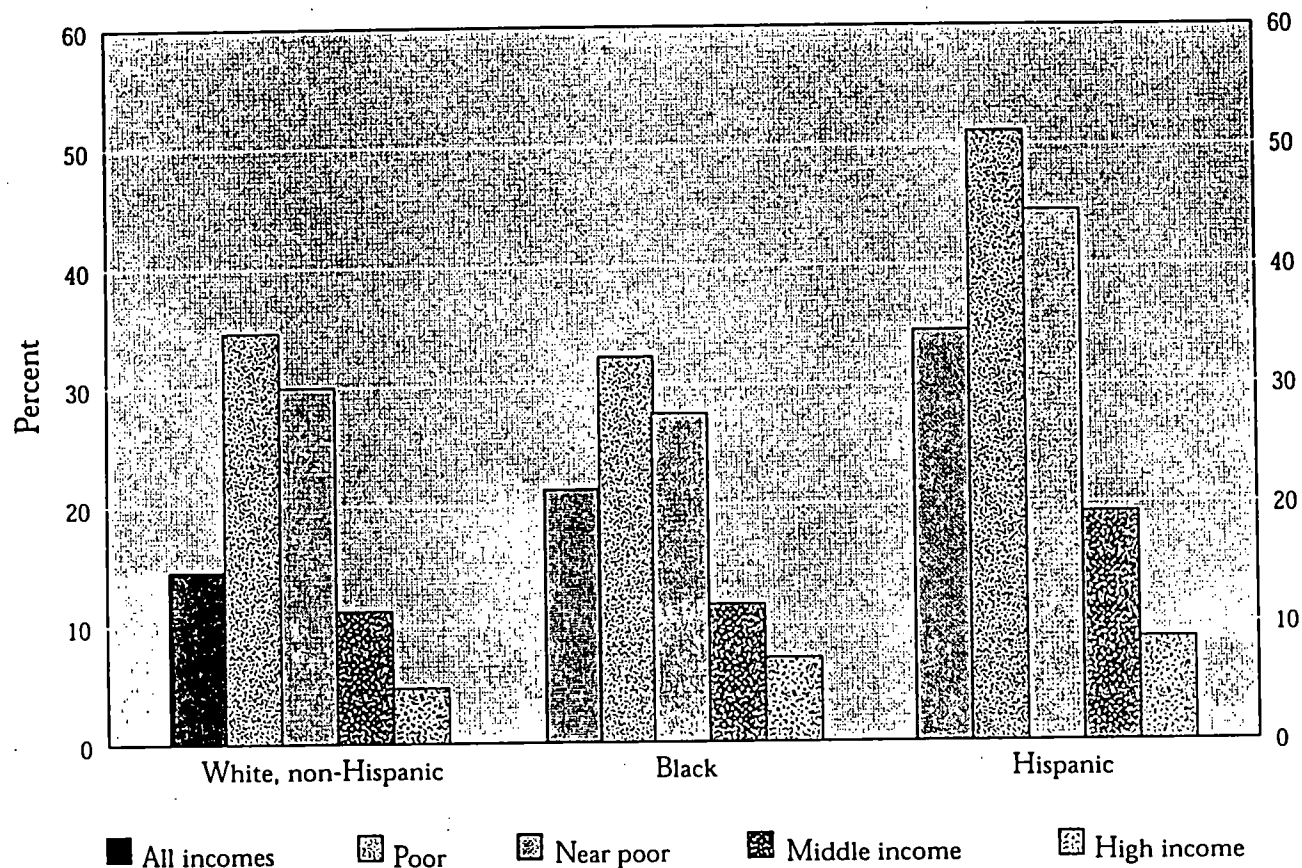


- Chronic diseases such as heart disease and cancer account for the largest fraction of deaths among those aged 45 to 64. Smoking is implicated in many of these deaths.
- Black men and women have the highest death rates from heart disease and cancer. Hispanics have lower death rates than non-Hispanic whites for these diseases. Asians generally have the lowest death rates, particularly for heart disease. American Indians have high rates of heart disease mortality relative to Hispanics and Asians.
- Overall, death rates among 45- to 64-year olds are higher for men than for women, largely because of differences in rates of death from these diseases, particularly heart disease.

Note: Rates are age-adjusted.

7. Persons Aged 18 to 64 without Health Insurance Coverage, 1994-95

Source: National Center for Health Statistics



- Coverage by health insurance, either private or public (for example, Medicaid), is a key indicator of access to medical care.
- Hispanics are the most likely to be uninsured, and non-Hispanic whites are the least likely to be uninsured. For every group, the rate of uninsurance is lower for those with higher incomes.
- The overall difference in uninsurance rates between non-Hispanic whites and blacks stems from the relative concentration of blacks in lower income categories, as non-Hispanic whites and blacks with similar incomes have similar rates of uninsurance. Hispanics, on the other hand, have higher rates of uninsurance at every level of income.
- In large part because they are more likely to be eligible for Medicaid, women tend to have lower rates of uninsurance than men (not shown in chart).

Note: Percentages are age-adjusted.

VII. Crime and Criminal Justice

A safe environment is important for stable childhood development, good health, and successful involvement in education and the job market. No single summary measure can capture the difficulties that crime creates in the lives of individuals and communities. This section discusses three important aspects of crime and justice: victimization—the experience of being a victim of crime—criminal activity, and the criminal justice system. Violent crime victimization is down in recent years, after rising in the late 1980s, and property crime rates have been declining since the mid-1970s. The prison population has grown substantially over the past 20 years, and increasing numbers of individuals have other involvement in the criminal justice system. The differences by race and Hispanic origin in the experiences with crime and involvement in the justice system are stark.

The measured level of criminal activity and criminal justice supervision is the result of actions by many individuals and institutions, including offenders, victims, the police, the courts, and the prison system. Because of these many actors, differences in observed rates of criminal activity and victimization over time or across groups may be difficult to interpret. For example, if individuals perceive that their risk of being victimized has increased, they may take precautions—such as staying inside more or taking a taxi instead of walking—to reduce that risk. If those precautions are successful, the crime rate may not rise, but crime is still playing a larger role in their lives, and they are certainly worse off.

Crimes fall into three major categories: crimes against persons (including violent crimes), property crimes, and public-order crimes (traditionally, crimes such as drug sales, gambling, and prostitution have been included in this category). Information about the number of crimes is available from two types of sources, victimization surveys and data collected by law enforcement officials (the FBI Crime Index, for example). Since surveys provide more reliable information about the characteristics of victims, victimization data from the National Crime Victimization Survey, rather than FBI data, are presented in this section.

In 1996, Americans were victims of an estimated 27.3 million property crimes and 9.1 million violent crimes. Both property and violent crime rates fell in the mid-1990s. Victims of crime bear psychological, economic, and health costs, and offenders may be arrested and punished for their crimes. Although they are not costless to society, public-order crimes cannot be accurately counted by surveys of households that ask about incidents of victimization.

The effects of crime reach beyond victims and offenders to their families and communities. While in prison or jail, offenders can support neither themselves nor their families—in 1991 more than half of male prisoners had children under 18—and a criminal record can continue to impair individuals' labor market opportunities for years.¹ In addition, political participation may be affected: In many states, those convicted of a felony are temporarily or permanently prohibited from voting. Crime costs the economy billions of dollars each year, including property losses and damage, as well as public and private spending to control crime. But these numbers do not capture the heightened sense of insecurity that crime imposes on individuals and communities.

Hispanics and members of racial minority groups, particularly blacks, are much more likely than whites to be victims of crime. Differences in victimization are particularly striking for violent crimes. For example, the homicide victimization rate of blacks is more than twice that of Hispanics and six times that of non-Hispanic whites and Asians. American Indians' homicide victimization

rate falls between that of Hispanics and non-Hispanic whites and Asians (Crime and Criminal Justice 1). The differences in victimization by race and Hispanic origin are much smaller for property crimes than for violent crimes, although differences have grown somewhat since the 1970s. Hispanics have the highest rates of property crime victimization, followed by blacks and whites (Crime and Criminal Justice 2).

Unfortunately, reliable national data on involvement in the criminal justice system are available only for blacks, whites, and "others;" discussion of this subject here is limited to black-white differences. Blacks have higher rates of involvement in the criminal justice system than do whites. Although blacks comprised only 13 percent of the population, nearly equal numbers of blacks and whites were admitted to prison in 1995 (Crime and Criminal Justice 3). Black adults are much more likely than white adults to be under the supervision of the criminal justice system—on probation or parole, or in jail or prison (Crime and Criminal Justice 4).

Blacks represented 43 percent of arrests, 54 percent of convictions, and 59 percent of prison admissions for violent crimes in 1994 (Crime and Criminal Justice 5), indicating that arrested blacks are more likely to be convicted, and convicted blacks are more likely to be imprisoned, compared with whites. Historically, America's criminal justice system has clearly been biased against blacks—for example, between 1930 and 1973, southern jurisdictions put to death 398 black men and 43 white men for the crime of rape.² More recent instances of discrimination on the part of police and elsewhere in the criminal justice system have been documented in personal and media accounts.³ But assessing how much continuing discrimination contributes to the large black-white difference in criminal justice system involvement is difficult. Research suggests that most or all of the differences in the likelihood of conviction and imprisonment can be explained by other factors, such as severity of crime or prior record of the offender.⁴ Less is known about the extent of discrimination at the arrest stage, in part because underlying rates of criminal activity by race cannot be easily assessed. Some evidence comes from comparing the race distribution of "offenders" derived from victims' surveys with the racial composition of individuals arrested for the same crime. Two studies have found that these distributions are roughly comparable for many violent crimes.⁵

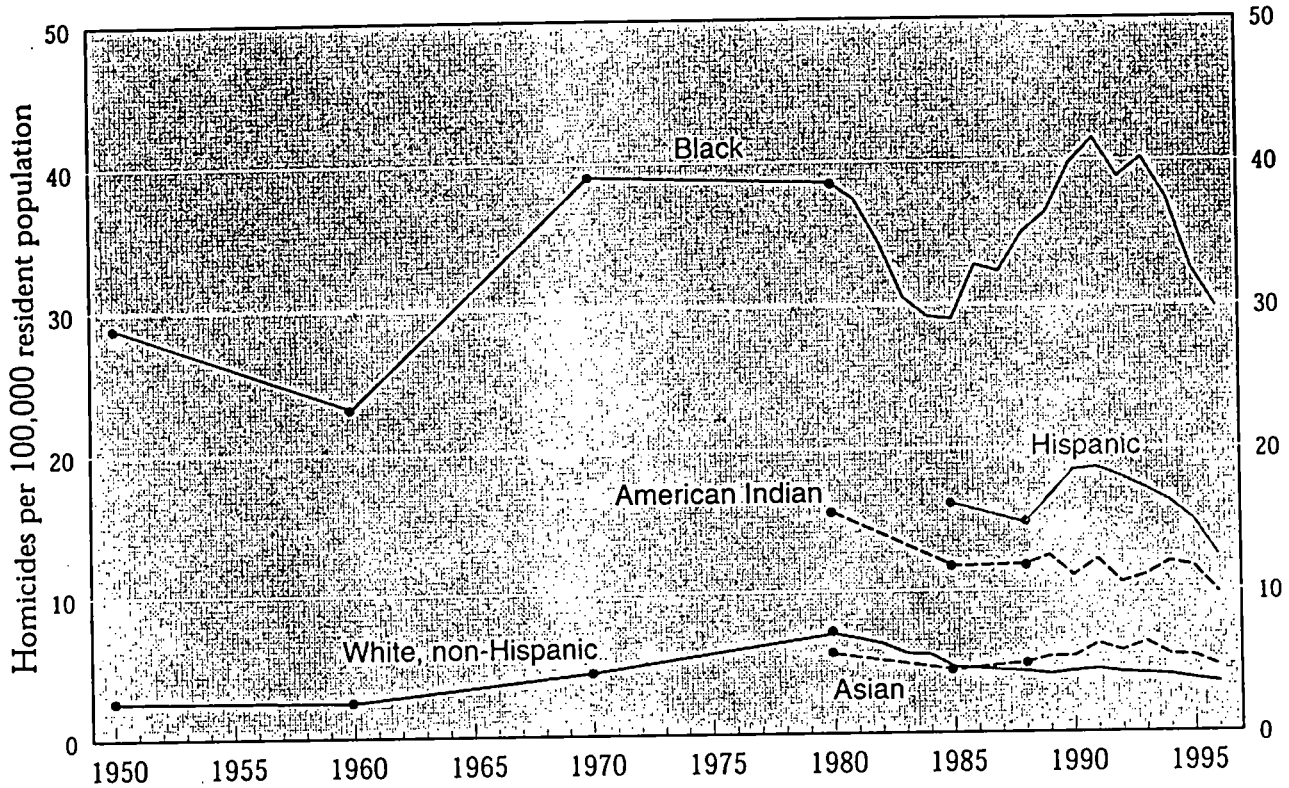
A variety of factors contribute to differences in victimization, criminal activity, and involvement in the criminal justice system, including neighborhoods, economic status, and education. Those who have poorer earnings prospects in the legal job market may be more likely to engage in criminal activity. Since the 1970s, earnings for low-skilled men have deteriorated markedly, increasing the attractiveness of illegal compared to legal job prospects. This trend may explain some of the rise in prison admissions and criminal justice system involvement. In addition, since blacks, Hispanics, and American Indians are over represented at the bottom of the earnings distribution, those groups have been disproportionately affected by deteriorating earnings. Crime policy and enforcement decisions also influence differences in victimization, criminal activity, and punishments. Some policies can have different effects on different groups. For example, the War on Drugs (launched in the early 1980s) resulted in larger increases in incarceration and criminal supervision rates among blacks than among whites. This difference was related, in part, to differences in sentencing and enforcement for crack cocaine—which is more commonly used and sold by blacks—relative to powder cocaine.⁶ Drug use also contributes to nondrug crimes—40 to 80 percent of persons arrested for nondrug offenses tested positive for drugs in 1991.⁷

Besides perceptions of discrimination in the criminal justice system, lack of racial and ethnic diversity among those working in criminal justice may also undermine the perceived legitimacy of the system. However, minority representation on local police departments has increased in recent years and is much higher in large cities, which tend to serve more diverse populations (Crime and Criminal Justice 6). Differences in perceptions about the fairness of the police, the courts, prisons, and jails among racial and ethnic groups have been widely noted. National survey data indicate that blacks are more likely than whites to believe that the criminal justice system treats blacks more harshly (Crime and Criminal Justice 7), and some research based on particular groups or cities finds that both whites and members of minority groups believe that discrimination on the basis of race or ethnicity is a problem in the administration of the criminal justice system.⁸

1. Beck, Allen, et al. 1993. *Survey of State Prison Inmates, 1991*. Bureau of Justice Statistics. Washington, DC; Freeman, Richard B. 1992. "Crime and the Employment of Disadvantaged Youth." In *Urban Labor Markets and Job Opportunity*, ed. George E. Peterson and Wayne Vroman. Washington, DC: The Urban Institute Press.
2. U.S. Department of Justice. 1975. "Capital Punishment 1973." *National Prisoners Statistics Bulletin*. Washington, DC: U.S. Government Printing Office.
3. See, for example, Russell, Kathryn K. 1998. *The Color of Crime*. New York: New York University Press.
4. Stone, Christopher. 1998. "Race, Crime and the Administration of Justice: A Summary of the Available Facts." Paper presented to the Advisory Board of the President's Initiative on Race, May 19. Blumstein, Alfred, et al. 1983. *Research on Sentencing: The Search for Reform*. Washington, DC: National Academy Press.
5. Hindelang, Michael J. 1978. "Race and Involvement in Common Law Personal Crimes." *American Sociological Review* 43 (February):93-109; General Accounting Office. 1994. *Racial Differences in Arrests*. Washington, DC.
6. McDonald, Douglas C. and Kenneth E. Carlson. 1993. *Sentencing in the Federal Courts: Does Race Matter? The Transition to Federal Sentencing Guidelines, 1986-90*. Bureau of Justice Statistics. Washington, DC.
7. National Institute of Justice. *Drug Use Forecasting, 1991 annual report*.
8. See, for example, Carter, David L. 1985. "Hispanic Perception of Police Performance: An Empirical Assessment." *Journal of Criminal Justice* 13: 487-500; Moore, David W. and Lydia Saad. 1995. "No Immediate Signs That Simpson Trial Intensified Racial Animosity." *The Gallup Poll Monthly*, October: 2-9; The Gallup Organization. 1997. *The Gallup Poll Social Audit: Black/White Relations in the United States 1997*.

1. Victims of Homicide

Source: National Center for Health Statistics

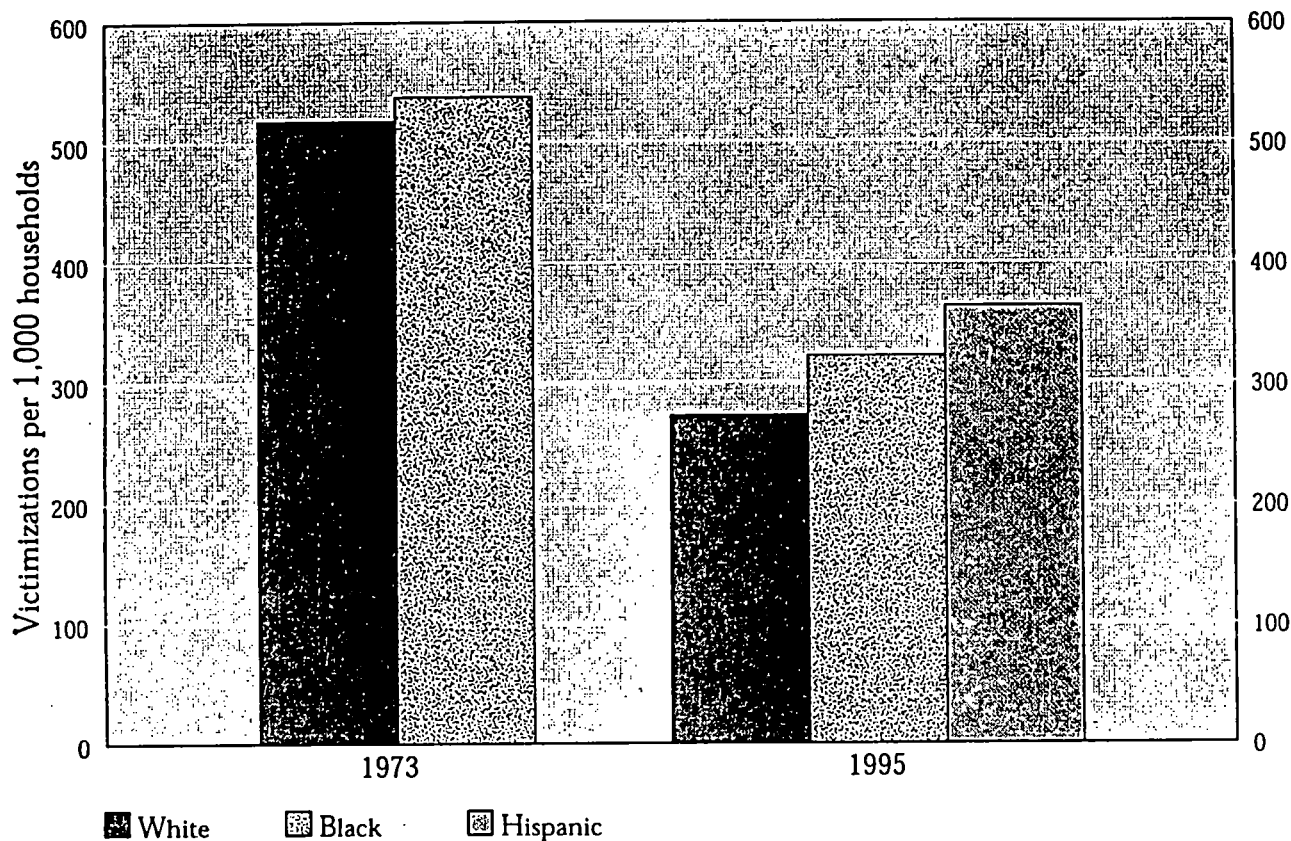


- Homicide victimization rates for blacks have been at least five times those of whites for the last half century, sometimes reaching more than ten times the white rate. In 1996, non-Hispanic whites and Asians had the lowest homicide victimization rates (3.5 and 4.6 per 100,000 resident population), followed by American Indians (9.8), Hispanics (12.4), and blacks (29.8).
- Males are almost four times more likely than females to be victims of homicide (not shown in chart).
- Males aged 15 to 24 (not shown in chart) have the highest homicide victimization rate, and the differences across racial and ethnic groups are even larger for this group: Blacks have by far the highest rate (123.1 per 100,000 population), followed by Hispanics (48.9), American Indians (26.6), Asians (15.6), and non-Hispanic whites (6.4).

Note: Straight line between dots indicates data are not shown for intervening years. Data include deaths from "legal intervention" (use of police force). Prior to 1985, data for whites include Hispanic whites. Prior to 1970, data include nonresidents.

2. Victims of Property Crime

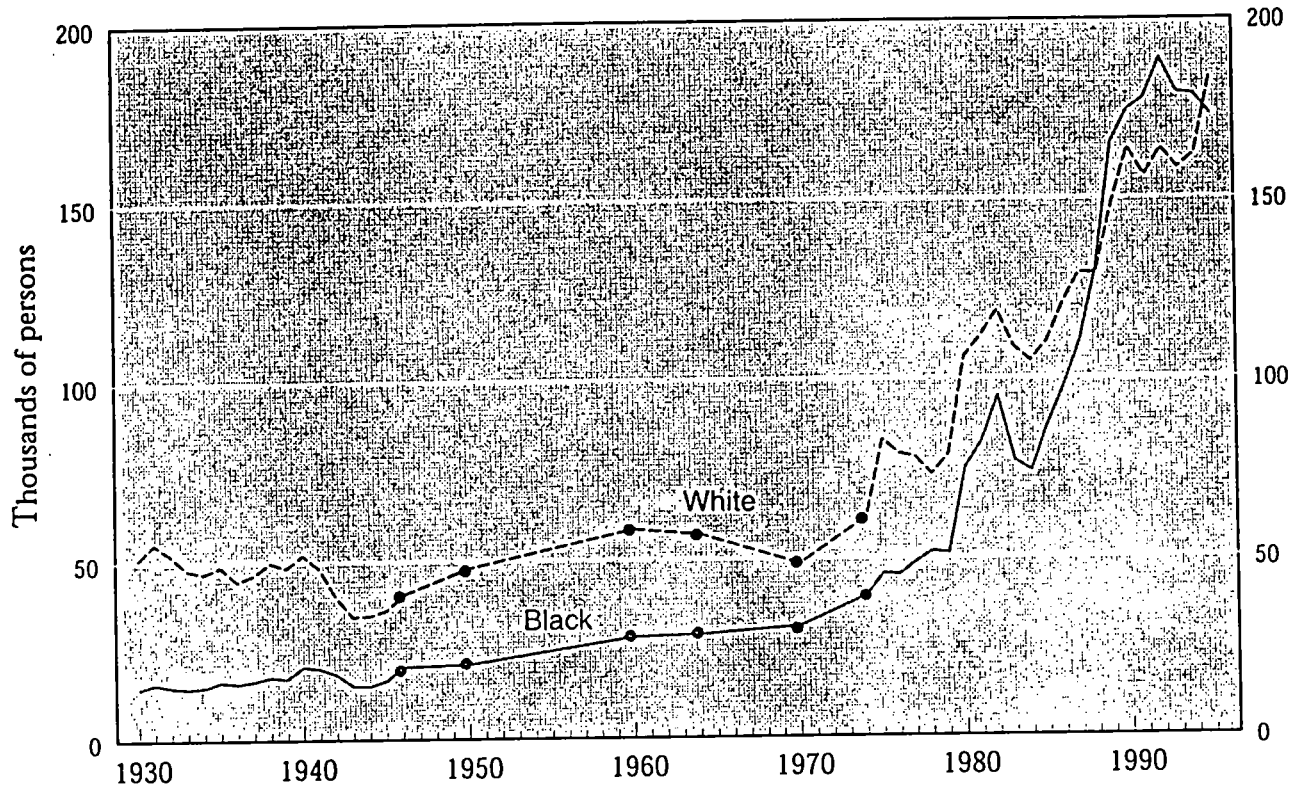
Source: Bureau of Justice Statistics



- Property crimes include burglary, motor vehicle theft, and personal theft. Both attempted and completed crimes are reported.
- Differences in property crime victimization rates across racial and ethnic groups are much less pronounced than those for violent crimes such as homicide (not shown in chart).
- Property crime victimization was less frequent in 1995 than 1973 among both black and white households, but differences between these groups grew somewhat. (Data for Hispanics are not available for 1973.)

3. Admissions to State and Federal Prisons

Source: Bureau of Justice Statistics

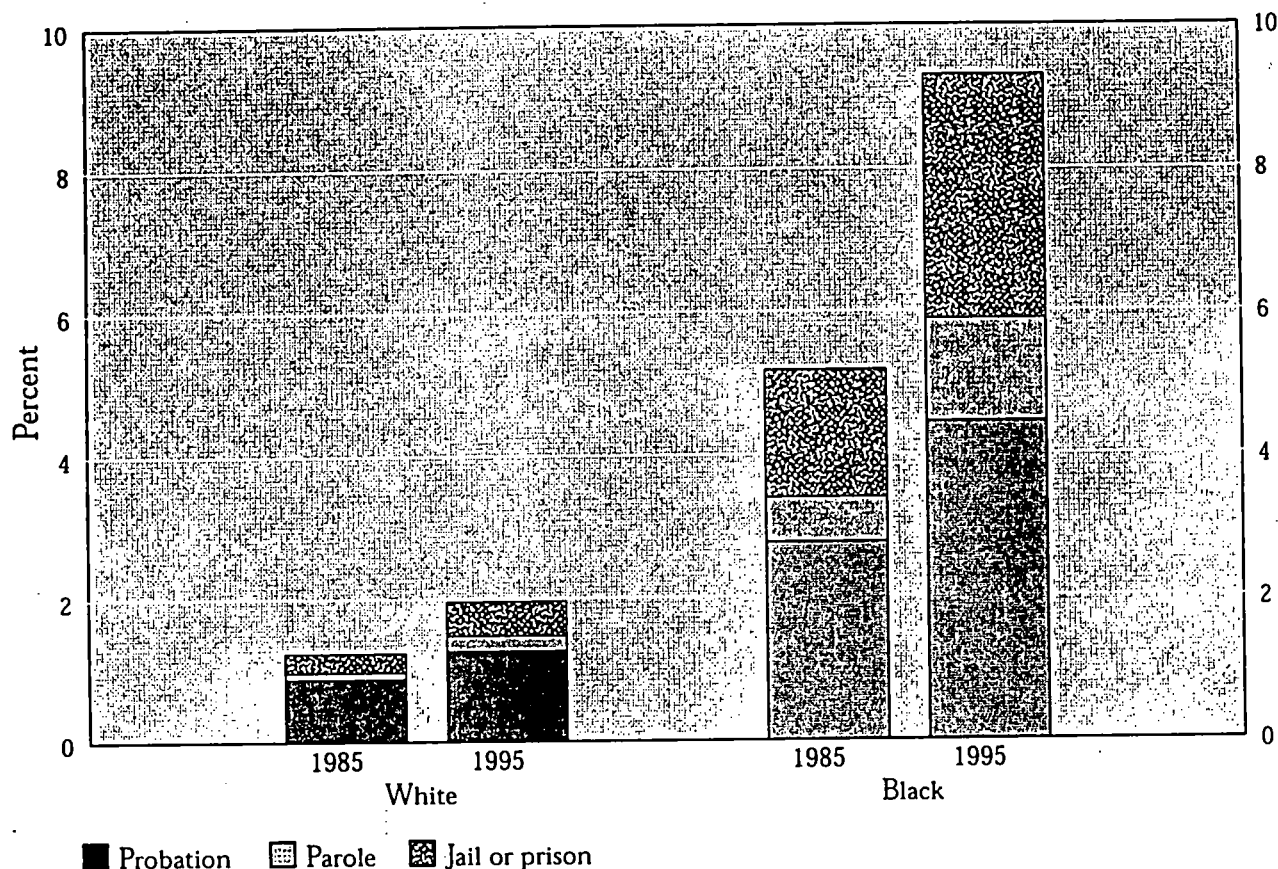


- Prison admissions rose slightly between 1930 and 1970 but have risen substantially since then. Between 1970 and 1995, white admissions more than tripled, and black admissions increased more than five-fold. Admissions of blacks fell slightly between 1992 and 1995.
- Rapidly rising admissions for drug offenses explain part of the recent increase in total admissions. Between 1985 and 1995, the fraction of admissions to state prisons that were for drug offenses grew from 13 to 31 percent (not shown in chart). The fraction of new admissions for drug offenses was similar for blacks and whites in 1985; however, the increase in drug-crime admissions has been much larger for blacks.
- In 1995 women comprised less than 10 percent of new court commitments to state and federal prisons, but prison admissions have been growing faster among women than men (not shown in chart).

Note: Straight line between dots indicates data are not available for intervening years.

4. Adults under Correctional Supervision

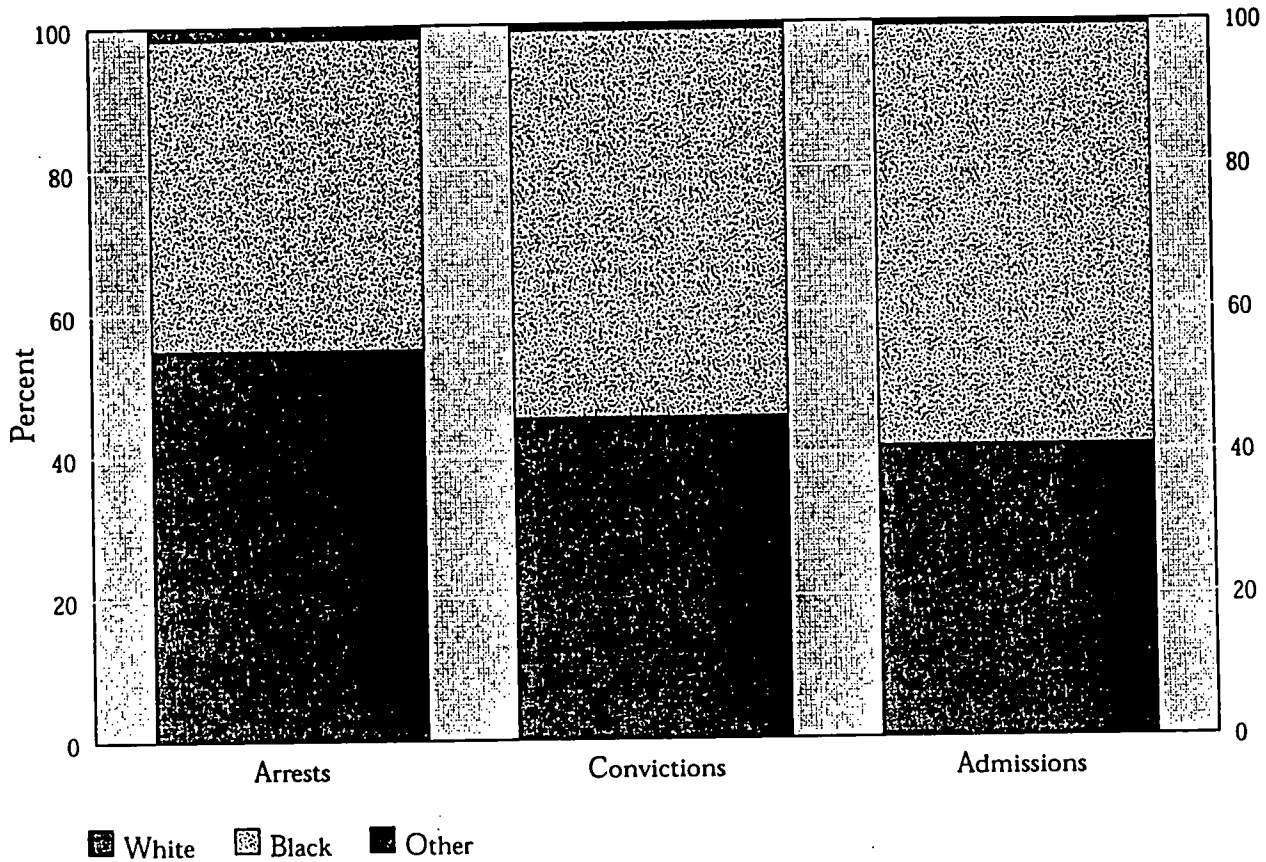
Source: Bureau of Justice Statistics



- The fraction of the adult population under correctional supervision is one indicator of the extent to which the criminal justice system is involved in the lives of individuals and communities.
- The fraction of the population that is involved in the criminal justice system—on probation or parole or in jail or prison—has grown substantially. Between 1985 and 1995, the fraction of white and black adults in each category of supervision grew considerably.
- Black adults were nearly five times more likely than white adults to be under supervision of the criminal justice system in 1995.
- Men aged 20 to 29 are the most likely to be under correctional supervision (not shown in chart). In 1991, about 7 percent of white men and 26 percent of black men in their twenties were under correctional supervision.

5. Arrests, Convictions, and Prison Admissions for Violent Crimes, 1994

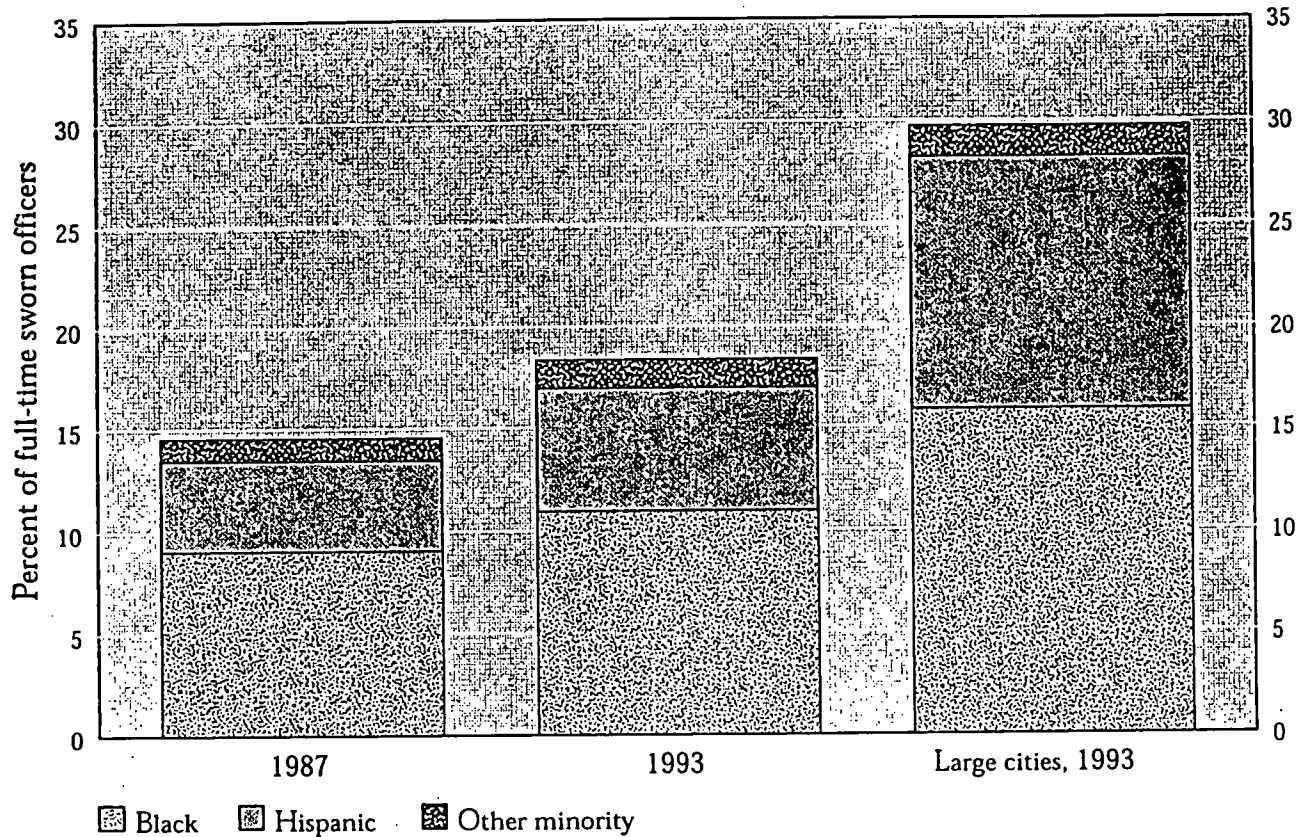
Source: Bureau of Justice Statistics



- This chart shows the racial composition of arrests, convictions, and prison admissions for violent crimes in 1994, including murder, rape, robbery, and aggravated assault.
- Blacks represented 43 percent of arrests, 54 percent of convictions, and 59 percent of prison admissions for violent crimes in 1994. Thus, compared with whites, blacks were more likely to be convicted if arrested and are more likely to be imprisoned if convicted.
- Discriminatory behavior on the part of police and elsewhere in the criminal justice system may contribute to blacks' high representation in arrests, convictions, and prison admissions, although research suggests that other factors may explain much of the difference for violent crimes (see introduction to Crime and Criminal Justice).

6. Minority Composition of Local Police and Sheriffs' Departments

Source: Bureau of Justice Statistics

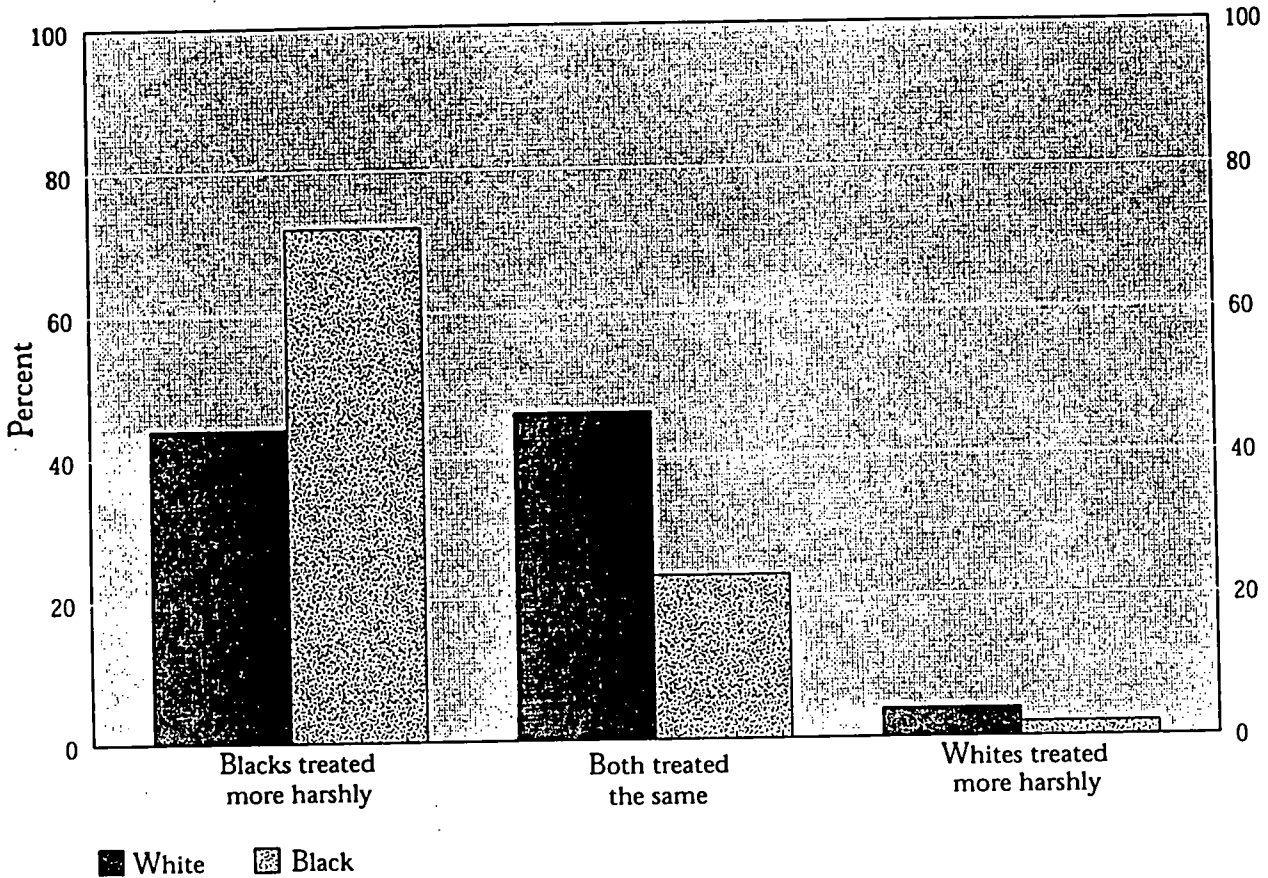


- The police are typically the first contact with the criminal justice system for both victims and offenders. Higher minority representation among police officers may improve relations between police departments and those they serve, reduce discrimination, and improve police departments' ability to fight crime.
- Total minority representation among full-time sworn officers in local police and sheriffs' departments grew from 15 percent in 1987 to 18 percent in 1993. Representation of blacks grew from 9 to 11 percent, and Hispanic representation grew from 4 to 6 percent.
- Minority representation is higher in police and sheriffs' departments serving larger cities. For example, minorities comprise 30 percent of full-time sworn officers in cities with one million or more, compared with less than 10 percent for departments serving fewer than 50,000 people (not shown in chart).

Note: Large cities are those with police or sheriffs' departments serving a population of one million or more.

7. Perception of Whether Blacks or Whites are Treated More Harshly by the Criminal Justice System, 1997

Source: Gallup



- Lack of confidence and perceptions of unfair practices in the criminal justice system may limit its effectiveness, especially since police and prosecutors rely heavily on community members to report crime and act as witnesses.
- This chart presents the opinions of a national sample of whites and blacks (data for other groups are not available) who were asked whether blacks or whites are treated more harshly by the criminal justice system.
- A large percentage of the population, both black and white, perceive that blacks are treated more harshly by the criminal justice system than whites, although blacks are more likely than whites to have this view (72 percent of blacks compared with 44 percent of whites). Forty-six percent of whites perceived that the criminal justice system treats whites and blacks the same, compared with only 23 percent of blacks.

VIII. Housing and Neighborhoods

The housing in which people live and the neighborhoods where they reside may affect a variety of opportunities for children and adults. Poor housing may contribute to a number of adverse health and educational outcomes, particularly in children. For example, severe crowding, indoor air pollution, or deteriorating lead paint may cause or exacerbate diseases such as asthma or lead poisoning, sometimes with long-term effects.¹

There are currently about 100 million occupied housing units in the United States, of which about two-thirds are owner-occupied. Homeownership has increased in recent years to the highest level in history. The national homeownership rate was 66 percent in 1997, but less than half of black and Hispanic householders owned their homes (Housing and Neighborhoods 1). About 5 million of the 35 million renter households receive some form of federal subsidy.

High housing cost burdens, moderate or severe physical housing problems, and crowding are three commonly used measures of adverse housing conditions.² Between 1976 and 1995, the fraction of households with moderately high housing cost burdens (30 to 50 percent of income) rose (Housing and Neighborhoods 2). Over the same period, the physical condition of housing improved markedly. (Housing and Neighborhoods 3). The fraction of households that are crowded (more than one person per room) fell substantially, from 4.6 percent in 1976 to 2.6 percent in 1995 (Housing and Neighborhoods 4). All groups (for which data are available) have generally experienced improvements in housing conditions, although crowding among Hispanic households has risen somewhat in recently years.

Non-Hispanic white households have the best housing conditions according to all three of these measures, but the relative position of the other groups varies depending on the measure. Non-Hispanic black, Hispanic, Asian, and American Indian households are about equally likely to have very high housing cost burdens, and non-Hispanic white households are least likely to have high housing cost burdens. Non-Hispanic black households are more likely than members of other groups to live in units with moderate or serious physical problems, followed by American Indians, Hispanics, Asians, and non-Hispanic whites. Hispanic households are the most likely to be crowded, followed by Asians and American Indians, non-Hispanic blacks, and non-Hispanic whites.

An individual's neighborhood is related to the availability and quality of important amenities such as a safe environment, primary education and other public services, as well as economic opportunities. Growing up in neighborhoods with concentrated poverty, high crime, and poor public schools is associated with poorer educational outcomes and may reduce chances of success in adulthood.³ Neighborhood quality and the quality of associated services vary considerably depending on the racial and ethnic composition of the population. Non-Hispanic black and Hispanic households tend to report more problems in their neighborhoods, including crime, litter, and housing deterioration, and poor public services (Housing and Neighborhoods 5). Concern about crime in neighborhoods rose considerably between 1985 and 1995.

Neighborhoods have long been segregated by race and Hispanic origin, although segregation has fallen somewhat since 1970, particularly between blacks and all others.⁴ Because neighborhoods have historically been segregated, public services and other amenities associated with neighborhoods have also been unequally distributed. In addition, the racial and ethnic composition of neighborhoods can play an important role in determining how much interaction individuals have with members of other racial and ethnic groups. Members of each group live

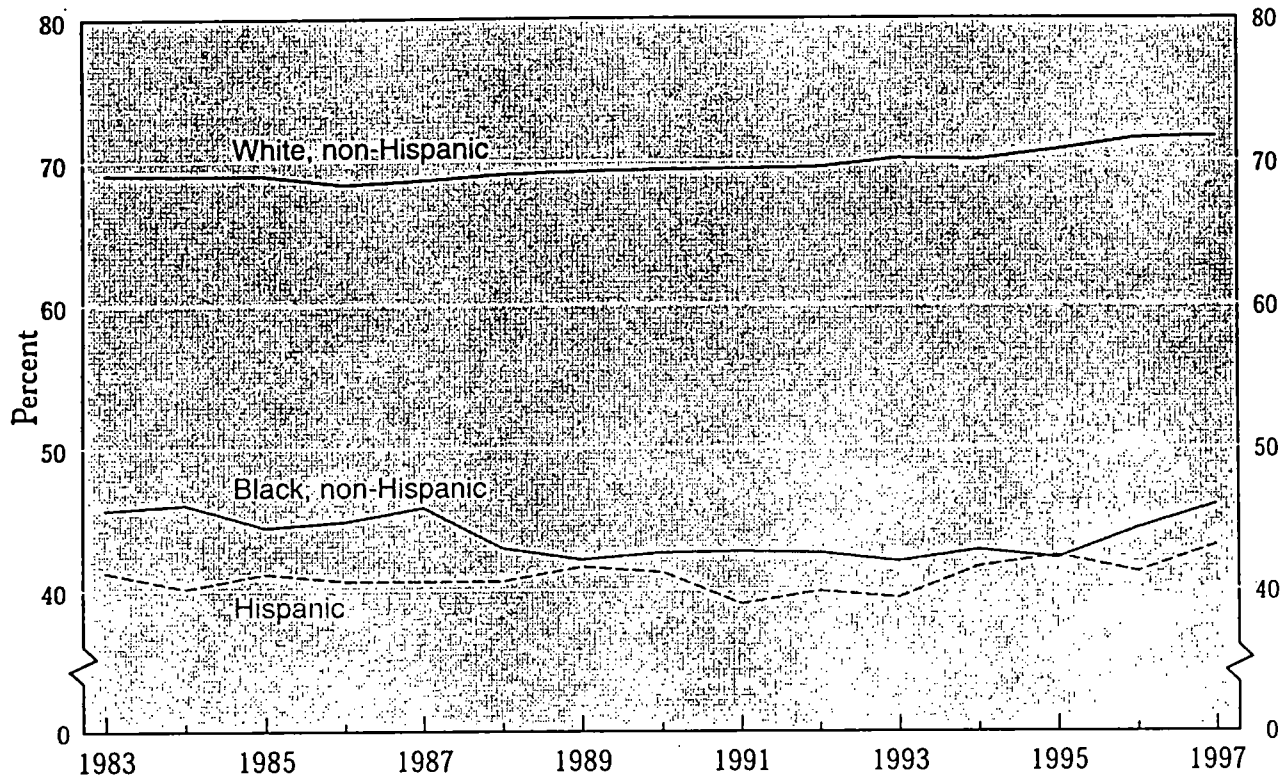
disproportionately with members of the same group (Housing and Neighborhoods 6). According to several measures of segregation, whites and blacks live in more segregated neighborhoods than Asians or Hispanics.⁵

The 1968 Fair Housing Act prohibited discrimination on the basis of race or ethnic origin in housing and mortgage lending. Evidence suggests that the Act may have helped reduce discrimination in housing markets and contributed to declining segregation.⁶ Attitudes about racial integration have also changed dramatically: The fraction of whites saying they would move if a black family moved in next door fell from 44 percent in 1958 to 1 percent in 1997 (Housing and Neighborhoods 7). Still, segregation remains high. And continued discrimination in housing and mortgage lending has been clearly documented through audit studies, in which similar white and minority candidates attempt to rent apartments or apply for home mortgage loans. One national study found that the incidence of unfavorable treatment in the housing market was 23 to 30 percentage points higher for a black or Hispanic applicant compared with his or her matched white counterpart.⁷

1. Children's Defense Fund. 1994. *Wasting America's Future*. Boston: Beacon Press.
2. For a description, see 1996. *American Housing Survey for the United States in 1995*. U.S. Department of Commerce and U.S. Department of Housing and Urban Development. Washington, DC.
3. Ellen, Ingrid Gould and Margery Austin Turner. 1997. "Does Neighborhood Matter? Assessing Recent Evidence." *Housing Policy Debate* 8 (4):833-66.
4. Cutler, David M., Edward L. Glaeser, and Jacob L. Vigdor. 1997. "The Rise and Decline of the American Ghetto." National Bureau of Economic Research Working Paper No. 5881; Farley, Reynolds and William H. Frey. 1994. "Changes in the Segregation of Whites from Blacks During the 1980s: Small Steps Toward a More Integrated Society." *American Sociological Review* 59 (February):23-45.
5. Farley and Frey. "Changes in the Segregation of Whites from Blacks During the 1980s."
6. Farley and Frey. "Changes in the Segregation of Whites from Blacks During the 1980s."
7. Turner, Margery Austin, Raymond J. Struyk, and John Yinger. 1991. *Housing Discrimination Study: Synthesis*. U.S. Department of Housing and Urban Development. Washington, DC.

1. Homeownership Rates

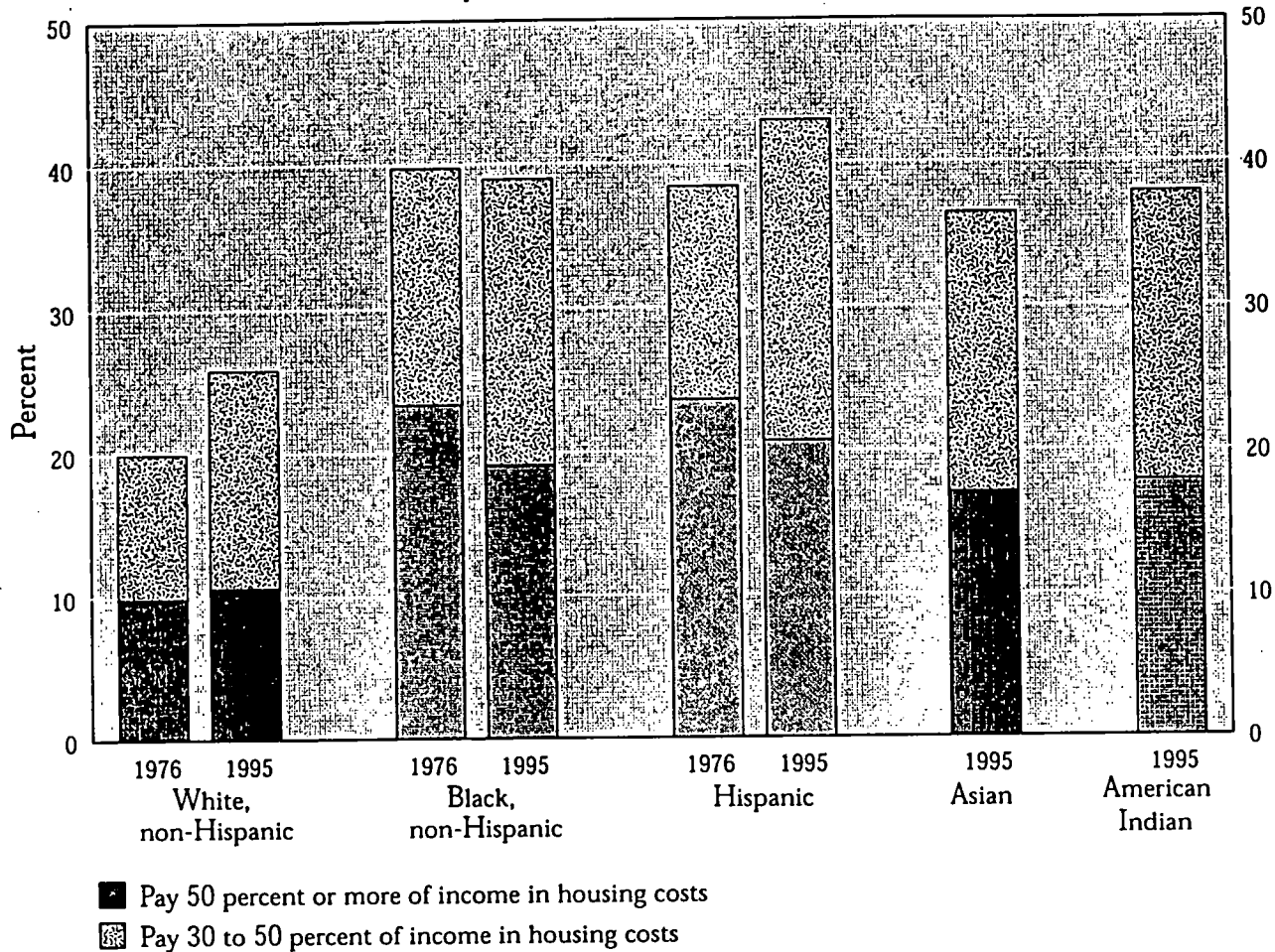
Source: Bureau of the Census



- Homeownership is an indicator of financial well-being and may also contribute to the stability of neighborhoods. The homeownership rate is the percentage of households that own their own homes.
- The homeownership rate of non-Hispanic whites is more than 25 percentage points above that of non-Hispanic blacks and Hispanics. Less than half of non-Hispanic black and Hispanic householders own their own homes.
- Homeownership rates have risen in recent years for all groups, in part because of the aging of the population. The overall rate reached a record high in 1997.

2. Households with High Housing Cost Burdens

Sources: Department of Housing and Urban Development and Bureau of the Census

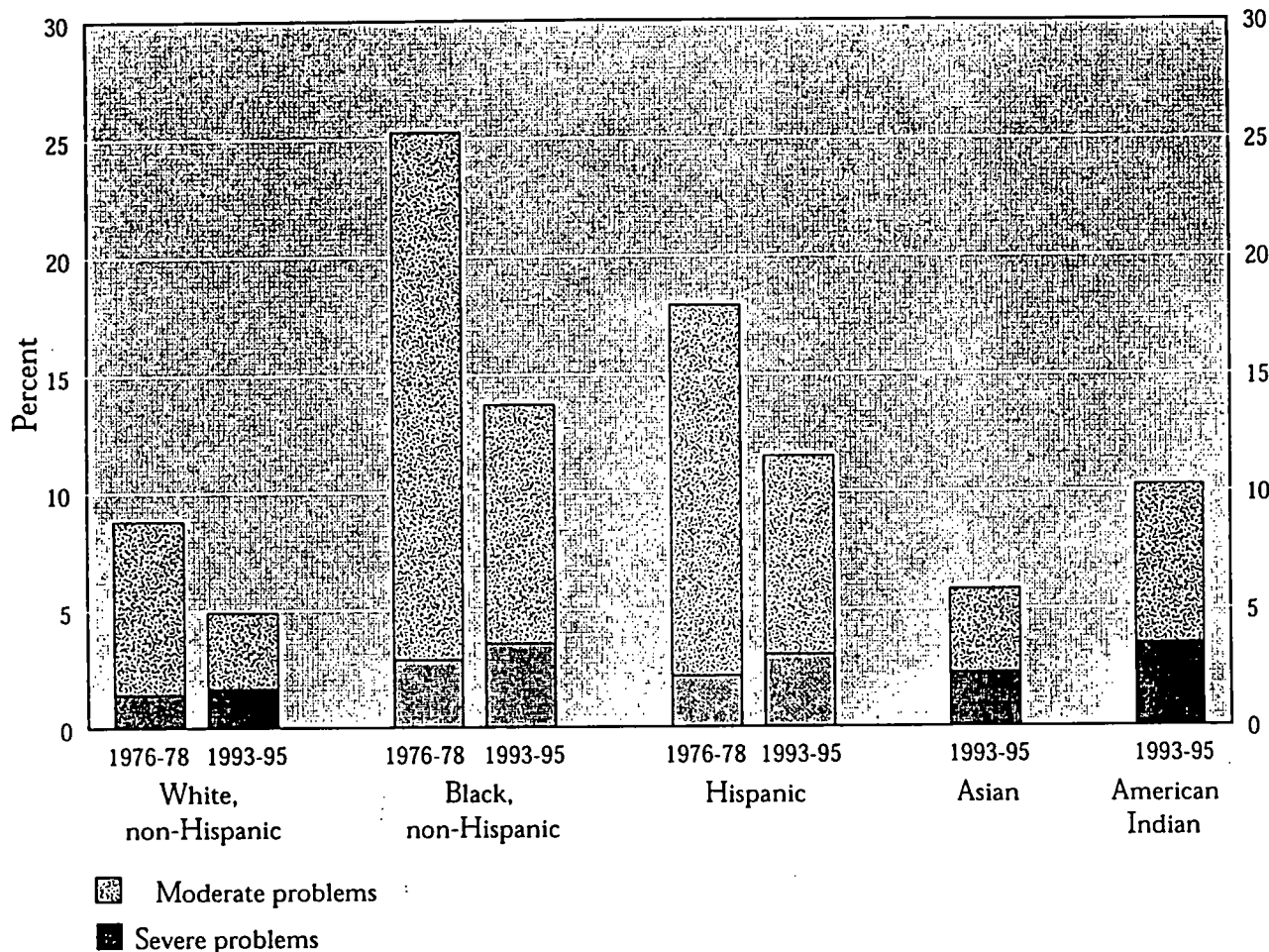


- High housing costs limit a household's ability to afford other necessities. Housing expenditures of less than 30 percent of income are considered "affordable," while the Department of Housing and Urban Development considers a household to have "worst case" housing needs if housing costs are more than 50 percent of household income (and income is below 50 percent of the area median).
- Non-Hispanic black, Hispanic, Asian, and American Indian households are nearly twice as likely as non-Hispanic whites to spend 50 percent or more of their income on housing costs. Differences across groups in the fraction paying 30 to 50 percent of income for housing are much less pronounced.
- Between 1976 and 1995, the proportion of non-Hispanic black and Hispanic households facing housing cost burdens of 50 percent or more of income fell slightly, while the proportion facing housing cost burdens between 30 and 50 percent increased. The proportion of non-Hispanic whites in both categories rose. (Data for Asians and American Indians are not available for 1976.)

Note: Data for Asians exclude Hispanic Asians, and data for American Indians exclude Hispanic American Indians.

3. Housing Units with Physical Problems

Sources: Department of Housing and Urban Development and Bureau of the Census

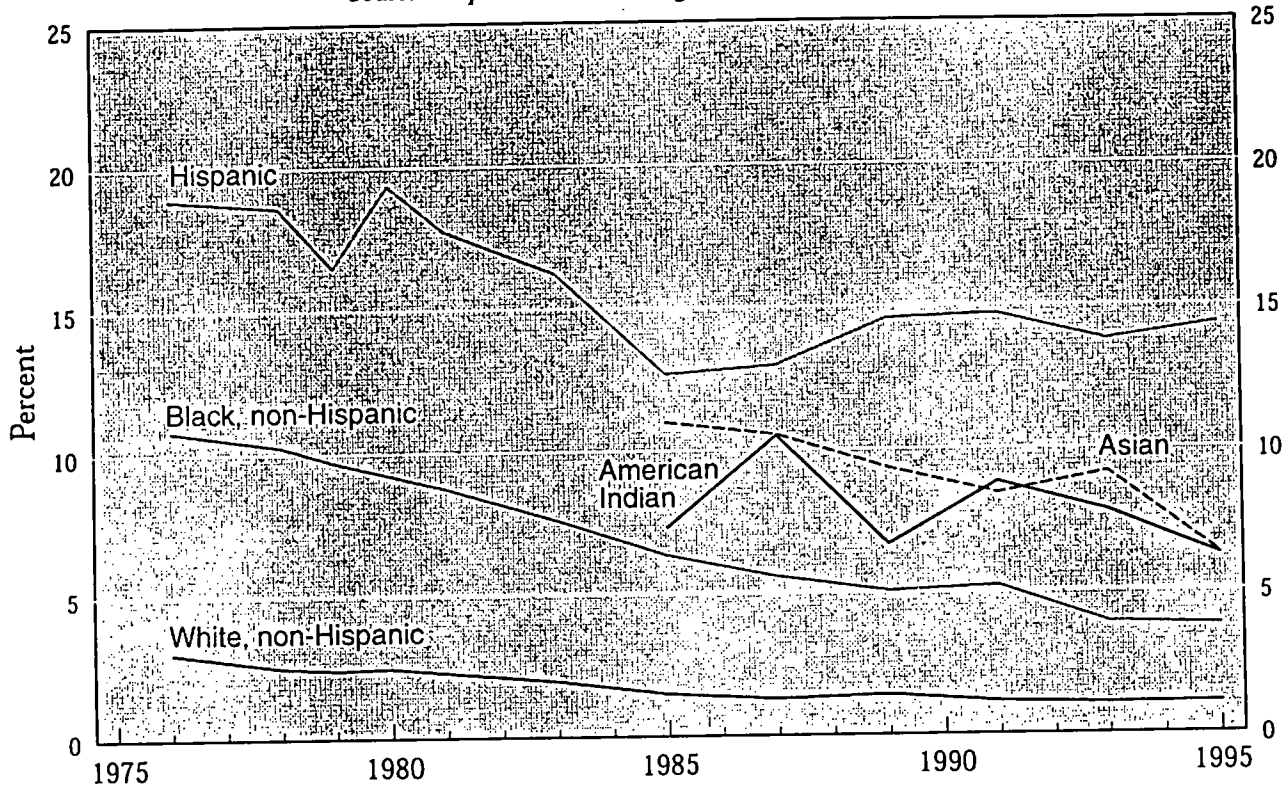


- Poor physical housing quality can contribute to health problems, particularly in children. Severe physical problems include lack of indoor plumbing, inadequate heating, electrical problems, and other serious upkeep problems. Moderate physical problems include problems with heating or plumbing or the lack of a kitchen sink, refrigerator, or stove burners.
- In 1993–95 non-Hispanic blacks, Hispanics, and American Indians were more likely than non-Hispanic whites or Asians to live in housing units with serious or moderate physical problems.
- Between 1976–78 and 1993–95, the fraction of households living in units with moderate physical problems fell substantially for all groups for which data are available. The fraction of households living in units with severe problems has risen but is still less than 5 percent for all groups.

Note: Data for 1976 and 1978, or 1993 and 1995, are averaged to provide more reliable estimates. Data for Asians exclude Hispanic Asians, and data for American Indians exclude Hispanic American Indians.

4. Crowding: Households with More Than One Person per Room

Sources: Department of Housing and Urban Development and Bureau of the Census

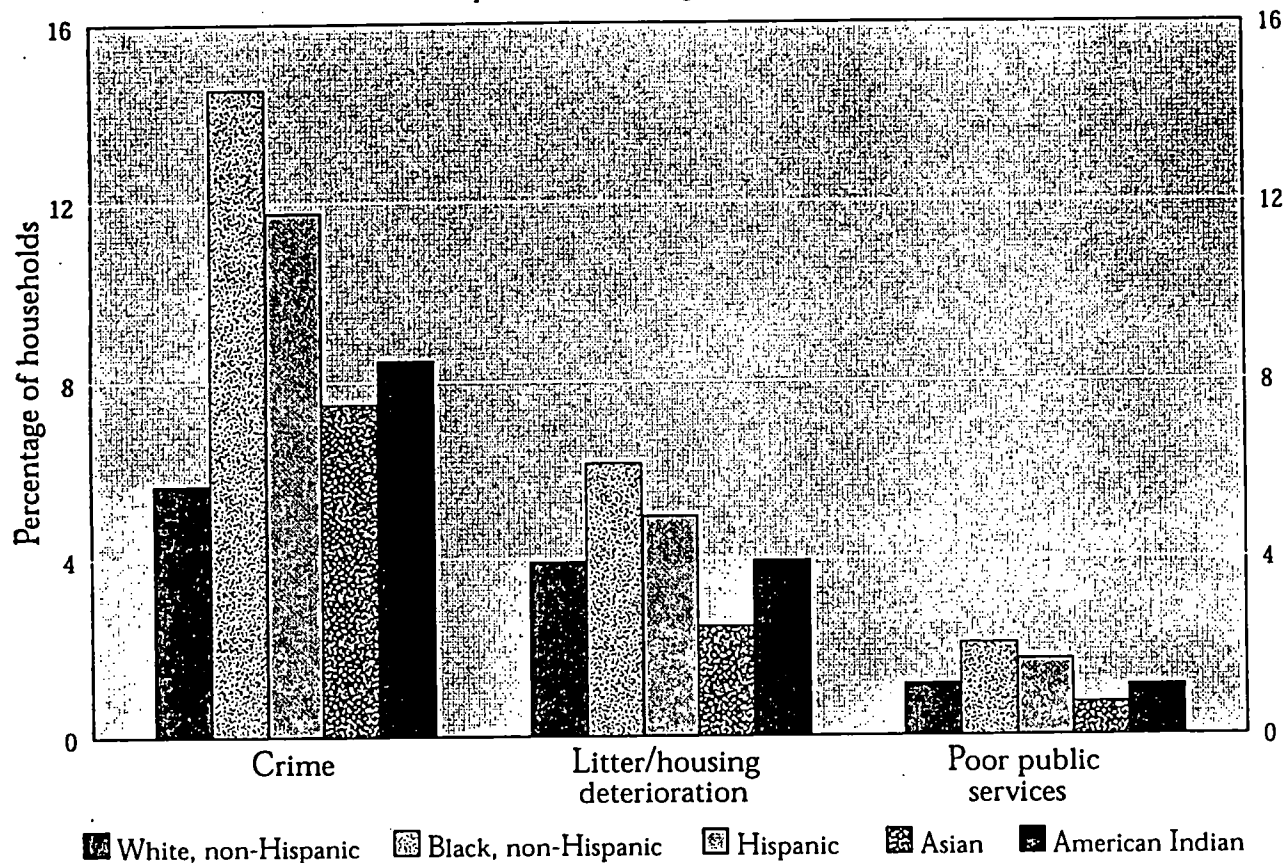


- Crowding is another indicator of housing conditions. A household is considered crowded if it contains more than one person per room. (Rooms used for living space are counted, including bedrooms, living rooms, and kitchens, but bathrooms or rooms created with temporary partitions are not included.)
- In 1995, only about 1 percent of non-Hispanic white households were crowded, with greater crowding among non-Hispanic blacks (4 percent) and Asians and American Indians (6 percent each). Hispanic households were more than twice as likely as any other group to be crowded (14 percent).
- Crowding has declined for all groups since 1976. Among Hispanics, however, crowding rose slightly between 1985 and 1995 after falling considerably between 1975 and 1985.

Note: Data for Asians exclude Hispanic Asians, and data for American Indians exclude Hispanic American Indians.

5. Reported Problems in Neighborhood, 1993-95

Source: Department of Housing and Urban Development and Bureau of the Census

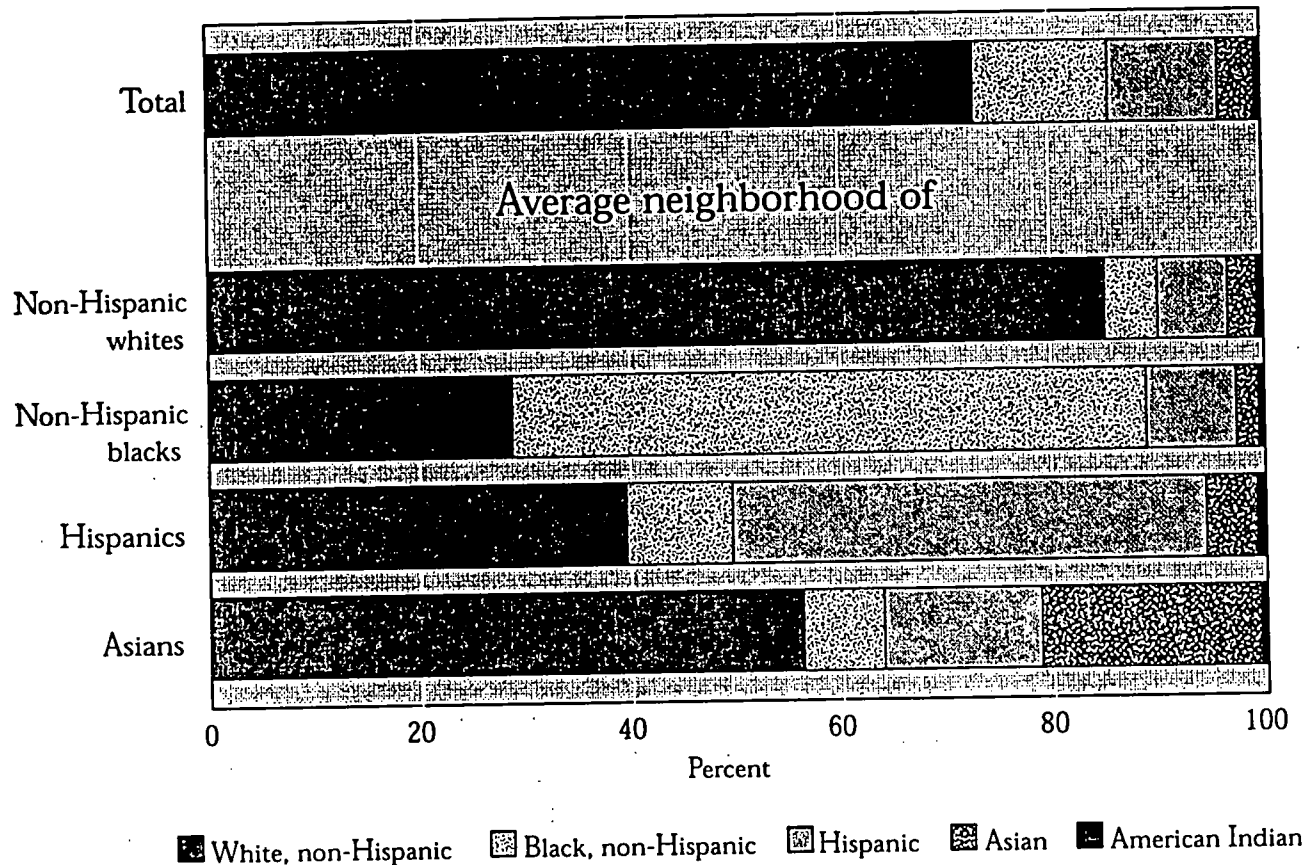


- Households' reports of problems in their neighborhood most likely reflect a combination of objective conditions, expectations, and overall satisfaction with their housing and neighborhood.
- In 1993-95, about 15 percent of non-Hispanic black households reported that crime was a problem in their neighborhood, compared with 12 percent of Hispanics, 8 percent of American Indians, 7 percent of Asians, and 6 percent of non-Hispanic whites. The fraction of households reporting concern about crime rose between 1985 and 1993-95 for all groups except American Indians (not shown in chart).
- Non-Hispanic black and Hispanic households are more likely to report problems with litter and housing deterioration than are American Indians, non-Hispanic whites, and Asians.
- Reported dissatisfaction with public services is 2 percent or less for all groups.

Note: Data for 1993 and 1995 are averaged to provide more reliable estimates. Data for Asians exclude Hispanics Asians, and data for American Indians exclude Hispanics American Indians.

6. Average Racial and Ethnic Composition of Metropolitan Neighborhoods, 1990

Source: Reynolds Farley, *The New American Reality*

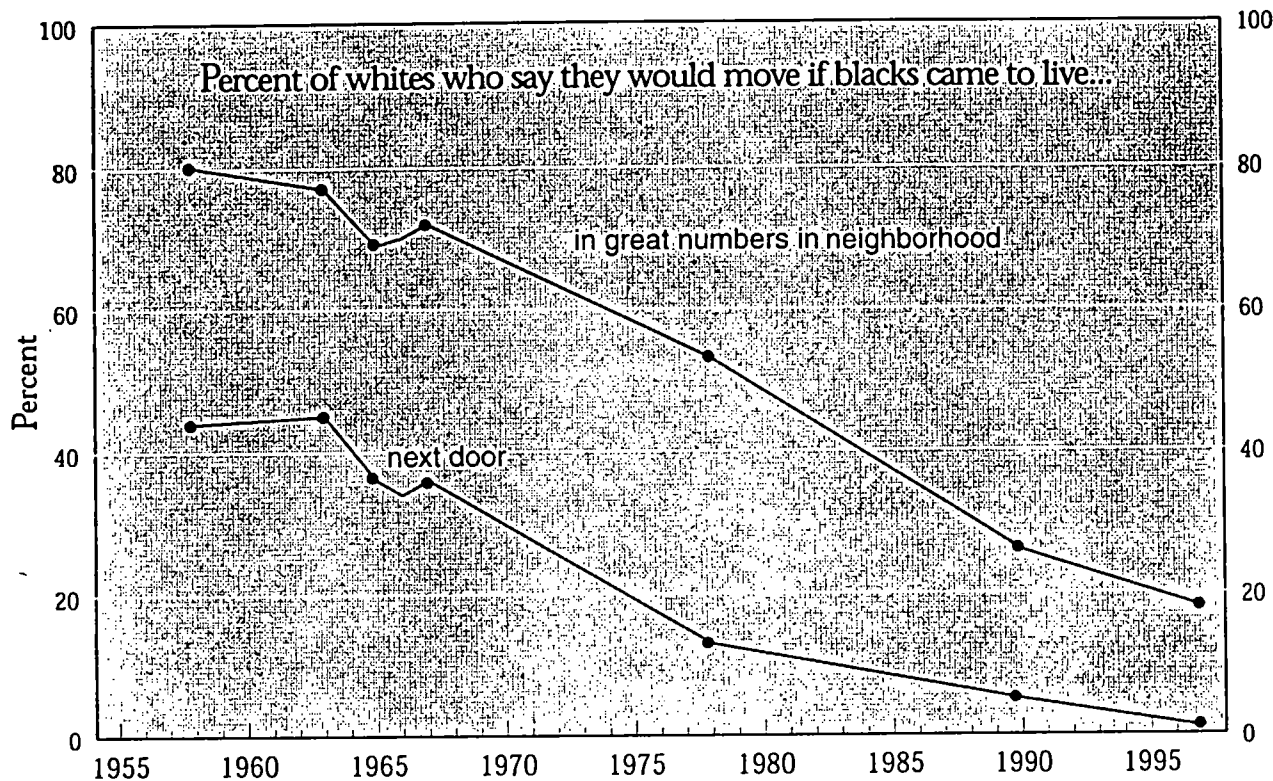


- The racial and ethnic composition of neighborhoods can affect how much interaction individuals have with members of other racial or ethnic groups. This chart shows the average racial and ethnic composition of metropolitan neighborhoods for members of each group.
- Members of each racial and ethnic group live disproportionately with members of the same group.
- Residential segregation of blacks from other groups declined between 1970 and 1990 (not shown in chart). Between 1980 and 1990, residential segregation of Asians and Hispanics from other groups changed little but is still much lower than for blacks.

Note: Data for Asians exclude Hispanic Asians, and data for American Indians exclude Hispanic American Indians. The American Indian category includes individuals classified as "other."

7. Whites' Attitudes towards Integration

Source: Gallup



- A variety of questions have been used to examine America's changing views on race and racial tolerance. Beginning in 1958, a national sample of whites has been asked whether they would move if "black people came to live next door" or if "black people came to live in great numbers" in their neighborhood.
- The fraction of whites saying they would move if blacks moved in next door fell dramatically from 44 percent in 1958 to 1 percent in 1997. The fraction saying they would move if blacks moved into their neighborhood in large numbers fell from 80 percent to 18 percent over the same period.
- These questions have been consistently asked only of whites, so similar indicators of other groups' views of integration are not available.

Note: Straight line between dots indicates data are not available for intervening years.

IX. Appendix

For further information on the topics covered in this book, see the following government websites and publications:

Population

Government websites

U.S. Bureau of the Census (<http://www.census.gov>)

Census data and publications on population characteristics
(<http://www.census.gov/prod/www/titles.html#pop>)

Census data and publications on race
(<http://www.census.gov/population/www/socdemo/race.html>)

Census data and publications on Hispanic origin
(<http://www.census.gov/population/www/socdemo/hispanic.html>)

Education

Government websites

National Center for Education Statistics (<http://www.nces.ed.gov>)

Government publications

U.S. Department of Education, National Center for Education Statistics. 1997. *Digest of Education Statistics 1997*. Washington, DC.
(<http://www.nces.ed.gov/pubs/digest97>)

U.S. Department of Education, National Center for Education Statistics. 1998. *The Condition of Education 1998*. Washington, DC.
(<http://www.nces.ed.gov/pubs98/condition98/>)

U.S. Department of Education, National Center for Education Statistics. 1998. *Projections of Education Statistics to 2008*. Washington, DC.
(<http://www.nces.ed.gov/spider/web spider/98016XXXXX.html>)

Labor Markets

Government websites

Bureau of Labor Statistics (BLS) (<http://stats.bls.gov>)

Current Population Survey (<http://stats.bls.gov/cpshome.htm>)

Monthly Labor Review (<http://stats.bls.gov/opub/mlr/mlrhome.htm>)

Government publications

U.S. Department of Labor, Bureau of Labor Statistics. *Employment and Earnings*. Washington, DC.
(<http://stats.bls.gov/cpshome.htm>)

Economic Status

Government websites

U.S. Bureau of the Census (<http://www.census.gov>)

Census data and publications on income
(<http://www.census.gov/hhes/www/income.html>)

Census data and publications on wealth
(<http://www.census.gov/hhes/www/wealth.html>)

Census data and publications on poverty
(<http://www.census.gov/hhes/www/poverty.html>)

Government publications

Lamison-White, Leatha. 1997. *Poverty in the United States: 1996*. U.S. Bureau of the Census, Current Population Reports, Series P60-198. Washington, DC.
(<http://www.census.gov/hhes/www/povty96.html>)

Health

Government websites

National Center for Health Statistics (<http://www.cdc.gov/nchswww>)

Healthy People 2010 (<http://www.health.gov/healthypeople>)

Center for Disease Control (<http://www.cdc.gov/cdc.html>)

The Substance Abuse and Mental Health Services Administration
(<http://www.samhsa.gov>)

The Office of Minority Health Resource Center (<http://www.omhrc.gov>)

Improving Services for Hispanics
(<http://www.dhhs.gov/about/heo/hispanic.html>)

Indian Health Service (<http://www.ihs.gov>)

The Minority Health Project (sponsored by the National Center for Health Statistics)
(<http://www.minority.unc.edu>)

Government publications

National Center for Health Statistics. 1998. *Health United States 1998 with Socioeconomic Status and Health Chartbook*. Hyattsville, MD. (See also previous annual editions; 1990 edition includes a chartbook on minority health.)

U.S. Department of Health and Human Services. 1990. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. Washington, DC: Public Health Service.

U.S. Department of Health and Human Services. 1985. *Report of the Secretary's Task Force on Black and Minority Health*. Volume 1. Washington, DC: Public Health Service.

U.S. Department of Health and Human Services. 1998. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services. (<http://www.cdc.gov/nccdphp/osh/sgr-minorities.htm>)

Crime and Criminal Justice

Government websites

The Bureau of Justice Statistics (<http://www.ojp.usdoj.gov/bjs>)

Government publications

U.S. Department of Justice, Bureau of Justice Statistics. 1997. *Sourcebook of Criminal Justice Statistics, 1996*. Washington, DC. (<http://www.albany.edu/sourcebook/>)

Langan, P. A. *The Racial Disparity in U.S. Drug Arrests*. 1995. Report for Attorney General.

Langan, P. A., and Brown, J. M. *Felony Sentences in State Courts, 1994*. 1997. US Department of Justice, Bureau of Justice Statistics, Washington, DC.

Racial Disparities in Federal Death Penalty Prosecutions, 1988-1994. 1994. US Congress House Subcommittee on Civil and Constitutional Rights, Washington, DC.

United States Sentencing Commission Annual Report 1996. 1997. United States Sentencing Commission, Washington, DC.

United States Sentencing Commission Sourcebook of Federal Sentencing Statistics. 1997. United States Sentencing Commission, Washington, DC.

Survey of State Prison Inmates, 1991. 1993. US Department of Justice, Bureau of Justice Statistics, Washington, DC.

(<http://www.ojp.usdoj.gov/bjs/pub/ascii/sospi91.txt>)

Literacy Behind Prison Walls: Profiles of the Prison Population From the National Adult Literacy Survey. 1994. Educational Testing Service Princeton, NJ, US Department of Education, Office of Educational Research and Improvement, Washington, DC.

Stephan, J. J. 1997. *Census of State and Federal Correctional Facilities, 1995*. US Department of Justice, Bureau of Justice Statistics, Washington, DC.

(<http://www.ojp.usdoj.gov/bjs/pub/pdf/csfcf95.txt>)

Housing and Neighborhoods

Government websites

The Department of Housing and Urban Development (<http://www.hud.gov>)

The Department of Housing and Urban Development HUD USER
(<http://www.huduser.org>)

U.S. Bureau of the Census (<http://www.census.gov>)

Government publications

U.S. Department of Commerce and U.S. Department of Housing and Urban Development. 1996. *American Housing Survey for the United States in 1995*. Washington, DC. (<http://www.census.gov/prod/www/titles.html#house>)

X. Detailed Chart Sources

The data on which charts are based, and a copy of *Changing America*, can be found online at <http://www.whitehouse.gov/WH/EOP/CEA/html/publications.html>.

Population

1. 1970 and 1990 Census of Population and projections. U.S. Bureau of the Census. *1970 Census of Population (Characteristics of the Population: United States Summary and Subject Reports (Japanese, Chinese, and Filipinos in the United States; Persons of Spanish Origin; American Indians; and The Negro Population))*; Statistical Abstract of the United States: 1997.

2. 1970 Census of Population and March 1997 Current Population Survey. U.S. Bureau of the Census. *1970 Census of Population (Characteristics of the Population: United States Summary and Subject Reports (Japanese, Chinese, and Filipinos in the United States and American Indians))*; "Selected Characteristics of the Population by Citizenship: 1997." (<http://www.census.gov/population/socdemo/foreign/97/ppltab1.txt>.)

3. Projections. Campbell, Paul R. 1996. *Population Projections for States by Age, Sex, Race, and Hispanic Origin: 1995 to 2025*. U.S. Bureau of the Census, PPL-47.

4. 1970 and 1990 Census of Population and March 1996 Current Population Survey. Harrison, Roderick J. and Claudette E. Bennett. 1995. "Racial and Ethnic Diversity." In *State of the Union: America in the 1990s*, ed. Reynolds Farley. New York: Russell Sage Foundation; Current Population Survey Reports: Households and Families. (<http://www.census.gov/population/www/socdemo/hh-fam.html>).

5. 1990 Census of Population. U.S. Bureau of the Census. Unpublished data from the Public Use Microdata Samples.

6. 1970 and 1990 Census of Population and March 1996 Current Population Survey. U.S. Bureau of Census. *1970 Census of Population (Characteristics of the Population: United States Summary and Subject Reports (Japanese, Chinese, and Filipinos in the United States and American Indians))*; *1990 Census of Population (General Population Characteristics: United States)*; selected tables from <http://www.census.gov/population/www/socdemo>.

7. Estimates. Hollman, Frederick W., et al. 1998. *U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1990 to 1997*. U.S. Bureau of the Census, PPL-91R.

Education

1. National Household Education Survey. National Center for Education Statistics. *The Condition of Education, 1998*. NCES 98-013.

2. National Household Education Survey. National Center for Education Statistics. *The Condition of Education, 1998*. NCES 98-013.

3. October Current Population Surveys. National Center for Education Statistics. *The Condition of Education, 1995*. NCES 95-273.

4. National Assessment of Educational Progress. National Center for Education Statistics. *NAEP 1996 Trends in Academic Progress*. NCES 97-986.

5. National Assessment of Educational Progress. National Center for Education Statistics. *NAEP 1996 Trends in Academic Progress*. NCES 97-986.

6. 1980 and 1990 Census of Population and March 1997 Current Population Survey. U.S. Bureau of the Census. *1980 Census of Population (General Social and Economic Characteristics: United States Summary)*; *1990 Census of Population (Social and Economic Characteristics: United States)*; "Selected Characteristics of the Population by Race: March 1997." (http://www.bls.census.gov/cps/pub/1997/int_race.htm.)

7. March Current Population Surveys. U.S. Bureau of the Census and National Center for Education Statistics. Selected tables from <http://www.census.gov/population/socdemo/education/tablea-02.txt>; *The Condition of Education, 1998*.

8. March Current Population Surveys. U.S. Bureau of the Census and National Center for Education Statistics. Selected tables from <http://www.census.gov/population/socdemo/education/tablea-02.txt>; *The Condition of Education, 1998*.

Labor Markets

1. Current Population Surveys. U.S. Bureau of Labor Statistics. Compiled from data from <http://www.bls.gov/>.

2. Current Population Surveys. U.S. Bureau of Labor Statistics. Data from <http://www.bls.gov/>.

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HEALTH & HUMAN SERVICES
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Chart 4.33

Age-Adjusted Malignant Neoplasm Death Rates

The age-adjusted malignant neoplasm death rate for American Indians and Alaska Natives hit a low in 1977-1979 of 80.2 deaths per 100,000 population, but has increased 22 percent since then to 97.5 in 1992-1994. The Indian rate is lower than the U.S. All Races rate, but the gap between the two rates has been decreasing. The 1992-1994 Indian rate increases to 112.2 after adjusting for miscoding of Indian race on death certificates, which is only 15 percent less than the All Races rate of 132.6 for 1993. If all the past Indian rates were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate of change would probably remain the same.

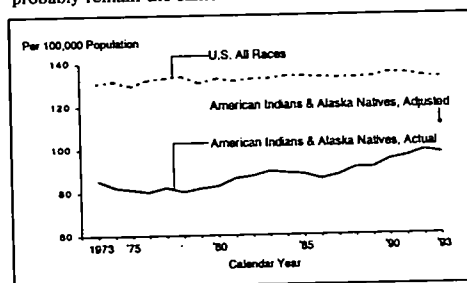


Chart 4.42

Age-Adjusted Diabetes Mellitus Death Rates

The age-adjusted diabetes mellitus death rate for American Indians and Alaska Natives varied between 24.0 and 30.0 between 1972-1974 and 1990-1992. In 1991-1993, it rose to 31.7 and in 1992-1994 to 35.1. When the 1992-1994 rate is adjusted for miscoding of Indian race on death certificates, it increases to 41.1. This is 3.3 times the U.S. All Races rate of 12.4 for 1993. This is the highest U.S. rate since 1974, when the rate was 12.5. If all the past Indian rates were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate of change would probably remain the same.

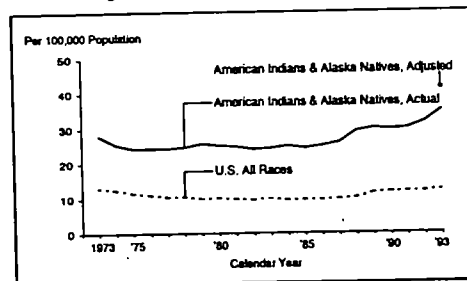
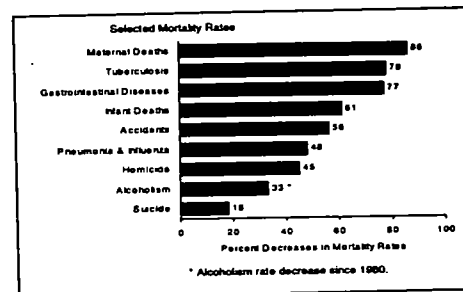


Chart 4.54

Indian Health Service Program Accomplishments Since 1973

The health status of American Indians and Alaska Natives has experienced major improvements since 1972-1974. Some of these positive changes are evident from lower death rates. For example, maternal and infant mortality rates have declined 86 percent and 61 percent, respectively. Likewise, tuberculosis, gastrointestinal diseases, and accidents age-adjusted death rates have been reduced respectively by 78, 77, and 56 percent.



Sources of Copies and Additional Information

The 1997 Trends in Indian Health is available on the IHS Homepage (address: <http://www.ihs.gov/>). Copies of the publication and additional information can be obtained from:

Indian Health Service
Office of Public Health
Division of Community and
Environmental Health
Program Statistics Team
12300 Twinbrook Parkway, Suite 450
Rockville, Maryland 20852

Phone: (301) 443-1180
Fax: (301) 443-1522



Highlights of

TRENDS in Indian Health

U.S. Department of Health and Human Services
Indian Health Service
Office of Public Health
Division of Community and Environmental Health
Program Statistics Team

Introduction

This pamphlet provides highlights from a larger report, 1997 Trends in Indian Health, published by the Indian Health Service (IHS). Information was extracted from the completed report to emphasize key improvements in American Indian and Alaska Native health and to focus on health conditions that warrant further attention. Charts and descriptive statements are used to make these points.

Chart 3.8

Infant Mortality Rates

The infant mortality rate for American Indians and Alaska Natives dropped from 22.2 (rate per 1,000 live births) in 1972-1974 to 8.7 in 1992-1994, a decrease of 61 percent. When the 1992-1994 rate is adjusted for miscoding of Indian race on death certificates, it increases to 10.9. This is 30 percent higher than the U.S. All Races rate of 8.4 for 1993. If all the past Indian rates were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate of change would probably remain the same.

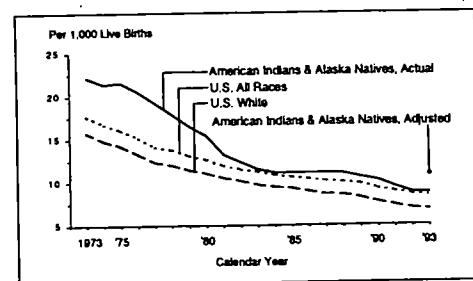


Chart 4.11

Selected Age-Adjusted Death Rates: Ratio of Indians (1992-1994) to U.S. All Races (1993)

The American Indian and Alaska Native age-adjusted death rates for 1992-1994 were more than triple those of the U.S. All Races (1993) for tuberculosis (5.3 times), chronic liver disease and cirrhosis (4.4 times), and accidents (3.1 times). Indian rates were below those of the U.S. All Races for HIV infection (.3 times), chronic obstructive pulmonary diseases (.8 times), and malignant neoplasms (.8 times). These Indian rates have been adjusted for miscoding of Indian race on death certificates.

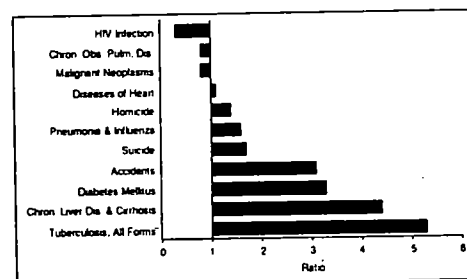


Chart 4.12

Age-Specific Death Rates: Ratio of American Indians and Alaska Natives (1992-1994) to U.S. All Races (1993)

The age-specific death rate for American Indians and Alaska Natives (1992-1994) was more than double the U.S. All Races rate (1993) for age groups 1 to 4 and 15 through 34. The Indian rate was less than the U.S. All Races rate for only one age group, 85 years and older. These Indian rates have been adjusted for miscoding of Indian race on death certificates.

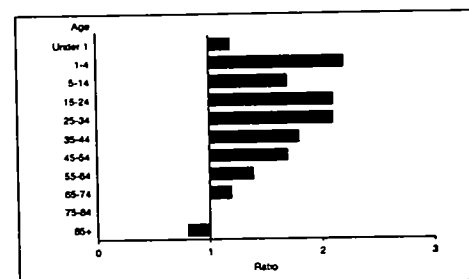


Chart 4.19

Age-Adjusted Accident Death Rates

The age-adjusted accident death rate for American Indians and Alaska Natives has decreased over 56 percent since 1972-1974, 188.0 to 82.3. However, during the last 10 years the decline has slowed to about 16 percent. When the 1992-1994 rate is adjusted for miscoding of Indian race on death certificates, it increases to 94.5. This is more than triple the U.S. All Races rate of 30.3 for 1993. If all the past Indian rates were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate of change would probably remain the same.

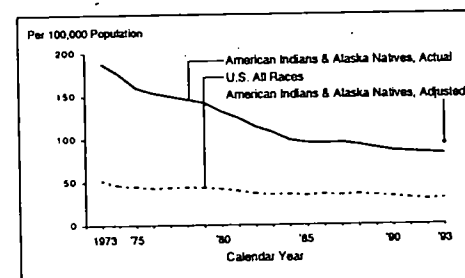


Chart 4.21

Age-Adjusted Suicide Death Rates

The age-adjusted suicide death rate for American Indians and Alaska Natives decreased 29 percent from a high (22.5) in 1975-1977 to a low (16.0) in 1984-1986. Since then, it has increased 8.0 percent to 17.3 in 1992-1994. When the 1992-1994 rate is adjusted for miscoding of Indian race on death certificates, it increases to 19.2. This is 70 percent higher than the U.S. All Races rate of 11.3 for 1993. If all the past Indian rates were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate of change would probably remain the same.

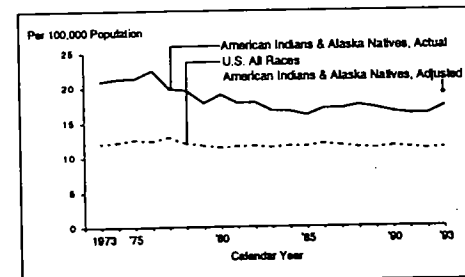


Chart 4.29

Age-Adjusted Alcoholism Death Rates

The age-adjusted alcoholism death rate for American Indians and Alaska Natives decreased 47 percent between 1979-1981 and 1985-1987. Since then, it has increased 27 percent. When the 1992-1994 rate is adjusted for miscoding of Indian race on death certificates, it increases from 39.4 to 45.5. This is nearly 7 times the U.S. All Races rate of 6.7 for 1993. If all the past Indian rates were similarly adjusted for miscoding, the actual/unadjusted trend line would rise in value, but the rate of change would probably remain the same.

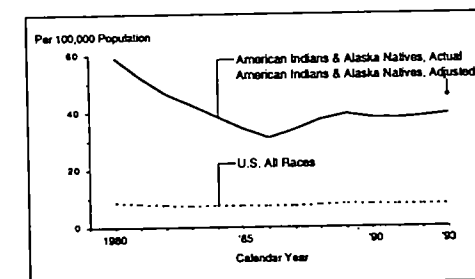
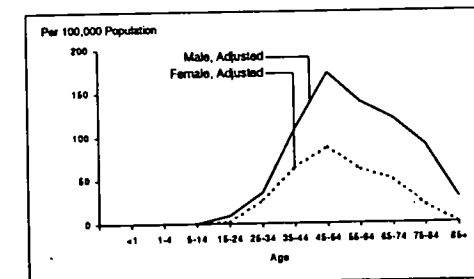


Chart 4.30

Alcoholism Death Rates by Age and Sex, American Indians and Alaska Natives (1992-1994)

Drinking has taken a greater toll on Indian males compared to Indian females as evidenced by alcoholism death rates. The age-specific alcoholism death rate (1992-1994) for Indian males was higher for all age groups, with a non-zero rate, in comparison with Indian females. However, the Indian female rate is much higher than the rate for females in the U.S. All Races population. The U.S. female rate never reached 10.0 for an age group in 1993, whereas the Indian female rate ranged from 20.1 to 87.6 for age groups 25 through 84 years. These Indian rates have been adjusted for miscoding of Indian race on death certificates.



Actual Causes of Death in the United States

J. Michael McGinnis, MD, MPP, William H. Foege, MD, MPH

Objective.—To identify and quantify the major external (nongenetic) factors that contribute to death in the United States.

Data Sources.—Articles published between 1977 and 1993 were identified through MEDLINE searches, reference citations, and expert consultation. Government reports and compilations of vital statistics and surveillance data were also obtained.

Study Selection.—Sources selected were those that were often cited and those that indicated a quantitative assessment of the relative contributions of various factors to mortality and morbidity.

Data Extraction.—Data used were those for which specific methodological assumptions were stated. A table quantifying the contributions of leading factors was constructed using actual counts, generally accepted estimates, and calculated estimates that were developed by summing various individual estimates and correcting to avoid double counting. For the factors of greatest complexity and uncertainty (diet and activity patterns and toxic agents), a conservative approach was taken by choosing the lower boundaries of the various estimates.

Data Synthesis.—The most prominent contributors to mortality in the United States in 1990 were tobacco (an estimated 400 000 deaths), diet and activity patterns (300 000), alcohol (100 000), microbial agents (90 000), toxic agents (60 000), firearms (35 000), sexual behavior (30 000), motor vehicles (25 000), and illicit use of drugs (20 000). Socioeconomic status and access to medical care are also important contributors, but difficult to quantify independent of the other factors cited. Because the studies reviewed used different approaches to derive estimates, the stated numbers should be viewed as first approximations.

Conclusions.—Approximately half of all deaths that occurred in 1990 could be attributed to the factors identified. Although no attempt was made to further quantify the impact of these factors on morbidity and quality of life, the public health burden they impose is considerable and offers guidance for shaping health policy priorities.

(JAMA. 1993;270:2207-2212)

IN 1990, approximately 2 148 000 US residents died. Certificates filed at the time of death indicate that their deaths were most commonly due to heart disease (720 000), cancer (505 000), cerebrovascular disease (144 000), accidents (92 000), chronic obstructive pulmonary disease (87 000), pneumonia and influenza (80 000), diabetes mellitus (48 000), suicide (31 000), chronic liver disease and cirrhosis (26 000), and human immunodeficiency virus (HIV) infection (25 000).¹ Often referenced as the 10 leading causes of death in the United States, they generally indicate the primary pathophysiological

conditions identified at the time of death, as opposed to their root causes. These conditions actually result from a combination of inborn (largely genetic) and external factors.

Because most diseases or injuries are multifactorial in nature, a key challenge is sorting out the relative contributions of the various factors. For heart disease, well-established external risk factors include tobacco use, elevated serum cholesterol levels, hypertension, obesity, and decreased physical activity; for various cancers, such risk factors include tobacco use, dietary patterns, certain infectious agents, and environmental or occupational exposure to carcinogenic agents. Even motor vehicle injuries can be associated with multiple factors, including alcohol use, failure to use passenger protection systems, poor roadway design, and inadequate

law enforcement. These factors may act independently of each other, the risks being additive according to the effect of each, or they may act synergistically, the interaction of factors presenting a greater total risk than the sum of their individual effects.

Available analyses of the roles of various external factors in these conditions suggest that the most prominent identifiable contributors to death among US residents are tobacco, diet and activity patterns, alcohol, microbial agents, toxic agents, firearms, sexual behavior, motor vehicles, and illicit use of drugs. When these contribute to deaths, those deaths are by definition premature and are often preceded by impaired quality of life. Although mortality is but one measure of the health status of a nation, the public health burden imposed by these contributors offers both a mandate and guidance for shaping health policy priorities.

METHODS

This article summarizes published reports that attributed deaths to these contributors and presents a composite approximation of the totals reported for each (Table). Articles published between 1977 and 1993 were identified through MEDLINE searches, reference citations, and expert consultation. Government reports and compilations of vital statistics and surveillance data were also obtained. All relevant analyses were reviewed in full. Those selected for use in developing estimates were those most often cited and those for which the methodological assumptions could be identified.

The limitations in the data should be underscored both with respect to deficiencies in the primary databases (eg, the paucity of data on the role of drugs in motor vehicle fatalities or on long-term exposure levels of populations to various toxic agents) and to the disparate approaches used in the studies reviewed to arrive at estimates of the contribution of a factor to a particular health outcome. In some cases, assignments were attempted through simple tallies of available information about the presence or absence of a factor in association with a given outcome (eg, whether or not a

From the US Department of Health and Human Services, Washington, DC (Dr McGinnis), and the Carter Presidential Center, Atlanta, Ga (Dr Foege).

Reprint requests to the Deputy Assistant Secretary for Health, Disease Prevention and Health Promotion, US Department of Health and Human Services, 330 C St SW, Room 2132, Washington, DC 20201 (Dr McGinnis).

driver in a motor vehicle fatality had a blood alcohol concentration above a certain level). In other cases, population-attributable risk calculations were used to arrive at estimates based on determinations of the relative risk for a particular health outcome of a population exposed to a specified health risk. Some of the studies presented meta-analyses of reports in the literature on a given topic. Estimates were often limited by the adequacy of information as to disease prevalence, risk factor prevalence, and the nature of the relationship to other contributing risk factors for the disease.

Despite their limitations, the results of such studies provide a sense of the relative impact of various factors on health in the United States. Derivation of the numbers presented in the Table is explained below in the discussion of each category. Where well-established methodologies have been developed for making the estimates, as with tobacco and alcohol, they have been used approximately as reported. For areas of greater uncertainty, such as diet and activity patterns and toxic agents, a sum of the lower boundaries of the estimates for various disease outcomes has been used. Although several of these factors are interrelated in their actions, care has been taken to avoid double counting. Given the fragility of the database involved and the fact that the studies cited use different approaches to derive estimates, these numbers should be viewed as first approximations.

RESULTS

Tobacco

Tobacco accounts for approximately 400 000 deaths each year among Americans. It contributes substantially to deaths from cancer (especially cancers of the lung, esophagus, oral cavity, pancreas, kidney, and bladder, and perhaps of other organs), cardiovascular disease (coronary artery disease, stroke, and high blood pressure), lung disease (chronic obstructive pulmonary disease and pneumonia), low birth weight and other problems of infancy, and burns.² In a major effort that drew on analyses that had been commissioned to assess the mortality, morbidity, and financial burden imposed by each of 15 priority health problems,³ the Carter Center's *Closing the Gap* project attributed 17% (338 000) of all deaths in 1980 and 13% of all potential years of life lost from death before 65 years of age to tobacco.⁴ Other estimates have placed tobacco's contribution in the range of 11% to 30% of cancer deaths,⁵⁻¹⁰ 17% to 30% of cardiovascular deaths,^{7,10-16} 30% of lung disease deaths,^{7,10} 24% of pneumonia and influenza deaths,¹⁷ 10% of infant deaths,^{17,18}

and 20% to 30% of low-birth-weight infants.^{19,20} Approximately 3000 lung cancer deaths annually among nonsmokers have been attributed to environmental tobacco smoke.²¹ The sum of the lower and upper boundaries, respectively, for these estimates would yield an approximate range of 257 000 to 468 000 tobacco-attributable deaths in 1990. Using a specially developed software package,²² the Centers for Disease Control and Prevention (CDC) estimated that 418 690 deaths were caused by tobacco in 1990, including approximately 30% of all cancer deaths and 21% of cardiovascular disease deaths.^{17,23} The CDC estimates have been widely accepted and provide the basis for the 400 000 figure included in the Table.

Diet and Activity Patterns

Dietary factors and activity patterns that are too sedentary are together accountable for at least 300 000 deaths each year. Dietary factors have been associated with cardiovascular diseases (coronary artery disease, stroke, and high blood pressure), cancers (colon, breast, and prostate), and diabetes mellitus.²⁴ Physical inactivity has been associated with an increased risk of death for heart disease^{16,25-27} and colon cancer.^{26,28} The interdependence of dietary factors and activity patterns as risk factors for certain diseases is illustrated by the case of obesity, which is associated with increased risk for cardiovascular disease, certain cancers, and diabetes, and is clearly related to the balance between calories consumed and calories expended through metabolic and physical activity. Similarly, high blood pressure, a major risk for stroke, can be affected by dietary sodium, obesity, and sedentary lifestyle. The Carter Center review of deaths in 1980 attributed 290 000 deaths to overnutrition and another 297 000 to high blood pressure.⁴ Sedentary lifestyles have been linked to 23% of deaths from the leading chronic diseases.²⁹ An assessment of the decline in coronary artery disease mortality from 1968 to 1976 credits reductions in serum cholesterol levels with about a third of the improvement.¹³ Some studies credit changes in sodium consumption with the potential to lower death rates for coronary heart disease by 16% to 30% and stroke death rates 23% to 39%.^{30,31} Half of all type II diabetes (non-insulin-dependent diabetes mellitus) is estimated to be preventable by obesity control.³² A 50% reduction in consumption of animal fats might result in a proportionate reduction in risk for colon cancer.³³ In the most extensive analysis to date of studies on risk factors for cancer, Doll and Peto established 35% as their best estimate for the proportion of all cancer deaths attributable to diet.^{6,34}

Actual Causes of Death in the United States in 1990*

Cause	Deaths	
	Estimated No. *	Percentage of Total Deaths
Tobacco	400 000	19
Diet/activity patterns	300 000	14
Alcohol	100 000	5
Microbial agents	90 000	4
Toxic agents	60 000	3
Firearms	35 000	2
Sexual behavior	30 000	1
Motor vehicles	25 000	1
Illicit use of drugs	20 000	<1
Total	1 060 000	50

*Composite approximation drawn from studies that use different approaches to derive estimates, ranging from actual counts (eg, firearms) to population attributable risk calculations (eg, tobacco). Numbers over 100 000 rounded to the nearest 100 000; over 50 000, rounded to the nearest 10 000; below 50 000, rounded to the nearest 5000.

Other studies have associated dietary factors or sedentary lifestyles with 22% to 30% of cardiovascular deaths,^{7,10,11,14} 20% to 60% of fatal cancers,^{5-10,35} and 50% to 80% of diabetes mellitus cases,^{7,32,36} including 30% of diabetes deaths.^{7,10} If the boundaries of these various estimates were summed, they would yield a range of approximately 309 000 to 582 000 deaths in 1990 related to diet and activity patterns. Because of the complexity of the issues and the difficulty of the analyses relating diet and activity patterns to disease outcomes, the lower bound is used as the basis for the 300 000 deaths figure presented in the Table.

Alcohol

Misuse of alcohol accounts for approximately 100 000 deaths each year, but the related health, social, and economic consequences of alcohol extend far beyond the mortality tables. An estimated 18 million US residents suffer from alcohol dependence,^{23,37} and some 76 million are affected by alcohol abuse at some time.³⁸ Estimates of alcohol's death toll range from 3% to 10% of deaths.^{37,39} Various estimates have placed alcohol's contribution in the range of 60% to 90% of cirrhosis deaths,⁴⁰ 40% to 50% of motor vehicle fatalities,^{12,39,41} 16% to 67% of home injuries, drownings, fire fatalities, and job injuries,^{7,39,42} and 3% to 5% of cancer deaths.^{6,7,9} The Carter Center project estimated that 5% of deaths and 15% of potential years of life lost before age 65 were attributable to alcohol use.⁴ Summing the boundaries of these estimates yields an approximate range of 67 000 to 107 000 alcohol-related deaths in 1990. The CDC used clinical case studies and analytic epidemiologic studies to determine alcohol-attributable fractions of various diagnoses and concluded that a total of 105 095 deaths were caused by alcohol in 1987, including approximately 30 000 deaths from unintentional injuries, 19 600 from digestive diseases in-

cluding liver cirrhosis, 17 700 from intentional injuries, and 16 000 from cancers.⁴³ Because the CDC estimate is the one most often reported, it has been applied to 1990 death rates and serves as the basis for the 100 000 alcohol-related deaths included in the Table.

Microbial Agents

Infectious agents—apart from those counted elsewhere with causes of the human immunodeficiency virus (HIV) infection or consequent to use of tobacco, alcohol, or drugs—currently account for approximately 90 000 deaths per year. Infections were once the leading killer in the United States, and they are still a prominent threat, especially to persons with other health impairments. Infectious agents also exert great influence on society through an estimated 740 million nonfatal illnesses caused by symptomatic infections that occur annually among Americans.⁴⁴

Although immunizations and infection control measures may already prevent as many as 135 million infections and 63 000 deaths annually in the United States,⁴⁴ a substantial fraction of the infections and deaths that do occur are also preventable. The major contributors to death from infectious agents are pneumococcal pneumonia, nosocomial infections (in both acute and chronic care facilities), legionellosis, *Staphylococcus aureus* infection, hepatitis, and group A streptococcal infections. Vital statistics reports for 1990 indicated the number of deaths from infectious and parasitic diseases to be 55 612, plus another 79 513 from pneumonia and influenza and 1289 from meningitis and encephalitis.⁴⁵ The Carter Center study of deaths occurring in 1985 estimated that nearly 200 000 deaths could be attributed to infections, of which 13% were potentially preventable with current vaccines.⁴⁴ Hepatitis B infection is a good example. Approximately 5000 deaths in 1988 resulted from hepatitis B infection, including about 25% of all deaths from primary liver cancer, although a vaccine has been available since 1982.⁴⁶⁻⁴⁸ Tuberculosis, which ranked second as a cause of death in 1900, accounted for 1810 of the infectious disease deaths in 1990,¹ and with the spread of antibiotic-resistant strains, tuberculosis gives evidence of increasing in this decade.⁴⁹

The difficulty of assigning responsibility for infectious disease deaths is illustrated by the fact that, while the number of classic bacterial pneumonia deaths increased about 10% from 1980 to 1990, those classified as "other" and "unspecified organism" increased by more than 50% and now account for approximately 90% of all pneumonia deaths.⁴⁵ A substantial part of the growth in these cat-

egories reflects the impact of the HIV epidemic, but most of those deaths are counted in this review under deaths attributable to unprotected intercourse or drug use.⁵⁰ Moreover, many deaths from pneumonia occur among cancer, heart, lung, and liver disease patients and are therefore traceable to other causes such as tobacco, diet, and alcohol (eg, the 24% and 4% of pneumonia and influenza deaths ascribed to tobacco¹⁷ and alcohol,⁴³ respectively). Other pneumonia deaths that may also be related to more proximal causes, but which are as yet unassigned, are counted here as general infectious disease deaths. Hence, the 90 000 deaths included here for microbial agents represent the sum of 1990 deaths from key International Classification of Diseases codes 001 through 139 (infectious and parasitic diseases), 320 through 323 (meningitis and encephalitis), and 480 through 482 (pneumonia and influenza), and not including those from codes 042 through 044 (HIV infection) and those otherwise estimated to be attributable to tobacco use, alcohol use, sexual behavior, and illicit use of drugs.

Toxic Agents

Estimates of the deaths attributable to toxic agents vary widely, and because measurement techniques and the recognition of health effects are still evolving, the number of 60 000 per year included in the Table may be the most uncertain of the figures indicated for the various causes.

Toxic agents may pose a threat to human health as occupational hazards, environmental pollutants, contaminants of food and water supplies, and components of commercial products. They can contribute to conditions that are potentially lethal, including cancer and other diseases of the heart, lungs, liver, kidneys, bladder, and neurological system. Estimates of the total cancer deaths caused each year by synthetic chemicals in the environment or occupational settings range upward from about 30 000,^{6,51} including an estimated 9000 from asbestos exposure.⁵² Occupational exposures alone have been estimated to cause 1% to 3% of all cardiovascular, chronic respiratory, renal, and neurological disease deaths, as well as all pneumoconioses.⁵³ In addition, occupational exposures have been linked with about 4% to 10% of all cancer deaths,^{6,9,53} and pollutants with approximately another 2% of all cancer deaths.⁶ Although evidence is generally unavailable for the long-term effects of ambient pollutants on cardiovascular or pulmonary death rates,⁵⁴ significant elevations of respirable pollutants such as particulates, sulfur dioxide, and carbon monoxide have been associated with transient increases in daily mortality

rates of 4% to 16%.⁵⁵⁻⁵⁷

Indoor air may present a greater burden of pollutants than outdoor air.^{58,59} Environmental tobacco smoke is an established carcinogen,²¹ and estimates of radon's contribution to lung cancer deaths range from about 7000 deaths per year to nearly 24 000 deaths per year.^{6,60,61} In all, geophysical factors such as background ionizing radiation and ultraviolet light may be accountable for some 3% of cancer deaths.⁶

The sum of the boundaries for these estimates approximates a range of 57 000 to 108 000 deaths in 1990 related to toxic agent exposure. The nonfatal effects of toxic exposures in the environment may present even more widespread consequences. For example, fatal lead poisoning is rare, but the toll from high blood lead levels may be lifelong learning impairment for some of the more than 230 000 children now exposed to blood lead levels greater than 1.20 $\mu\text{mol/L}$ (25 $\mu\text{g/dL}$).⁶² Urgent questions are also raised about environmental changes such as atmospheric warming and ozone depletion. Given the uncertainties related to toxic environmental exposures and the ubiquitous character of their impact, an even more compelling challenge than identification of their current mortality burden is clarification of the nature of the issues, the exposure trends, and their likely long-term consequences. The figure of 60 000 presented in the Table for estimated total deaths from toxic agents represents the sum of the lower boundaries of various estimates of the contribution of toxic agents to deaths from cancers and (for occupational exposures only) other diseases of the lung, cardiovascular, renal, and neurological systems.

Firearms

Firearms caused more than 36 000 deaths among Americans in 1990, including about 16 000 homicides, 19 000 suicides, and 1400 unintentional deaths.⁴⁵ The number of deaths caused by firearms is now higher than those caused by motor vehicle crashes in five states and the District of Columbia (unpublished data, National Center for Health Statistics, September 8, 1993). Comparison data indicate that firearm-related homicide rates for young males in the United States are 12 to 273 times the rates in other industrialized nations, whereas non-firearm-related homicide rates are 1.4 to 9.2 times greater than those elsewhere.⁶³ For example, in 1986 there were 1043 firearm-related homicides among US males aged 15 to 19 years, compared with six such deaths in Canada and two in Japan.⁶⁴ Firearm-related deaths now comprise 11% of all childhood deaths and 17% for those

aged 15 to 19 years, including 41% of deaths among black males of this age.⁶⁴ Firearm-related suicides among black teenage males aged 15 to 19 years doubled from 1982 to 1987, and although the rate for white males the same age did not change substantially during this period, it was nearly twice as high.⁶⁴ The risk of suicide among adolescents has been found to be nearly three times greater in homes where a gun is kept.^{65,66} Moreover, guns kept in homes as protection have been found to be several times more likely to kill a family member than an intruder.⁶⁵ The prominent, detrimental effect of firearms on overall death rates in the United States is unique in comparison with other countries.⁶⁷

Sexual Behavior

Unprotected sexual intercourse was accountable for approximately 30 000 deaths in 1990. Sexual behavior is associated with substantially increased risk for preventable disease and disability and is the source of some of today's most prominent social challenges. Each year, 12 million persons (two thirds of whom are under 25 years of age) are newly infected with a sexually transmitted disease.⁶⁸ An estimated 56% of all pregnancies among US women are unintended,²³ including most of the 1 million that occur among US teenagers each year.⁶⁹ One of the most rapidly increasing causes of serious illness is hepatitis B infection, of which about a third is estimated to be sexually transmitted.⁷⁰ Among women, pelvic inflammatory disease is a severe complication of lower genital tract infections such as gonorrhea and chlamydia. Each year pelvic inflammatory disease affects an estimated 1 million US women,⁷¹ of whom perhaps as many as 150 000 become sterile as a result.⁷²

The 30 000 deaths in 1990 attributed in the Table to unprotected sexual intercourse include approximately 5000 from excess infant mortality rates among those whose pregnancies were unintended,⁷³ 4000 from cervical cancer,⁷⁴⁻⁷⁶ 1600 from sexually acquired hepatitis B infection,^{46,70} and 21 000 from sexually acquired HIV infection.⁵⁰ As indicated by the nearly 20% increase over deaths in the previous year from sexually acquired HIV infection, unprotected intercourse now represents one of the most rapidly increasing causes of death in the country.

Motor Vehicles

Motor vehicle injuries to passengers and pedestrians caused about 47 000 deaths in 1990.¹ Nearly 40% of all deaths among those aged 15 to 24 years were caused by motor vehicles.²³ The chances of surviving a serious motor vehicle crash

are increased severalfold if an occupant is protected. Lap and shoulder belts have been shown to reduce the risk of death by about 45% to 65%, and of serious injury by about 40% to 55%.^{42,77} Airbags have been shown to yield a 30% reduction in fatalities and a 35% reduction in serious injury in frontal crashes.⁴² Child passenger restraints can reduce fatalities by 50% to 90%.⁴² Use of motorcycle helmets can reduce fatalities by 30% and serious head injuries by 75%.¹² The estimate of 25 000 deaths attributed in the Table to motor vehicles does not include those already recorded as relating to alcohol or drug use.^{12,39,41,78}

Illicit Use of Drugs

Approximately 20 000 deaths were caused in 1990 by illicit use of drugs. It is estimated that some 3 million people in the United States have serious drug problems.⁷⁹ Illicit use of drugs contributes to infant deaths and to deaths reported for such causes as overdose, suicide, homicide, motor vehicle injury, HIV infection, pneumonia, hepatitis, and endocarditis. In 1990, approximately 9000 deaths nationwide were attributed to illicit use of drugs (both legal and illegal) by vital statistics reports. This figure, however, does not include those indirectly related, such as deaths from accidents, homicides, infections with HIV, and hepatitis.¹ In 1990, approximately 9000 HIV deaths resulted from intravenous drug use (20% more than 1989),⁵⁰ as did at least another 1300 hepatitis B-related deaths.^{46,47,70} In addition, the National Highway Traffic Safety Administration estimated in 1988 that other drugs, often in association with alcohol, may be a factor in 10% to 22% of highway crashes.⁷⁸ The problem of accurately identifying drug-related deaths is illustrated by a study of the Drug Abuse Warning Network (DAWN) data and the national vital statistics reports of cocaine-related deaths in 25 metropolitan areas, which found that about 75% more cocaine-related deaths were reported by DAWN than by the vital statistics system from 1983 to 1988.^{80,81} A study of deaths from 1978 to 1986 in New York City identified 1091 deaths in 1986 as "narcotics-related," only 247 of which had been specifically attributed by vital statistics to drugs. Some 241 deaths were attributed to unspecified pneumonia, 172 to liver disease, and 113 to endocarditis.⁸² The findings of that study suggest that there may be a substantial undercount of the role of intravenous drug abuse relative to these and other causes of death. Although local vital statistics reports indicated an increase of 50% in drug-related deaths from 1978 to 1986, the study cited found a much more rapid increase of more than 400% for the same period.⁸² Further com-

plicating this analysis is the fact that the use of illegal drugs by pregnant women increases the risk for a poor pregnancy outcome, including infant death. The National Commission to Prevent Infant Mortality reported in 1992 that such drugs may be used by as many as one in five pregnant women nationwide.⁸⁰ The 20 000 deaths attributed in the Table to drug use represents deaths reported to the vital statistics system as drug-related, as well as those from drug-related HIV infection, automobile injuries, and hepatitis infections. It, too, is expected to increase substantially in future years as a result of HIV deaths associated with intravenous drug use.

Other Factors

Lack of access to a reliable source of primary care is also associated with an increased risk of death from a variety of causes, although quantifying the impact is complicated by the challenges of appropriately characterizing the various elements of access and distinguishing their effects on a given health outcome from other confounding variables. Comparisons of the health status profiles of various developed countries suggest that residents of countries that provide relatively greater access to a full range of primary care services generally fare better than residents of countries with poorer access.⁸³ The Carter Center project estimated that gaps in primary care, as indicated by lack of access to standard primary care, screening, and preventive interventions, accounted for 7% of premature deaths and 15% of potential years of life lost before age 65 in 1980, of which substantial portions were due to infant deaths.⁴ Limitations on access and use of appropriate primary care services require very close scrutiny as important determinants of health status for many Americans and present an obvious target of opportunity for a nation with 15% of the population currently uninsured.⁸⁴

Poverty too has its own direct effect on mortality rates, although it is difficult to separate the effect of lack of access to primary care from that of social and economic status. In the United Kingdom, which guarantees universal access to services, a substantial differential remains in health status outcomes by social class despite improved access,^{85,86} and overall scores in health status indicators are somewhat lower than those for other more socially homogeneous Western European countries.⁸³ Similarly, reports indicate that poor Canadians have a projected 11 fewer years of disability-free life than their more affluent counterparts, despite guaranteed access to medical care.⁸⁶ Several studies that have controlled for other risk factors have shown

that populations characterized by low educational or income status experience poorer health prospects.^{85,87-94} People who are poor have higher mortality rates for heart disease, diabetes mellitus, high blood pressure, lung cancer, neural tube defects, injuries, and low birth weight, as well as lower survival rates from breast cancer and heart attacks.^{89,95,96} For example, a study of the relative contribution of various risk factors and income levels to mortality among blacks estimated that 38% of excess mortality could be accounted for by family income and 31% by six risk factors (smoking status, blood pressure, cholesterol level, body mass index, alcohol use, and diabetes), with 31% remaining unexplained.⁹⁷ Efforts to improve health must take into account the special challenges to those who are poor.

COMMENT AND CONCLUSIONS

Approximately half of all deaths that occurred among US residents in 1990 could be attributed to the factors identified. Despite their approximate nature, the estimates presented here hold implications for program priorities. At the most basic level, they compel examination of the way the United States tracks its health status. Clearly, there is a need to improve the assessment of the contributory effects of etiologic factors on deaths among US residents and to clarify the role of factors such as poverty and restricted access to health services. There is also a need to look more specifically at how these factors affect the 50% of all deaths that occur before age 75. Moreover, there is a need to assess how they affect our measures on the increasingly important dimensions of morbidity and quality of life. Our national efficiency in changing the health profile is dependent on our ability to identify and monitor trends for the major factors that give direct shape to that profile.

The most important implications of this assessment of the actual causes of death in the United States are found in the way the nation allocates its social resources and shapes its program emphases. In 1993, health care costs in the United States are expected to reach approximately \$900 billion,⁹⁸ an average of more than \$14 000 annually for each family of four, if equally allocated across the population. The preponderance of this expenditure will be devoted to treatment of conditions ultimately recorded on death certificates as the nation's leading killers. Only a small fraction will go to the control of many of the factors that the Table indicates imposed a substantial public health burden. The national investment in prevention is estimated

at less than 5% of the total annual health care cost.⁹⁹

There can be no illusions about the difficulty of the challenges in changing the impact these factors have on health status. Of those identified here, the three leading causes of death—tobacco, diet and activity patterns, and alcohol—are all rooted in behavioral choices. Behavioral change is motivated not by knowledge alone, but also by a supportive social environment and the availability of facilitative services. The most rapidly increasing among these causes of death—sexual behavior and illicit use of drugs—take place behind closed doors and are difficult to confront directly even in a putatively open society. Several of the causes of death, such as firearms, are the focal point of powerful lobbies that impede constructive exploration of the full range of social options.

Nonetheless, the central public health focus for each of these factors must be the possibility for improvement. Change can occur. In recent years, trends have been salutary on several dimensions, eg, reductions in tobacco use, saturated fat consumption, and motor vehicle fatalities. The discouraging trends with respect to the effects of sexual behavior, firearms, and illicit use of drugs need not be inexorable. If the nation is to achieve its full potential for better health, public policy must focus directly and actively on those factors that represent the root determinants of death and disability.

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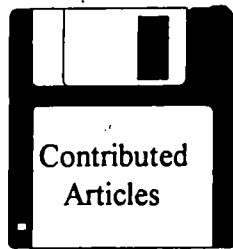
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Asian and Pacific Islander Americans:
An Overview of Demographic Characteristics and Health Care Issues

Jane S. Lin-Fu

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Asian and Pacific Islander Americans: An Overview of Demographic Characteristics and Health Care Issues

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Abstract

Purpose. To review the demographic characteristics of Asian and Pacific Islander Americans (APIAs) and their health care needs.

Methods. The author reviewed the 1990 Census data, later Current Population Surveys, monographs, books, and the medical literature on APIAs based on MEDLINE and other sources.

Findings. APIAs are the fastest growing minority in the U.S. They are mostly foreign-born, highly diversified, heterogeneous, bipolar in socioeconomic status, and concentrated in the West and metropolitan areas. APIAs have many health care needs: lack of health data, ethnocultural barriers, and high frequency of hepatitis B and tuberculosis and certain genetic disorders such as thalassemia and lactase deficiency. It is also questionable whether some U.S. norms and standards based on non-APIA subjects are appropriate for APIAs.

Conclusions. APIAs are a fast growing minority whose many unmet health care needs have been overshadowed by the myth of a model minority. The health care system should address these needs and assure equal access to health services for all minorities.

Key Words. Asian Americans; Culture; Ethnicity; Health Services Accessibility; Health Education; Health Policy; Hepatitis B; Minority Groups; Thalassemia, Tuberculosis.

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Asian and Pacific Islanders: An Overview of Demographic Characteristics and Health Care Issues

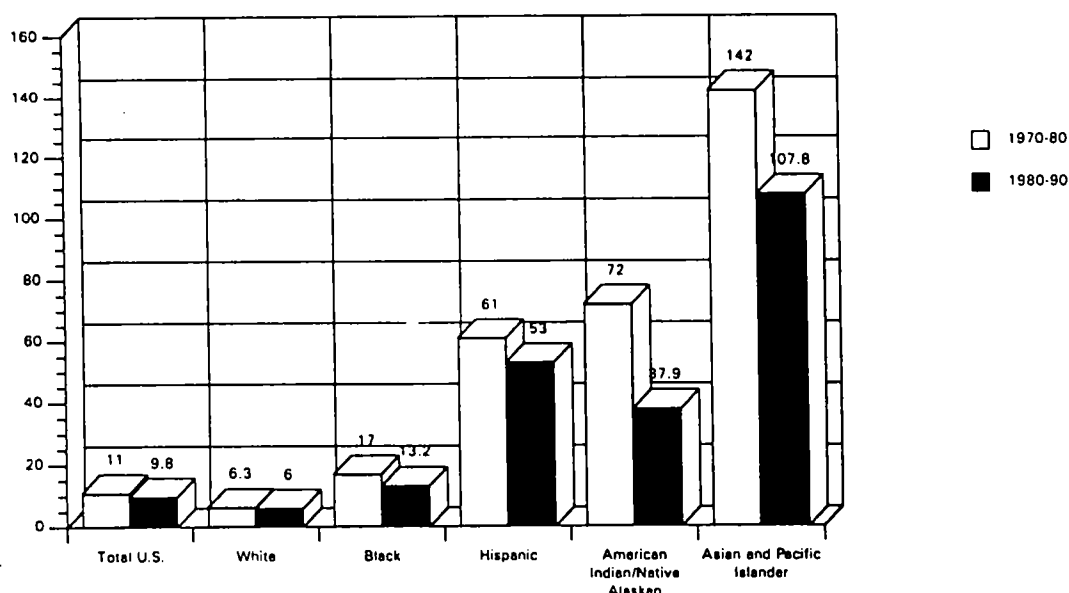
INTRODUCTION:

According to the projections of Bureau of the Census, as of July 1, 1992, Asian and Pacific Islander Americans (APIAs) reached 8,451,000 or 3.3 percent of the total U.S. population. This reflected an increase of 1,177,000 persons since the 1990 census was taken. What belies these seemingly unremarkable figures is the fact that APIAs have been the fastest growing minority in the United States for over two decades, and the trend is expected to continue into the next century. The censuses of 1970, 1980 and 1990 showed that APIAs expanded at a rate unmatched by any other groups.^{2,3} In both of the last two intercensus periods (1970-1980, 1980-1990), APIAs grew at a rate more than ten times that of the total population. The Bureau of the Census projected that APIAs will double its current size by 2009, triple by 2024 and quadruple by 2038. In the year 2050, when non-Hispanic whites will make up only 52.7 percent and Blacks 16.2 percent of the total population, APIAs will reach 41 million or 10.7 percent of the population.¹

unmatched
growth rates

Growth of U.S. Populations by Race and Ethnicity, 1970-90

In Percent



Despite its recent dramatic increase, and the projected escalation in growth, APIAs have remained one of the most poorly understood, invisible and neglected minority groups, receiving little attention from the health care system and policymakers. This fact is clearly reflected in the dearth of information and reference to this minority in major national health policy guideline and status report on minority health.^{4,5} Unlike any other

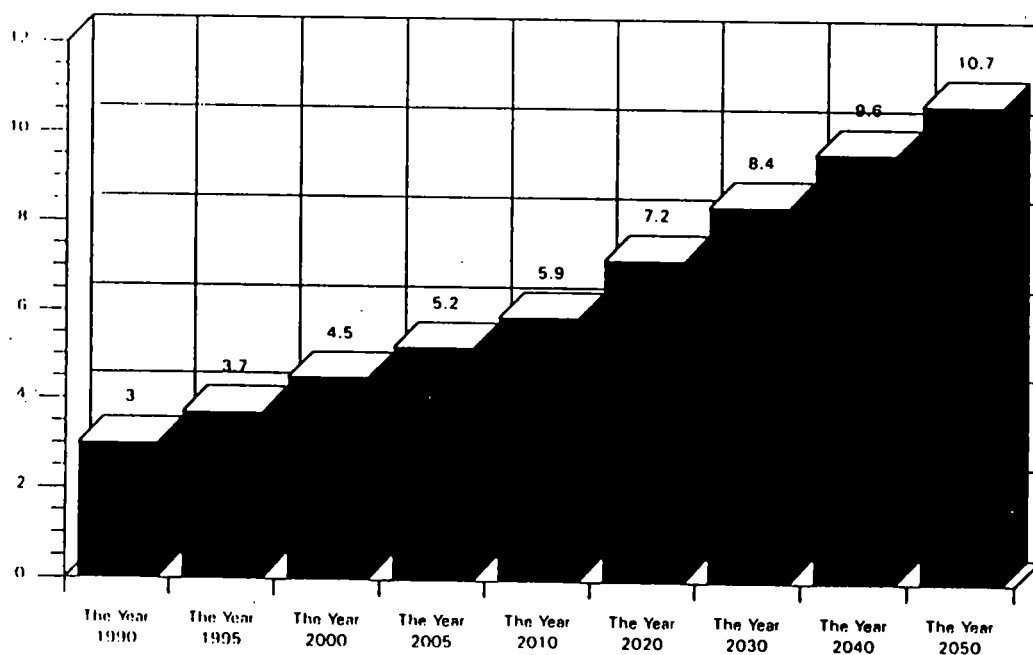
myth of a
"model
minority"

minorities, APIAs have had to bear the burden imposed by the myth of a "model minority."⁶ This inaccurate and most unfortunate stereotype, created largely by the popular media, has led many into assuming that APIAs are a homogeneous population all of whom are highly successful, have no particular health problems or health care needs, and do not require special considerations as do other minorities. An earlier paper has presented the APIA population characteristics based on the 1980 census and the special health care needs of this minority.⁶ This paper will review the 1990 census and subsequent Current Population Surveys (CPS) and more recent literature. The census is a complete count of the population while the CPSs are monthly nationwide surveys of scientifically selected samples representative of the non-institutionalized civilian population.

METHODS:

The demographic characteristics of APIAs were based on a review of the 1970, 1980 and 1990 census data, Current Population Reports and the Statistical Abstract of the United States, 1992, all published by the U.S. Bureau of the Census. In addition, monographs on APIAs published by the Asian America Health Forum and the U.S. General Accounting Office were reviewed for other useful information. A Medline search on literature related to APIAs, the various subpopulations under this group, and specific topic such as health services accessibility, hepatitis B, and thalassemia provided the basic information on the health care issues of APIAs. Other sources, including conference proceedings, books, government publications and unpublished papers available to the author were also examined.

Asian and Pacific Islander Americans as Percentage of Total U.S. Population Census Bureau Projection In Percent



RACIAL AND ETHNIC COMPOSITION:

The 1990 Census enumerated 7,273,662 APIAs of which 6,908,638 (95 percent) were Asian Americans and 365,024 (five percent) were Pacific Islander Americans. As in 1980, Chinese (23.8 percent) remained the largest subgroup of Asian Americans followed in order of size by Filipinos (20.4 percent), Japanese (12.3 percent), Asian Indians (11.8 percent), Koreans (11.6 percent), and Vietnamese (8.9 percent). These six subgroups accounted for 88.7 percent of Asian Americans. Among Pacific Islander Americans, Hawaiians remained the largest subgroup, making up 57.8 percent of the population. Together with Samoans, Guamanians and Tongans, these four subgroups made up 93.4 percent of Pacific Islander Americans.¹

See pages
35-36

Although classified together in the census data and in most other statistics, APIAs are in fact an extremely heterogeneous group. Under this single category are persons originating from 28 Asian countries and 25 identified Pacific Island cultures.² Each subgroup has its own unique history, culture, language, religion, and history of immigration to the United States. For example, Japanese, Chinese, and Filipinos are represented by both new immigrants and descendants of persons who migrated to the United States several generations earlier. Others like the Vietnamese, Laotian, Hmong, Cambodians, were virtually non-existent in the United States until the influx of refugees from Southeast Asia began in 1975. These groups are therefore overwhelmingly recent refugees and immigrants. Still others like the Hawaiians, Samoans, and Guamanians are born U.S. citizens.⁸

Between 1980 and 1990, as a group, APIAs increased by 107.8 percent. However, the rate of growth varied widely among the subgroups, ranging from 20.9 percent for Japanese to 134.8 percent for Vietnamese. Asian Indians increased by 125.6 percent, Koreans by 125.3 percent, Chinese by 107.8 percent and Filipinos by 104.1 percent.⁷ Since the 1990 Census, APIAs have continued the rapid pace of growth and by 1992, had reached 8,451,000.¹

APIAs in-
creased by
107.8%

GEOGRAPHIC DISTRIBUTION:

APIAs continued to be very unevenly distributed geographically. In 1991, 58.5 percent of this minority, compared to 21.2 percent of the total U.S. population, resided in the West. California alone accounted for 39.1 percent of APIAs, and together with New York (9.5 percent) and Hawaii (9.4 percent) served as home to nearly three fifths of this population. Seventy nine percent of APIAs resided in only 10 States (CA, NY, HI, TX, IL, NJ, WA, VA, FL, MA). Only 13 States (MD, PA, MI in addition to the 10 cited above) had over 100,000 APIAs while 28 States had fewer than 50,000.^{7,9} APIAs remained poorly visible in most states, making up less than 3 percent of the population in 43 States and the District of Columbia.⁹

APIA con-
centrations

As in 1980, APIAs in 1990 were highly concentrated in metropolitan areas. About 49 percent resided in suburbs and 45 percent lived inside the central cities. Only six percent were in non-metropolitan areas.⁷

SELECTED DEMOGRAPHIC CHARACTERISTICS:

As noted above, the APIAs are an extremely heterogeneous population. Group data are therefore often not meaningful because of marked variations between subpopulations. However, since APIAs are classified together in the census data and most health statistics, and in national health policy documents,¹⁻⁵ some demographic characteristics of the APIAs as a group will be presented below.

Age

As a group, APIAs are younger than the total U.S. population. In 1991, their median age was 30.4 years compared to 33.0 years for the total population; 8.6 percent were under 5 years, and only 7.3 percent were 65 years and older. Comparable figures for the total population were 7.8 percent and 15.9 percent respectively. Proportionately more women were in their reproductive age. Those between 15-44 years made up 50.9 percent of the APIA female population compared to 46 percent of the total female population.⁹

Women in Reproductive Age - 1990

	Asian and Pacific Islander American	Total Population
Total Female	3,716,000	127,470,000
+ Female 15-44 Years	1,979,000	58,584,000
+ Percent 15-44 Years	53%	45.9%

Marital Status:

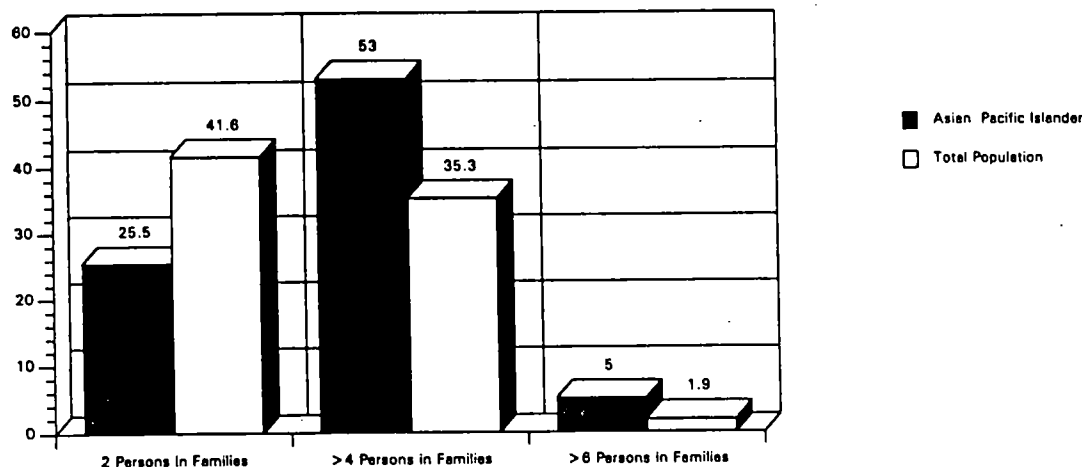
The male (48.7 percent) to female (51.3 percent) distribution was identical for APIAs and the total population. But among persons 15 years and older, APIAs were more likely to have never married (31.1 percent vs. 26.5 percent), and less likely to be widowed (5.1 percent vs. 7.1 percent) or divorced (4 percent vs. 8.2 percent). A slightly higher proportion (56.4 percent) than the total population (55.0 percent) were married with spouse present. A similar percentage (3.4 percent and 3.3 percent) reported to be married but spouse was absent.⁹

Family Structure

APIA families tended to be larger with fewer female headed units. In 1991, married couples made up 80.1 percent of APIA families, slightly higher than the 78.6 percent in the total population. Female householder with no spouse present was considerably lower (12.7 percent vs. 17.0 percent). Conversely, male householder with no spouse present was higher (7.3 percent vs. 4.4 percent). Only 25.5 percent of APIA families had just two persons in contrast to 41.6 in the total population. On the other hand, those with 4 or more persons accounted for 53.0 percent of APIA families but only 35.3 percent of families in the total population. In fact 5.7 percent of APIA families (vs. 1.9 percent) had 6 or more persons. With such family sizes, it is not surprising that APIAs had more wage

earners per family. The percent of APIA families with 4 or more earners (7.6 percent) was more than twice that in the total population (3.6 percent). Moreover, only 10.4 percent of families, compared to 14.4 percent in the total population, had no earners.⁹

Comparisons of Size of Families: Asian/Pacific Islanders vs. Total Population



Source: U.S. Bureau of the Census. P. 20-459, 1992

Among children under 18 years living with relatives, 84.3 percent of APIAs, compared to 73 percent of those in the total population, lived with two parents. It follows that a significantly lower percentage of APIA children lived with one parent (14.2 percent vs. 24.8 percent). Only 1.5 percent of APIA children, versus 2.2 percent in the total population lived with neither parent. Although 81.8 percent of APIAs 25 years or older had at least 4 years of high school, a higher percentage of the family householders (26.1 percent) were not high school graduates compared to the total population (23.7 percent). Likewise, persons 65 years or older were a smaller fraction of this minority, but made up a higher percentage of householders (8.4 percent) than in the total population (6.3 percent).⁹

Nativity

In the 1980's, as in the 1970's, immigration played a major role in the remarkable growth of this population. In the last 20 years alone (1971 to 1990), 4,451,200 persons immigrated to the U.S. from Asia. Immigration accounted for 28 percent of the total population increase but 71 percent of the growth of APIAs between 1980 and 1989.⁹ The impact of immigration is reflected in the number of foreign-born persons reported in the census. In 1990, foreign-born persons made up only eight percent of the total U.S. population but almost three quarters (74 percent) of APIAs.¹⁰ Not only were the vast majority of APIAs foreign-born, but many were relatively recent arrivals. Among new immigrants and those who immigrated later in life, language barriers often prevent access to most services, including health services. In 1990, 4,471,621 person reported speaking one of

Immigration
accounted for
71% of
growth

the APIA languages at home, and of these, 2,420,355 reported that they did not speak English "very well."¹⁰ These data suggest that one third or more of APIAs faces a severe language barrier.

Education

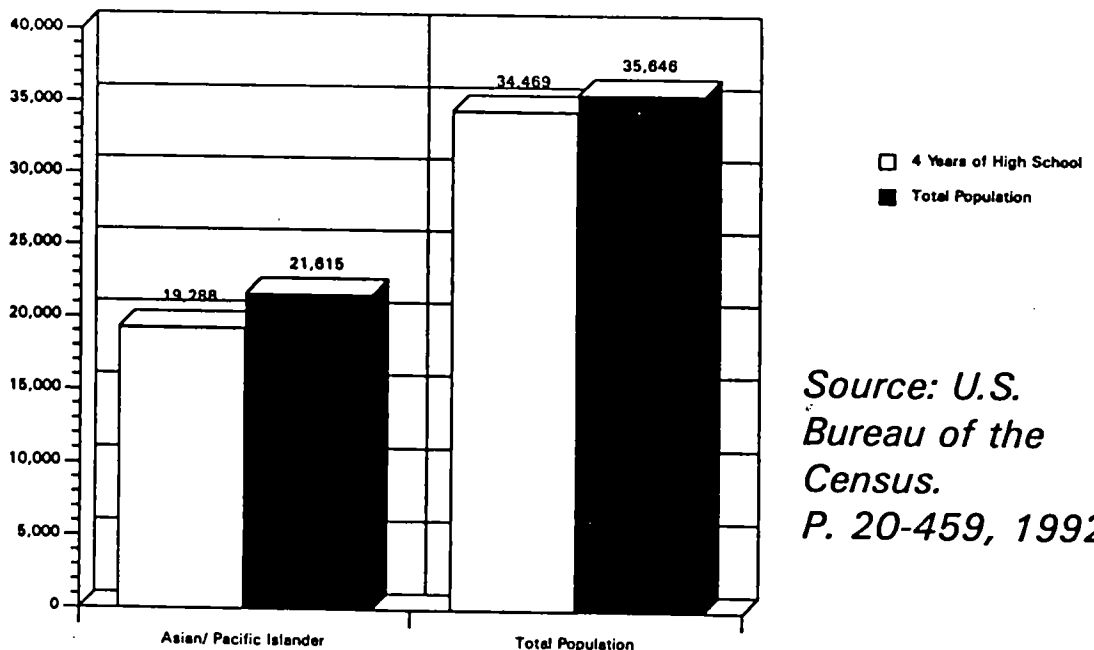
Overall, 81.8 percent of APIAs 25 years or older had 4 years of high school education or more, compared to 78.4 percent in the total population. An impressive 39.1 percent had 4 or more years of college. This is significantly higher than the 21.5 percent reported in the total population. However, a little publicized fact is that the percentage of APIAs with 0-4 years of elementary education (5.3 percent) was more than twice that in the total population (2.4 percent). Among women, the percentage (6.2) was three times that in the total population (2.1 percent).⁹ Thus APIAs continue to be over-represented at both ends of the scale.

"... a little publicized fact..."

The generally high educational attainment of this population may be partially explained by the selective migration of the better educated to the United States.⁹ However, educational attainment in different subgroups of APIAs varied considerably. In 1980, only 26.5 percent of APIAs from Laos and 37.5 percent of those from Cambodia were high school graduates.¹¹ Moreover, APIAs who received higher education before immigrating still faced language and other cultural barriers that prevented equal access to employment and promotion opportunities as shown by data below.

Earnings, Family Income And Poverty

Median Earnings of Year-Round Workers, > 25 Years Old by Education, 1990



The higher education of APIAs did not translate into proportionately better earning power and income. In 1990, the median earning of year-round, full time APIA workers 25 years and older (\$25,193) was in fact slightly lower than that for the total population (\$25,511). APIAs actually did less well than their peers with comparable education in the total population. Among these workers, the median income for those with 4 years of high school education was \$21,615 for the total population but only \$19,288 for APIAs. The median income for those with 4 or more years of college was \$35,646 and \$34,469 respectively. Although 14.8 percent of full-time year-round APIA workers 25 years or older had earnings of \$50,000 or more (compared to 12.2 percent in the total population), more than one-third, or 34.7 percent, had earnings of less than \$20,000, a figure slightly higher than that in the total population (33.9 percent). One out of every five workers (20.5 percent) earned less than \$15,000 and 12.2 percent of APIAs lived below poverty.⁹

The above data clearly show that like other populations, not all APIAs are highly successful and live in affluence. Many are far from the successful stereotype associated with the image of the model minority. Despite their educational attainment, many APIAs have yet to gain equal footing in earning power. But the myth of a model minority continues to be perpetuated when statistics are quoted out of context. A prime example is the frequently cited fact that in 1990, the median family income for APIAs (\$42,245) was higher than that of the total population (\$35,353).⁹ These figures cannot be properly interpreted without considering key factors that contributed to family income. First, APIA families were considerably larger with more earners per family; and fewer units had no earners. As noted earlier, the percentage of APIA families with 4 earners or more was twice that in the total population. Second, more than half of APIAs (58.5 percent compared to 21.2 percent of the total population) lived in the West where the median family income was higher than that for the Nation.⁷ In addition, 9.5 percent resided in New York where wages were also higher. Third, a smaller percentage of APIA families were headed by female householders which generally had lower income than those headed by males. It should be noted that despite such impressive median family income, the APIA per capita income was lower (\$13,420) than that for the white population (\$15,270). This lower per capita income probably reflects, at least in part, the fact that a sizeable fraction of the APIAs were recent immigrants whose relatively late entry into the U.S. labor force meant lower seniority and pay. APIA householders were also less likely to own or be buying their homes (49.1 percent vs. 64.1 percent). A higher percentage of families lived below poverty: 11.9 percent of APIA families and 9.4 percent of married couple families lived below poverty in 1990, compared to 10.3 percent and 5.6 percent in the total population.⁹

"far from the successful stereotype. . ."

In short, APIAs are a unique minority quite unlike any other groups because it is overwhelmingly made up of immigrants. Although categorized together by public policy, this minority is extremely diverse and heterogeneous. About three fourths are foreign-born, and many, including the Southeast Asian refugees, have immigrated only since the mid to late 1970's. APIAs are over-represented at both ends of the socioeconomic scale: many have college or higher education but a significant number are functionally illiterate; likewise many have good income but roughly one out of eight persons live in poverty and one in every five year-round full-time workers earns less than \$15,000.⁹

"a unique minority"

The dramatic growth of APIAs is a very recent phenomenon. As late as 1960, this minority made up only 0.4 percent of the total population. The sudden explosion of this population caught the U.S. health care system unprepared to recognize their existence, understand their cultures, and meet their needs.⁶ In the following section, health issues of special concern to APIAs will be presented:

HEALTH CARE ISSUES OF SPECIAL CONCERN TO APIAS:

Health Data

"paucity of data . . . equated with a lack of health problems"

Vital statistic and other health-related data serve as the basis for determining public health policies and resource allocation. Yet until recent years, such data were virtually non-existent for APIAs. Because of its relatively small numbers, most health surveys and studies have neglected to identify APIAs separately. Instead, data for this group generally appeared in the "others" category which serves no useful purpose.^{6,12} Even today, important documents offering racial and ethnic health data largely ignore APIA data and include information only for the white and black populations and occasionally for the Hispanics.⁵ Over the years, the paucity of health data for APIAs became equated with a lack of health problems or health care needs. Healthy People 2000, the major Federal health policy guideline stated that closing the gap between the health indices of whites and minorities is a national goal. Yet the document included few baseline data for this minority, and of the 336 objectives identified, only 8 targeted APIAs as opposed to 48, 31 and 27 that targeted blacks, American Indians and Native Alaskan, and Hispanics respectively.⁴

The lack of data for APIAs often meant that data from a few subgroups were used instead. However, socioeconomic status, lifestyle and prevalence of diseases vary widely not only among the many subgroups, but also between native-born and foreign-born of the same ethnic group. Presentation of data from a few subgroups often misrepresents the health status of the other groups.^{6,12}

Racial misclassifications

Aside from the above issues, another major problem is racial misclassification on vital and other records. This seemingly minor error in record keeping meant underestimating mortality rates for APIAs. Two earlier studies documented serious racial misclassification for Japanese, Chinese and Filipinos on death certificates resulting in artificially low mortality rates.^{13,14} A more recent careful examination of linked infant birth and death files from 1983 through 1985 found that the situation has not improved. In this study, 1.2 percent of infants classified as white at birth, 4.3 percent infants classified as black at birth and 43.2 percent of infants classified as members of other races at birth had a different racial classification at death. For infants classified as Chinese, Japanese, Hawaiian or Filipino at birth, 47.6 percent, 54.1 percent, 22.9 percent and 52.4 percent respectively were classified under a different racial category at death. The majority of infants misclassified at death were categorized as white.¹⁵ A separate study of a sample of 1986 U.S. death certificates reported that while whites were misclassified in only 0.5 percent and blacks in 1.0 percent of certificates, Asian American were misclassified in 21.1 percent of certificates and American Indians in 23.7 percent.¹⁶ In addition to these mistakes made directly on death certificates, the frequent practice of identifying APIAs as "others" has added yet another source of error. Decedents who have no specific racial

identity on death certificates are assigned as white or black, depending on the race of the preceding decedent in the National Center for Health Statistics (NCHS) mortality computer file.¹⁵ This further lowers the death count for non-black non-white minorities. Furthermore, the problem of racial misclassification extends beyond death certificates. A study of the NCHS Health Interview Survey found that 32.3 percent of persons who self-identified as APIAs were classified as either white or black by the interviewers.¹⁷ The above findings cast serious doubts on the validity of vital statistics and health data of APIAs available today. How does one then document the health problems or plan to meet the needs of this rapidly growing population?

Ethnocultural Barriers

Of the many deterrent to access to health services, ethnocultural barriers are perhaps the most poorly understood and neglected. Not many realize that the health care system is a cultural system that has been shaped and is still administered largely by mainstream America. Despite some improvements since the 1960's, the system has not been always sensitive or responsive to non-mainstream minorities. Many health care providers have not examined their own cultural perspective; nor do they understand the role culture plays in shaping a person's concept and beliefs regarding health and illness, and in determining one's lifestyle and health behavior. Confronted by patients whose culture and language are very different from their own, many health professionals simply hold the patients solely responsible for the ethnocultural barriers that stand between them, failing tragically to realize their own contribution to the problem. It is critical for health workers to understand that health services that are not culturally-relevant to the population being served are often ineffective since both service utilization and compliance are likely to be low.¹⁸⁻²²

"the most
poorly under-
stood. . ."

Ethnocultural barriers present a particularly serious problem for APIAs. In 1990, almost three-quarters of this minority were foreign-born many of whom were recent immigrants and refugees. At least one-third did not speak English very well. Today, after twenty five years of escalating growth, the APIAs find the U.S. health care system still unprepared to respond to their needs. Clinics and hospitals serving APIAs often do not have interpreter services, leaving the burden of assuring communication entirely to the service consumers. In addition, many service providers are not sensitive to cultural constraints common in this population such as dislike for blood sampling and other invasive procedures, pelvic examination and pap smear in unmarried women or hospitalization. Others fail to recognize that persons from other cultures may not understand or accept the Western biomedical model of disease. The theory of "hot" and "cold" embraced by many APIAs often influences both their perception of the nature of their illness and judgment on the appropriateness of the treatment prescribed. This in turn affects compliance. Some APIAs believe that human suffering is part of life and postpone seeking help until symptoms of illness are unbearable. Emphasis placed on stoicism and restraints in public display of emotions may make some appear unconcerned when presented with a grave diagnosis or situation.^{6,20,23} Mental health problems and somatization are common among Southeast Asian refugees and new immigrants, but may not be recognized by practitioners unfamiliar with Asian cultures.²⁴

"U.S. health
care system
still
unprepared..."

culture
relevance is
important

Health educational programs, even when translated into Asian and Pacific Islander languages, cannot be effective if the contents are not culturally-relevant. For example, nutritional education is often based on mainstream American diet that includes cheese and other dairy products as important sources of calcium and protein. Such education ignores the fact that lactase deficiency is very common in some APIA subgroups, and dislike for cheese and other dairy products is not uncommon among many new immigrants and refugees from Asia.⁶ Alternative sources of calcium and protein commonly used in APIA diets should be offered instead. Likewise, counseling on sodium intake should not be confined to salt, but should include other commonly used high sodium food items such as soy sauce, fish sauce, monosodium glutamate and certain preserved vegetables and fish. The failure of the U.S. health educational campaign to reach APIAs is reflected in the recent finding that among minorities, APIAs had the lowest participation rate in Pap smears, mammography, breast examination and smoking cessation counseling.^{25,26}

It is beyond the scope of this paper to discuss the complex subject of cross-cultural medicine. Suffice it to say that the health care system cannot properly address the health care needs of APIAs without a concerted effort to break down existing ethnocultural barriers so that health services will be more culturally-relevant to this minority.

Special Health Problems

The relatively recent expansion of the APIA population and its uneven geographic distribution mean that many service providers outside of areas with a sizeable APIA population may have little contact with APIAs and may not be familiar with APIA cultures and health problems common in this population. As noted earlier, in 1990 only 13 States had more than 100,000 APIAs and in only 7 States did APIAs comprise 3 percent or more of the State population. The special health care needs of APIAs have been reviewed in some details elsewhere.⁶ This paper will briefly discuss some health problems of great concern to APIAs.

alpha and
beta
thalassemia

The carrier frequency for both alpha and beta thalassemia, and for hemoglobin E is quite high in some subgroups. One study reported nine percent of Chinese Americans in Boston to be carriers of alpha thalassemia and 4.8 percent to be carriers of beta thalassemia.²⁷ Another study found that 26 percent of refugees from Cambodia and 28 percent of persons from Laos were carriers of hemoglobin E.²⁸ A prenatal hemoglobinopathy screening program in Rochester, NY found that Southeast Asians were four times more likely to be hemoglobinopathy carriers than non-Southeast Asians (14 percent vs. 3.6 percent).²⁹ Both hydrops fetalis from homozygous alpha thalassemia and blood transfusion dependent homozygous beta thalassemia have now been reported in these populations.^{28,30} Yet genetic screening and counseling services for APIAs are far from adequate and it is unclear whether primary care providers serving APIAs are generally familiar with genetic disorders (including G-6PD deficiency and lactase deficiency) common in this population.^{6,28}

hepatitis B

Aside from genetic disorders, at least two infectious diseases are of special concern to APIAs, i.e., hepatitis B and tuberculosis. Many APIAs originated from parts of Asia where hepatitis B is endemic. One study of Southeast Asian refugee teenagers found 14 percent to be positive for hepatitis B surface antigen (HBsAg) and eight percent to be

positive for HBeAg or HBcAg and were chronic carriers.³¹ Infants born to mothers who are both HBsAg and HBeAg positive have a 70-90 percent risk for acquiring HBV infection, and of these, 85-90 percent will remain chronically infected. Even infants born to women with only positive HBsAg still face a 31 percent risk of becoming infected.^{33,34} Chronic infection with HBV is an important factor leading to primary hepatoma and cirrhosis. Prenatal screening followed by treatment of infants born to infected mothers with HB immune globulin and a series of vaccination will prevent more than 90 percent of perinatal HB infections.^{33,34} It is important that this preventive measure be offered to all pregnant women, but particularly to APIA women. Because of the frequency of the carrier state in APIAs, vaccination should also be considered for family members of infected persons. Tuberculosis is another important problem. The age-specific incidence rate of bacteriologically confirmed tuberculosis in Southeast Asian refugees was found to be 14-70 times higher than in the U.S. population as a whole.^{35,36} An added concern is that many APIAs are infected with drug-resistant organisms.^{34,35} Other conditions such as skin infections, intestinal parasitism, and otitis media are also common among recent refugees.³²

tuberculosis

cancer

Cancer is another area of grave concern to APIAs. Among 9 populations (White, Black, Chinese, Japanese, Filipino, American Indian, Mexican American, Native Hawaiian, Alaskan Native) for whom age-adjusted cancer incidence rates are available for 1977-83, Native Hawaiians ranked first in incidence for stomach, breast, corpus uteri and ovarian cancer, and second in lung cancer. The incidence of stomach cancer among Japanese closely follows that in Hawaiians. Among Chinese, the incidence of liver cancer, 9.6/100,000 population is more than 4 times that in the white (2.1).³⁷ This is probably related to the high frequency of chronic HBV infection among Chinese. Nasopharyngeal carcinoma is disturbingly common in many APIA subgroups including Chinese, Filipinos, Vietnamese, Indonesians, Thais and Malays.³⁸

Some other problems also deserve attention. Sudden unexplained nocturnal death in relatively young and previously healthy persons occurs in Southeast Asian refugees with some frequency particularly in Hmong and Laotians.³⁹ The cardiovascular risk factors for APIAs have been reviewed elsewhere.⁴⁰⁻⁴³ An important finding is that smoking in immigrant Southeast Asian men is significantly higher than in the general population.^{40,41} There is also indication that smoking is becoming more of a problem among U.S. borne APIA women.⁴³ A recent study of Southeast Asian children in Minnesota further suggested an emerging problem in hypertension and cardiovascular diseases.⁴⁴

other problems

Questionable Applicability of U.S. Norms and Standards

Dosage of medications in the United States is based on clinical trials involving largely non-APIA research participants. It is questionable whether such dosages are appropriate for APIAs not only because many APIAs tend to be lighter in weight, but also because of genetic differences in pharmacokinetics. Questions have been raised on the different acetylation rate for drugs such as procainamide, isoniazide and hydralazine in Chinese compared to that in other racial groups.^{44,45} One study found that the effective weight-standardized dose of chlorpromazine for Asian Americans to be only about half that for white Americans, and the dose at which extrapyramidal signs begin to appear was

about two-thirds for whites.⁴⁶

Likewise, questions have been raised about the suitability of certain standard surgical procedures for APIAs due to anatomical differences. For example, lens implantation in cataract surgery may require modification for some APIAs with narrow eye fissures, tight eyelids and shallow orbit. In laser surgery for narrow angle glaucoma (irridotomy), because the iris is more heavily pigmented and thicker in APIAs than in most Caucasians, the instrument setting standardized for Caucasians does not result in adequate penetration.⁴⁸

CONCLUSION:

concrete steps
needed

APIAs have been the fastest growing population in the United States for over two decades. By the year 2050, they are expected to make up almost 11 percent of the total population. Yet today APIAs remain one of the most poorly understood and neglected minorities, paying a heavy price for the myth of a model minority. The health care system needs to be aware of the many unmet health care needs of APIAs. It should take note of the dearth of usable health data for APIAs, the severe ethnocultural barriers that currently prevent equal access to health services, the many health problems prevalent in this minority, and the questionable applicability of certain standard medication dosage and surgical procedures based on Caucasian norms on APIAs. More importantly, health policy makers, planners, and providers need to take concrete steps to meet the special needs of this population and assure equal access and benefits from health services for APIAs and other minorities.

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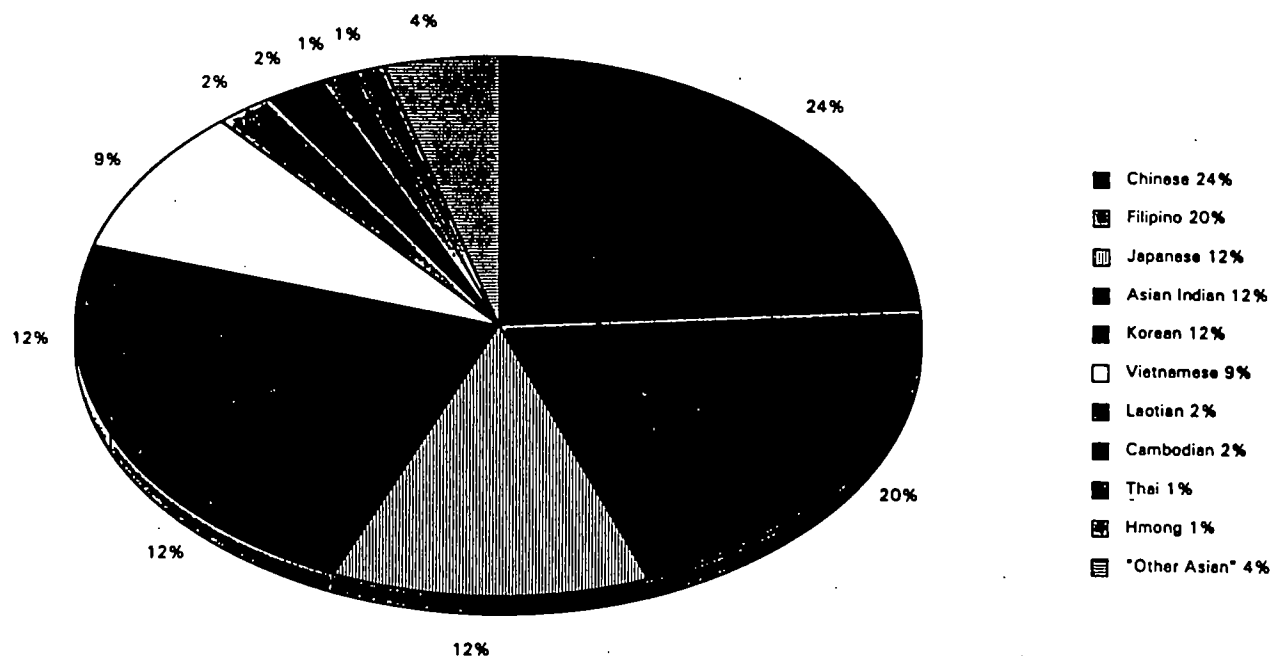
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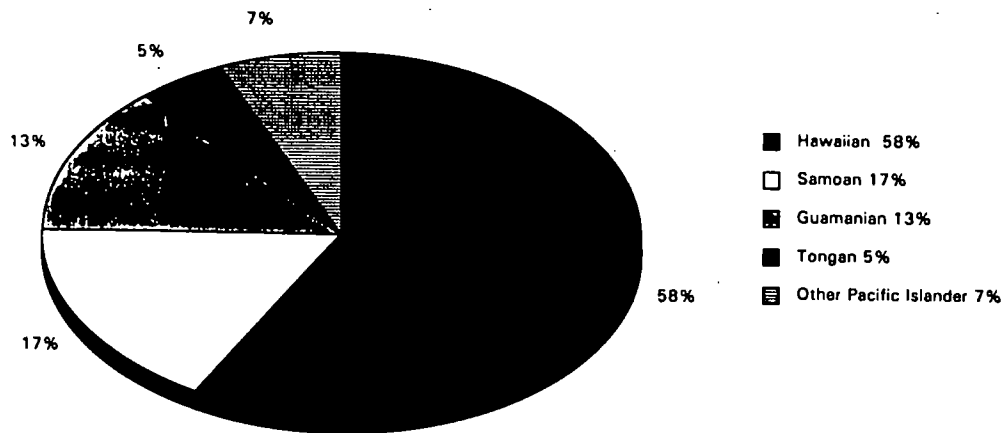
Distribution of Asian Americans



N = 6,908,638

Source: 1990 Census

Distribution of Pacific Islander Americans



N = 365,024
Source: 1990 Census

ASIAN AMERICANS	
Chinese	1,645,472
Filipino	1,406,770
Japanese	847,562
Asian Indian	815,447
Korean	798,849
Vietnamese	614,547
Laotian	149,014
Cambodian	147,411
Thai	91,275
Hmong	90,082
"Other Asian"	302,209
PACIFIC ISLANDER AMERICANS	
Hawaiian	211,014
Samoan	62,964
Guamanian	49,345
Tongan	17,606
All Other Pacific Islander	24,095
TOTAL	7,273,662

Race, Socioeconomic Status, and Health

The Added Effects of Racism and Discrimination

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ABSTRACT: Higher disease rates for blacks (or African Americans) compared to whites are pervasive and persistent over time, with the racial gap in mortality widening in recent years for multiple causes of death. Other racial/ethnic minority populations also have elevated disease risk for some health conditions. This paper considers the complex ways in which race and socioeconomic status (SES) combine to affect health. SES accounts for much of the observed racial disparities in health. Nonetheless, racial differences often persist even at "equivalent" levels of SES. Racism is an added burden for nondominant populations. Individual and institutional discrimination, along with the stigma of inferiority, can adversely affect health by restricting socioeconomic opportunities and mobility. Racism can also directly affect health in multiple ways. Residence in poor neighborhoods, racial bias in medical care, the stress of experiences of discrimination and the acceptance of the societal stigma of inferiority can have deleterious consequences for health.

This paper provides an overview of the ways in which race and socioeconomic status (SES) combine to affect health status. It first considers patterns of racial differences in health and the role that SES plays in accounting for these disparities. It then describes the nature of racism—the ways in which policies linked to the historic legacy and the persistence of racism have created adverse living conditions that are pathogenic for minority populations. Residential segregation has restricted African-Americans' access to desirable educational and employment opportunities. In combination with other racist mechanisms, it has created the concentrated disadvantage characteristic of many minority communities. The stability of these societal processes has led to remarkable stability in racial economic inequality and in the nonequivalence of SES indicators across race. Finally, the paper considers the ways in which economic discrimination, discrimination in medicine, perceptions of racial bias, and the stigma of inferiority can have pathogenic consequences.

RACE, SES, AND HEALTH

In the United States, race and ethnicity predict variations in health. TABLE 1 illustrates these associations by comparing the mortality rates for all of the major racial/ethnic minority groups to those of the white population.¹ National mortality

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data reveal that the overall death rate for American Indians is similar to that of whites. However, compared to whites, American Indians have lower death rates for cardiovascular disease and cancer but higher rates of death from injuries, the flu and pneumonia, diabetes, suicide, and cirrhosis of the liver. It should be noted that mortality rates for American Indians who live on or near reservations are higher than the national rates for their group.² The overall mortality rates for the Hispanic population is lower than that of the white population but Hispanics have higher death rates for diabetes, cirrhosis of the liver, and HIV/AIDS than whites. For all of the leading causes of death in the United States, the Asian Pacific Islander population has mortality rates that are considerably lower than those of whites.

Several factors must be considered to put these data into perspective. First, a non-trivial proportion of nonblack minorities are misclassified as white on the death certificate. This numerator problem leads to an underestimate of the death rates for American Indians, Asian and Pacific Islanders, and Hispanics.³⁻⁴ Second, there is considerable heterogeneity within each of the major racial/ethnic populations that importantly predicts variation in health status within each group. Third, a relatively high proportion of the Hispanic, and especially the Asian-American population, is foreign-born, and their health profile reflects in part the impact of immigration. Immigrants tend to enjoy better health status than the native-born population, even when those immigrants are lower in SES.⁵⁻⁶ However, with increasing length of stay in the United States and adaptation to mainstream behavior, the health status of immigrants deteriorates.

African Americans (or blacks) have an overall death rate that is 1.6 times higher than that of the white population. Elevated mortality rates for the black compared to the white population exists for eight of the ten leading causes of death. These racial

TABLE 1. Age-adjusted death rates (per 100,000 population) for whites and minority/white ratios for the 10 leading causes of death, United States 1996^a

Causes	White (W) (Rate)	Black/W Ratio	Aml ^b /W Ratio	API ^b /W Ratio	Hispanic/W Ratio
All causes	466.8	1.58	0.98	0.59	0.78
1. Heart disease	129.8	1.47	0.78	0.55	0.68
2. Cancer	125.2	1.34	0.68	0.61	0.62
3. Stroke	24.5	1.80	0.86	0.98	0.80
4. Pulmonary disease	21.5	0.83	0.59	0.40	0.41
5. Unintentional injuries	29.9	1.23	1.93	0.54	0.97
6. Flu and pneumonia	12.2	1.45	1.15	0.81	0.80
7. Diabetes	12.0	2.40	2.32	0.73	1.57
8. HIV/AIDS	7.2	5.75	0.58	0.31	2.26
9. Suicide	11.6	0.57	1.12	0.52	0.58
10. Liver cirrhosis	7.3	1.27	2.84	0.36	1.73

^aTaken from the National Center for Health Statistics.¹

^bAml, American; API, Asian-Pacific Islander.

TABLE 2. Mortality rates for blacks and black/white ratios (age-adjusted death rates per 100,000 for the leading causes of death in 1995)^a

Causes of Death	1950		1995	
	Black Rate	B/W Ratio	Black Rate	B/W Ratio
All causes	1236.7	1.55	765.7	1.58
1. Heart disease	379.6	1.26	198.8	1.49
2. Cancer	129.1	1.04	171.6	1.35
3. Cerebrovascular disease	150.9	1.81	45.0	1.82
4. Pulmonary disease	—	—	17.6	0.83
5. Unintentional injury	70.9	1.27	37.4	1.25
6. Flu and pneumonia	57.0	2.49	17.8	1.44
7. Diabetes	17.2	1.24	28.5	2.44
8. HIV/AIDS	—	—	51.8	4.67
9. Suicide	4.2	0.36	6.9	0.58
10. Cirrhosis	7.2	0.84	9.9	1.34
11. Homicide	30.5	11.73	33.4	6.07

^aTaken from the National Center for Health Statistics.¹

disparities have been documented for a long time and have been widening in recent years for multiple indicators of health status. TABLE 2 presents the mortality rates for blacks and the black/white mortality ratios for 1950 and 1995.¹ Although the overall mortality rate for African Americans has declined over time, for several causes of death (cancer, diabetes, suicide, cirrhosis of the liver, and homicide) the mortality rate is higher in 1995 than in 1950. Moreover, the black/white ratio for all-cause mortality in 1995 is virtually identical to that of 1950. Black/white mortality ratios over this 45-year period are virtually unchanged for some causes of death, such as stroke and unintentional injury, and smaller for two causes of death (the flu

TABLE 3. United States life expectancy, at age 45 by family income (1980 dollars)^a

Family Income	Females			Males		
	White	Black	Difference	White	Black	Difference
All ^b	36.3	32.6	3.7	31.1	26.2	4.9
1. Less than \$10,000	35.8	32.7	3.1	27.3	25.2	2.1
2. \$10,000–\$14,999	37.4	33.5	3.9	30.3	28.1	2.2
3. \$15,000–\$24,999	37.8	36.3	1.5	32.4	31.3	1.1
4. \$25,000 or more	38.5	36.5	2.0	33.9	32.6	1.3

^a1979–1989; Taken from the National Center for Health Statistics.¹

^b1989–1991; Taken from the National Center for Health Statistics.⁷

and pneumonia and homicide). However, the black/white mortality ratios in 1995 are larger than those in 1950 for heart disease, cancer, diabetes, and cirrhosis of the liver.

Socioeconomic status predicts variation in health within minority and white populations and accounts for much of the racial differences in health. TABLE 3 illustrates these data for life expectancy. At age 45, white males have a life expectancy that is almost five years more than their black counterparts.⁷ Similarly, white females have a life expectancy at age 45 that is 3.7 years longer than that of their black peers. However, there is considerable variation in life expectancy within both racial groups.¹ Black men in the highest income group live 7.4 years longer than those in the lowest income group. The comparable numbers for whites was 6.6 years. Thus, the SES difference within each racial group is larger than the racial difference across groups. A similar pattern is evident for women, although the SES differences are smaller. At age 45, black women in the highest income group have a life expectancy that is 3.8 years longer than those in the lowest income group. Among whites, the SES difference is 2.7 years. Also evident in the life expectancy data is an independent effect of race even when SES is controlled. At every level of income, for both men and women, African Americans have lower levels of life expectancy than their similarly situated white counterparts. This pattern has been observed across multiple health outcomes and for some indicators of health status, such as infant mortality, the racial gap becomes larger as SES increases.¹

RACE AND RACISM IN THE UNITED STATES

How do we understand these differences? What is race, and what contribution does racism make to these persisting patterns of racial differences in health? Our current racial categories were created before the development of valid scientific theories of genetics and do not capture biological distinctiveness.⁸⁻¹⁰ The American Association of Physical Anthropology¹¹ recently stated that "Pure races in the sense of genetically homogenous populations do not exist in the human species today, nor is there any evidence that they have ever existed in the past." There is considerable biological variation in human populations, but our racial categories fail to capture it. There is more genetic variation within our existing racial groups than between them. Moreover, genetics is not static but changes over time as human populations interact with their natural and social environment. In the United States, our racial groups importantly capture differences in power, status, and resources. Three of the five official racial/ethnic categories were used in the inaugural census in 1790 and these groups were not regarded as equal. In compliance with the First Article of the United States Constitution, that census enumerated whites, blacks as three-fifths of a person, and civilized Indians (that is, Indians who paid taxes). The Thirteenth Amendment abandoned the three-fifths rule, and over time new racial categories were developed to keep track of new immigrants.¹²

Historically, racial categorization has been rooted in racism, and racial classification schemes have had an implicit or explicit relative ranking of various racial groups. Within the U.S. context, whites have always been at the top, blacks at the bottom, and other groups in between. The construct of racism can enhance our understanding of racial inequalities in health. By racism, I mean an ideology of inferiority

ity that is used to justify unequal treatment (discrimination) of members defined as inferior, by both individuals and societal institutions. This ideology of inferiority may lead to the development of negative attitudes and beliefs towards racial outgroups (prejudice), but racism primarily lies within organized institutional structures and not in individual attitudes or behaviors.¹³

First, is the endorsement of an ideology of inferiority a relic of a bygone era? On the one hand, there have been dramatic improvements in the racial climate in the United States in the last 50 years.¹⁴ For example, national data reveal that in 1942 only 32% of whites with school-aged children believed that white and black children should go to the same schools. Ninety-six percent of white parents supported that view in 1995. Similarly, in 1958 only 37% of whites stated that they would vote for a qualified black man for President of the United States. In 1997, 95% of whites indicated that they would vote for a black person for President. At the same time, other data indicate that racial attitudes are complex. Overwhelming support for the principle of equality coexists with a reluctance to support policies that would reduce racial inequalities.¹⁴

Moreover, data on stereotypes reveal the persistence of negative images of minority racial/ethnic populations in the United States. National data reveal that 45% of whites believe that most blacks are lazy, 51% indicated that most blacks are prone to violence, 29% that most blacks are unintelligent, and 56% that most blacks prefer to live off welfare.¹⁵ These data also reveal a reluctance to endorse positive stereotypes of African Americans. Only 17% of whites indicated that most blacks are hard-working, 15% that most blacks are not prone to violence, 21% that most blacks are intelligent, and 12% that most blacks prefer to be self-supporting. These data are even more striking when compared with whites' perceptions of themselves and other groups. In general, whites view all minority racial groups more negatively than themselves, with blacks being viewed more negatively than any other group. Hispanics tend to be viewed twice as negatively as Asians. Jews tend to be viewed more positively, and southern whites more negatively, than whites in general.

RACISM AND SES

How does racism affect health? First, and most importantly, racism has restricted socioeconomic attainment for members of minority groups. By determining access to educational and employment opportunities, segregation has been a key mechanism by which racial inequality has been created and reinforced.¹⁶ It is generally recognized that there are large racial differences in SES, and health researchers routinely adjust for SES when examining the race-health association. However, SES is not just a confounder of racial differences in health but part of the causal pathway by which race affects health. Race is an antecedent and determinant of SES, and racial differences in SES reflect, in part, the successful implementation of discriminatory policies premised on the inferiority of certain racial groups.

Arguably, the single most important policy of this type that continues to have pervasive adverse effects on the socioeconomic circumstances and the health of African Americans is residential segregation. Beliefs about black inferiority and an explicit desire to avoid social contact with this out-group led to the development of policies

In the early 20th century that aimed at ensuring the physical separation of blacks from whites in residential areas.¹⁷ This physical separation was possible through cooperative efforts of major societal institutions.¹⁸ Between 1900 and the 1940s, federal housing policies, the lending practices of banks, restrictive covenants, and discrimination by the real estate industry, individuals and vigilant neighborhood organizations, ensured that housing options for blacks were restricted to the least desirable residential areas. Audit studies reveal that explicit discrimination in housing persists,¹⁹ but most of the institutional discrimination that created segregation is now illegal. However, the structure of segregation and its consequences have remained relatively intact over time.

TABLE 4 shows the average levels of segregation in the 30 metropolitan areas with the largest black populations between 1970 and 1990.²⁰ Data are provided for two of the most commonly used measures of segregation. The index of dissimilarity, a measure of unevenness, captures the percent of blacks who would have to change neighborhood residence to achieve complete integration. The isolation index indicates the percent of blacks in the census tract where the average black person resides. Segregation is slightly higher in the North than in the South but in both regions the levels of segregation are very high. In 1990, for example, 78% of blacks in northern metropolitan areas would have to move in order to achieve a random distribution of blacks and whites. In the South, 67% of blacks would have to move. Similarly, in 1990 the average African American living in the North resided in a census tract that was 69% black. In the South, the average black lived in a neighborhood that was 65% black. There has been little change in these levels of segregation in the last 20 years. While other groups have experienced residential segregation in the United States, no immigrant population has ever lived under the high levels of segregation that currently characterize the living circumstances of African Americans.¹⁶ Moreover, the high level of segregation of the black population is not self-imposed because blacks reflect the highest support for residence in integrated neighborhoods.²¹

Residential segregation has led to racial differences in the quality of elementary and high school education. Because the funding of education is at the local level, community resources importantly determine the quality of the neighborhood school.

TABLE 4. Average segregation in 30 metropolitan areas with largest black populations^a

Area ^b	1970	1980	1990
Non-South			
1. Unevenness	84.5	80.1	77.8
2. Isolation	68.7	66.1	68.9
South			
1. Unevenness	75.3	68.3	66.5
2. Isolation	69.3	63.5	64.9

^aTaken from Massey.²⁰

^bUnevenness, percent of blacks who would have to change residence to achieve an even spatial distribution; isolation, percent of blacks in the census tract where the average black person resides.

Residential segregation had led to the concentration of poverty in residential areas and thus the concentration of poverty in the classroom. Notwithstanding a unanimous Supreme Court ruling in *Board vs. Board of Education*, elementary and high school public education in the United States today is still highly segregated and decidedly unequal.²² Moreover, even in integrated schools, black students are disproportionately allocated or tracked into low-ability and non-college preparatory classes that are characterized by a less demanding curriculum and lower teacher expectations.¹⁸

Two-thirds of African-American students and three-fourths of Hispanic students attend schools where more than half the students are black or Latino.²³ The proportion of black and especially Hispanic students in predominantly minority schools has been increasing in recent years. There is nothing inherently negative with having most of one's fellow classmates being members of minority groups. The problem is the very strong relationship between racial composition of schools and concentrated poverty. In the United States a student in an intensely segregated African-American and/or Latino school is 14 times more likely to be in a high-poverty school than a student in a school where less than 10% of the students are black and Latino.²² Nationally, the correlation between minority percentage and poverty is 0.66.²³ In metropolitan Chicago this percentage is 0.90 for elementary schools.²² There are millions of poor whites in the United States, but most poor white families do not live in areas of concentrated poverty and thus have access to better options in terms of educational opportunities. In 96% of predominantly white schools in the United States the majority of the students come from middle class backgrounds,

Residential segregation also adversely affects SES by having a profound negative impact on employment. Several mechanisms appear to be at work. William Julius Wilson²⁴⁻²⁵ has documented that the selective out-migration of whites and some middle class blacks from the core areas of cities (where most blacks reside) to the suburbs over the last several decades has been accompanied by the movement of high-pay, low-skill jobs to the suburbs. This movement of jobs is related to larger processes of urbanization and industrialization, but some evidence suggests that considerations of race have explicitly played a role. African Americans have had significantly higher rates of industrial job losses than whites in recent decades, and research reveals that both U.S.-based and foreign companies explicitly use the racial composition of areas in their decision-making process regarding where to locate new plants.²⁶ This is true both for the placement of new plants and for the relocation of other plants to more rural and suburban areas. Consistent with this evidence, a *Wall Street Journal* analysis of over 35,000 U.S. companies that report to the Equal Employment Opportunity Commission found that blacks were the only racial group that experienced a net job loss during the 1990-1991 economic downturn.²⁷ African Americans had a net job loss of 59,000 jobs, compared with net gains of 71,100 for whites, 55,100 for Asians, and 60,000 for Latinos. These job losses did not reflect individual discrimination but rather were the result of restructuring, relocation, and downsizing. In many cases, they reflected the movement of employment facilities to suburban, rural, and southern areas where the proportion of blacks in the labor force was low.

Discrimination at the individual level also plays a role in reducing employment opportunities for minority group members. Studies of white employers reveal that

they consciously and deliberately use negative racial stereotypes to deny employment opportunities to black applicants.²⁸⁻²⁹ Some of the best evidence of the persistence of discrimination in employment comes from audit studies conducted by the Urban Institute. In these studies, white applicants were favored over black applicants with identical qualifications 20% of the time.¹⁹ Thus, negative racial stereotypes of African Americans appear to play a role both when individual employers evaluate potential applicants, as well as when corporate decision makers deliberate about the location of employment facilities.

Impoverished segregated areas have multiple adversities that may combine in additive and interactive ways to adversely affect SES. Lack of access to jobs produces high rates of male unemployment. There is a strong relationship, for both blacks and whites, between rates of marriage and rates of male unemployment and average male earnings. Thus, the concentration of economic disadvantage in impoverished segregated areas is a major force underlying high rates of out-of-wedlock births and female-headed households and the consequent feminization of poverty that occurs in many urban areas.³⁰⁻³¹ The resulting concentration of poverty isolates youth in segregated communities from both role models of stable employment and social networks that can provide linkages to employment opportunities.²⁴ Long-term exposure to these conditions can undermine a strong work ethic and devalue academic success.

Racism can also affect SES attainment through the impact of negative racial stereotypes on educational outcomes. Steele³² has reviewed the evidence that suggests that the negative cultural images of blacks may adversely affect academic performance. He indicates that there is little racial difference between blacks and whites on standardized tests in the first grade. However, a racial gap widens with each year in school and is two full grade levels by the sixth grade. This pattern is not explained by either SES or group differences in skills. Moreover, achievement gaps between blacks, as well as non-Asian minorities, are evident at all levels of SES and sometimes widen with increasing SES. Further, at every skill level, non-Asian minorities receive lower grades than whites. A similar pattern exists for women relative to men but only in those areas of academic performance where women are stereotypically viewed as deficient (such as in the physical sciences and in advanced math courses). Research from the U.K., Israel, Japan, India, and other countries reveal that groups viewed as lower in social status consistently have lower academic achievement.³³ Steele³² suggests that among lower SES blacks the internalization of negative societal stereotypes may become a self-fulfilling prophecy leading to low performance. In contrast, among high SES, self-confident blacks, the threat of poor performance in a stereotype-relevant domain may lead to anxieties that adversely affect academic performance.

STABILITY OF RACIAL INEQUALITY

Institutional policies have played a major role in creating large racial differences in SES. Because of the persistence of the institutional mechanisms underlying racial inequality, there has been remarkable stability in the racial gap in SES over time. The President's Council of Economic Advisors' recent review of trends in racial econom-

TABLE 5. Median income and poverty rates for whites and blacks, United States 1978-1996^a

Year	Median Income			Poverty Rate		
	Whites	Blacks	B/W Ratio	Whites	Blacks	B/W Ratio
1978	42,695	25,288	0.59	8.7	30.6	3.52
1980	41,759	24,162	0.58	10.2	32.5	3.19
1982	40,379	22,317	0.55	12.0	35.6	2.97
1984	41,809	23,302	0.56	11.5	33.8	2.94
1986	44,105	25,201	0.57	11.0	31.1	2.83
1988	44,981	25,636	0.57	10.1	31.3	3.10
1990	44,315	25,717	0.58	10.7	31.9	2.98
1992	43,245	23,600	0.55	11.9	33.4	2.81
1994	43,284	26,148	0.60	11.7	30.6	2.62
1996	44,756	26,522	0.59	11.2	28.4	2.54

^aTaken from the Economic Report of the President.³⁴

ic inequalities documented that the expansion of the black middle class and the convergence toward equality between blacks and whites was greatest in the 1960s.³⁴ In spite of current efforts to dismantle affirmative action policies, the data clearly show that the economic progress of blacks relative to whites stalled in the mid-1970s, and there has been 20 years of stagnation since then. Moreover, income inequality has increased since 1970 overall and within both racial groups.

TABLE 5 shows that in 1978, the median family income of blacks (\$25,288) was 59 cents for every dollar earned by whites in median family income (\$42,695). In 1996, the black/white ratio of median family income was identical to that of 1978, and there had been little change during the intervening 23 years. Similarly, the poverty levels for both blacks and whites have been relatively stable over time.³⁴ The poverty rate of blacks (30.6%) was 3.5 times higher than that of whites (8.7%) in 1978. The black poverty rate declined to 28.4 in 1996, and the poverty rate of whites increased somewhat to 11.2 in 1996. Thus, the black/white ratio fell slightly, with blacks being 2.5 times more likely to live in poverty in 1996, compared to whites. Longer trend data tell the same story. TABLE 6 presents the unemployment rates for blacks and whites from 1950 to 1995.³⁴ Since 1950, African Americans have had unemployment rates that have been about twice as high as that of whites. Over time, the unemployment of both blacks and whites have moved up and down with the business cycle, but the changes for African Americans have been at about twice the rate for whites. There have been modest gains in unemployment in the last few years, but in 1995 blacks still had an unemployment rate that was twice that of whites. These data provide striking evidence of persistent racial inequality in the United States.

Because of the operation of these large-scale societal processes, indicators of SES are not equivalent across racial groups. That is true at the level of the community, the household, and the individual. Because of residential segregation, black and white

TABLE 6. Unemployment rates for blacks and whites, 1950-1995^a

Year	Black	White	B/W Ratio
1950	9.0	4.9	1.84
1955	8.7	3.9	2.23
1960	10.2	5.0	2.04
1965	8.1	4.1	1.98
1970	8.2	4.5	1.82
1975	14.8	7.8	1.90
1980	14.3	6.3	2.27
1985	13.7	6.2	2.21
1990	11.4	4.8	2.38
1995	9.6	4.9	1.96

^aTaken from the Economic Report of the President.

neighborhoods differ dramatically in the availability of jobs, family structure, opportunities for marriage, educational quality, and exposure to conventional role models. They also differ in the quality of life and access to resources and amenities that sustain health. For example, Sampson and Wilson³⁵ found that in the 171 largest cities in the United States, there is not even one city where whites live in ecological equality to blacks in terms of poverty rates and rates of single-parent households. In fact, Sampson and Wilson concluded that, "The worst urban context in which whites reside is considerably better than the average context of black communities."³⁵

TABLE 7 presents racial differences in the income return from education for blacks, whites, and Hispanics in 1996.³⁶ These national data reveal that at every level of education blacks and Hispanics have lower levels of income than whites. Although part of this difference may be due to differences in educational performance and quality, some evidence suggests that other factors are at work. For example, a recent study documented that even after taking racial differences in test scores into account, young black males earned 7.5% less than their white counterparts.³⁷ Other

TABLE 7. Median income by educational attainment for whites, blacks, and hispanics aged 18 years and older, United States 1996^a

Education Level	White	Black	Hispanic
Not a high school graduate	\$9,762	\$7,365	\$9,486
High school graduate	\$16,331	\$13,294	\$13,408
Some college or associate degree	\$23,480	\$20,249	\$20,225
Bachelor's degree or more	\$30,121	\$26,160	\$25,302
Professional degree	\$56,436	\$42,237	—

^aTaken from the U. S. Bureau of the Census.³⁶

data reveal that blacks have higher costs for goods and services than whites due to higher prices on average for a broad range of services such as housing, food, and insurance in the central city areas where blacks live than in suburban areas where most whites reside.³⁸

Moreover, racial differences in income understate the true magnitude of the racial differences in economic resources. National data reveal that at every level of income there are large racial differences in wealth. For example, white households have a median net worth that is 10 times that of African-American households.³⁹ Whites in the lowest quintile of income have a median net worth of \$10,257 compared to \$1 for comparable blacks. Because much of the wealth of most American families exists in the form of home equity, a substantial part of this racial difference is linked to housing policies and institutional discrimination experienced in the past.⁴⁰ These racial differences in economic circumstances are consequential to the day-to-day struggle for survival for minority group members. In the early 1990s, the Census Bureau's Survey of Income and Program Participation collected data on the economic hardship experienced by American households. These data reveal that after adjustment for SES (income, education, transfer payments, home ownership, employment status, disability, and health insurance) and demographic factors (age, gender, marital status, the presence of children, and residential mobility), African Americans were more likely than whites to experience six of nine hardships examined: unable to meet essential expenses, unable to pay for rent or mortgage, unable to pay full utility bill, had utilities shut off, had telephone service shut off, and evicted from apartment or home.⁴¹ There were no racial differences on lacking visits to a doctor and not having enough food. Blacks were less likely than whites to have no visit to a dentist.

RACISM AND HEALTH: DIRECT EFFECTS

A growing body of research also suggests that in addition to its effects on health indirectly through socioeconomic position, exposure to racism and discrimination can also more directly adversely affect health. First, residential segregation can create pathogenic housing and living conditions. Segregation is often a key determinant of quality of life in neighborhoods. Residents of highly segregated neighborhoods have less access to a broad range of services provided by municipal authorities.⁴² Reductions in spending and the delivery of services leads to the neglect and deterioration of the physical environment in poor neighborhoods. The redlining by banks can result in the disproportionate representation of undesirable land uses, such as deserted factories, warehouses, and landfills in segregated areas. Persons who reside in segregated neighborhoods may also be disproportionately exposed to environmental toxins and poor-quality housing. The largest black-white difference in mortality noted earlier was for homicide. Research reveals that the combination of concentrated poverty, male joblessness, and residential instability leads to high rates of single parent households and these factors together account for variation in the levels of violent crime.³⁵ Importantly, the association between these factors and violent crime for whites was virtually identical in magnitude with the association for African Americans.

Several studies have found a positive association between both adult and infant mortality and residence in segregated areas. One recent study has documented elevated mortality rates for both blacks and whites in cities high on two indices of segregation compared to cities with lower levels of segregation.⁴³ This pattern suggests that beyond some threshold of segregation, the adverse conditions linked to highly segregated cities may negatively affect the health of all persons who reside there.

Another mechanism by which discrimination can affect health status is through access to medical care. The stigma of racial inferiority appears to affect the way that minority group members are treated in the health care system. A large body of evidence indicates that even after adjustment for SES, health insurance, and clinical status whites are more likely than blacks to receive a broad range of specific medical procedures.⁴⁴ Especially striking is data from the Veterans Administration Hospital System⁴⁵ and from analyses of the receipt of diagnostic and treatment procedures among black and white inpatients covered by Medicare.⁴⁶ Among Medicare inpatients, blacks were less likely than whites to receive all of the 16 most common procedures. Further examination revealed that there were only four procedures that blacks were more likely to receive than whites. Blacks were more likely than whites to have the amputation of a lower limb, the removal of both testes, the removal of tissue related to decubitus ulcers and the implantation of shunts for renal dialysis.⁴⁶ These procedures all reflected delayed diagnosis or initial treatment, poor or infrequent medical care and the failure in the management of chronic disease.

A recent study by Hannan *et al.*⁴⁷ demonstrated that African Americans were less likely than whites to receive bypass surgery when rigorous criteria demonstrated that the procedure was appropriate, as well as when rigorous criteria indicated that it was necessary. Similarly, a study by Peterson *et al.*⁴⁸ documented that blacks were less likely than whites with comparable disease to receive bypass surgery even among those patients with the most severe disease and with the greatest predictive benefit of survival. Moreover, this study found that the five-year survival rate was significantly lower for blacks. Other recent research indicates that patient preferences and patient refusals play little role in racial differences in the receipt of medical procedures.⁴⁷ Taken together, these studies suggest that consciously or unconsciously, a nontrivial proportion of the health care workforce discriminates against African Americans.

Some research also suggests that the subjective experience of discrimination may be an important type of stress that can adversely affect health. A review of these studies reveals that exposure to stress in a laboratory setting can lead to cardiovascular and psychological reactivity among blacks, as well as for a broad range of other groups.⁴⁹ In addition, population-based epidemiologic studies also reveal that experiences of discrimination are adversely related to both physical and mental health. One recent study of a major metropolitan area characterized exposure to a broad range of unfair treatment experiences.⁵⁰ This study documented that compared to whites, African Americans experienced higher levels of both chronic and acute measures of discrimination and markedly higher levels of discrimination based on race or ethnicity. Importantly, analyses of these data documented that most of the racial difference in physical health was accounted for by SES. However, the consideration of experiences of discrimination made an incremental contribution in accounting for racial differences in self-reported measures of physical health. Studies of the health

consequences of experiences of discrimination are still in their infancy, and there is an urgent need for prospective studies that would identify the temporal ordering of the relationship between discrimination and health.

What does it mean for a child to grow up in a society where he or she is viewed as being inferior and where those messages are routinely communicated in multiple ways? A small body of research suggests that the prevalence of negative stereotypes and cultural images of stigmatized groups can adversely affect health status. Researchers have long identified that one response of minority populations would be to accept the dominant society's ideology of their inferiority as accurate. Several studies have operationalized the extent to which African Americans internalize or endorse these negative cultural images. These studies have found that internalized racism is positively related to psychological distress, depressive symptoms, substance use, and chronic physical health problems.⁵¹⁻⁵³

CONCLUSION

Striking racial differences in health and their persistence over time are not acts of God. Neither can they be understood as simply reflecting racial differences in individual behavior or biology. Instead, considerable evidence suggests that they reflect, in large part, the successful implementation of specific policies. Racism has been responsible for the development of an organized system of policies and practices designed to create racial inequality. Research is needed that would identify how large societal forces shape individual beliefs and behavior and combine with preexisting resources and vulnerabilities to affect health status. Social factors ultimately affect health through specific physiological mechanisms and processes. The concept of allostatic load provides a useful framework for tracing the pathways from environmental exposure to adverse changes in health status via explicit physiological processes.⁵⁴ Racial differences in health importantly reflect the impact of the social environment and the cumulation of adversity across multiple domains. Efforts to improve the health of racial minority group members and reduce racial disparities in health may have to be equally comprehensive in the implementation of strategies that address the fundamental underlying causes of these disparities.

ACKNOWLEDGMENTS

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Part IV Summary: Psychobiological and Psychosocial Pathways and Mechanisms to Disease

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In the previous session we reviewed the emerging concept of social environment—family, neighborhood, community, workplace—and explored the potential contributions such environments may make to the socioeconomic status (SES) and health gradients. Although less directly discussed, each speaker also acknowledged the crucial role of physical environment—air quality, diet, habitual behaviors, workplace hazards, noise, and so forth. Although the precise contributions of each of these factors remains uncertain, there is substantial evidence that these factors are deleterious to health and heavily determined by SES.

In this session we turned our attention to the next link in the chain, how these environmental factors get internalized. Whatever else we may believe about the societal and social causes of health and disease, it remains axiomatic that health itself is very much an individual characteristic, and at the end of the day, it is individual health that is the target of our research. So we must come to understand not only how the external social and physical environments impact us, but how they "get under our skin," forming the basis for biologic deterioration, or resilience.

In this session several different approaches are discussed. Three speakers addressed current psychological and psychosocial theories that attempt to link external experience with psychologic reaction. Of course, in each case the psychological mechanisms that translate the external to the internal are themselves heavily influenced by SES, yet another level at which the gradient may be explained. Another speaker addressed the complex set of behavioral factors that may modulate the relationships between classic risk factors for heart disease, such as smoking, and subjects in different parts of the SES spectrum, with special attention to the role of longitudinal data for investigation. Yet another intriguing theory, discussed below, is that sleep may serve as an important vehicle by which the experiences of the environment, social and physical, get translated into biologic phenomena. Finally, the session closed with a review of what fraction of currently understood risk factors for cardiovascular disease actually explain of the SES gradient—not much—reminding us of the magnitude of the challenge before us.

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Going Public

Levels of Racism: A Theoretic Framework and a Gardener's Tale

Camara Phyllis Jones, MD, MPH, PhD

ABSTRACT

The author presents a theoretic framework for understanding racism on 3 levels: institutionalized, personally mediated, and internalized. This framework is useful for raising new hypotheses about the basis of race-associated differences in health outcomes, as well as for designing effective interventions to eliminate those differences.

She then presents an allegory about a gardener with 2 flower boxes, rich and poor soil, and red and pink flowers. This allegory illustrates the relationship between the 3 levels of racism and may guide our thinking about how to intervene to mitigate the impacts of racism on health. It may also serve as a tool for starting a national conversation on racism. (*Am J Public Health*. 2000;90:1212-1215)

Race-associated differences in health outcomes are routinely documented in this country, yet for the most part they remain poorly explained. Indeed, rather than vigorously exploring the basis of the differences, many scientists either adjust for race or restrict their studies to one racial group.¹ Ignoring the etiologic clues embedded in group differences impedes the advance of scientific knowledge, limits efforts at primary prevention, and perpetuates ideas of biologically determined differences between the races.

The variable race is only a rough proxy for socioeconomic status, culture, and genes, but it precisely captures the social classification of people in a race-conscious society such as the United States. The race noted on a health form is the same race noted by a sales clerk, a police officer, or a judge, and this racial classification has a profound impact on daily life experience in this country. That is, the variable "race" is not a biological construct that reflects innate differences,²⁻⁴ but a social construct that precisely captures the impacts of racism.

For this reason, some investigators now hypothesize that race-associated differences in health outcomes are in fact due to the effects of racism.^{5,6} In light of the Department of Health and Human Services' Initiative to Eliminate Racial and Ethnic Disparities in Health by the Year 2010,^{7,8} it is important to be able to examine the potential effects of racism in causing race-associated differences in health outcomes.

Levels of Racism

I have developed a framework for understanding racism on 3 levels: institutionalized, personally mediated, and internalized. This framework is useful for raising new hypotheses about the basis of race-associated differences in health outcomes, as well as for designing effective interventions to eliminate those differences. In this framework, *institutionalized racism* is defined as differential ac-

cess to the goods, services, and opportunities of society by race. Institutionalized racism is normative, sometimes legalized, and often manifests as inherited disadvantage. It is structural, having been codified in our institutions of custom, practice, and law, so there need not be an identifiable perpetrator. Indeed, institutionalized racism is often evident as inaction in the face of need.

Institutionalized racism manifests itself both in material conditions and in access to power. With regard to material conditions, examples include differential access to quality education, sound housing, gainful employment, appropriate medical facilities, and a clean environment. With regard to access to power, examples include differential access to information (including one's own history), resources (including wealth and organizational infrastructure), and voice (including voting rights, representation in government, and control of the media). It is important to note that the association between socioeconomic status and race in the United States has its origins in discrete historical events but persists because of contemporary structural factors that perpetuate those historical injustices. In other words, it is because of institutionalized racism that there is an association between socioeconomic status and race in this country.

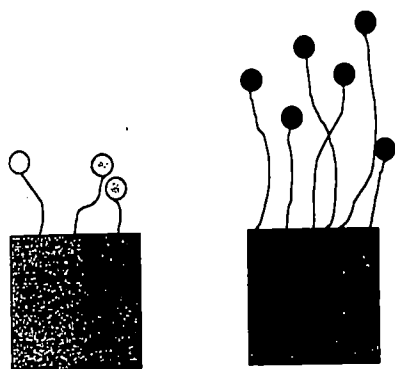
Personally mediated racism is defined as prejudice and discrimination, where prejudice means differential assumptions about the abilities, motives, and intentions of others accord-

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Institutionalized racism



- Initial historical insult
- Structural barriers
- Inaction in face of need
- Societal norms
- Biological determinism
- Unearned privilege

ing to their race, and discrimination means differential actions toward others according to their race. This is what most people think of when they hear the word "racism." Personally mediated racism can be intentional as well as unintentional, and it includes acts of commission as well as acts of omission. It manifests as lack of respect (poor or no service, failure to communicate options), suspicion (shopkeepers' vigilance; everyday avoidance, including street crossing, purse clutching, and standing there are empty seats on public transportation), devaluation (surprise at competence, lack of aspirations), scapegoating (the Rosewood incident,^{9,10} the Charles Stuart case,¹¹⁻¹⁴ the Susan Smith case¹⁵⁻¹⁸), and dehumanization (police brutality, sterilization abuse, hate crimes).

Internalized racism is defined as acceptance by members of the stigmatized races of negative messages about their own abilities and intrinsic worth. It is characterized by their not believing in others who look like them, and not believing in themselves. It involves accepting limitations to one's own full humanity, including one's spectrum of dreams, one's right to self-determination, and one's range of allowable self-expression. It manifests as an embracing of "whiteness" (use of hair straighteners and bleaching creams, stratification by skin tone within communities of color, and "the white man's ice is colder" syndrome); self-devaluation (racial slurs as nicknames, rejection of ancestral culture, and fratricide); and resignation, helplessness, and hopelessness (dropping out of school, failing to vote, and engaging in risky health practices).

The following allegory is useful for illustrating the relationship between the 3 levels of racism (institutionalized, personally mediated, and internalized) and for guiding our thinking about how to intervene. I use this story in my teaching on "race" and racism at the Harvard School of Public Health as well as in my public lectures.

Levels of Racism: A Gardener's Tale

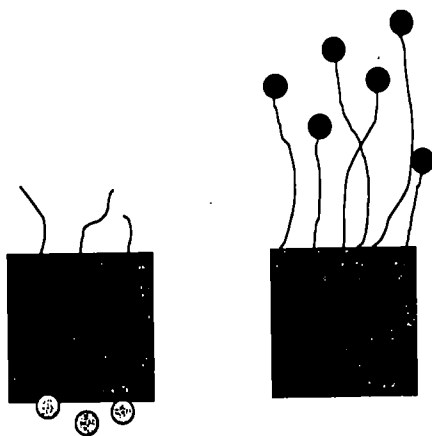
When my husband and I bought a house in Baltimore, there were 2 large flower boxes on the front porch. When spring came we decided to grow flowers in them. One of the boxes was empty, so we bought potting soil to fill it. We did nothing to the soil in the other box, assuming that it was fine. Then we planted seeds from a single seed packet in the 2 boxes. The seeds that were sown in the new potting soil quickly sprang up and flourished. All of the seeds sprouted, the most vital towering strong and tall, and even the weak seeds made it to a middling height. However, the seeds planted in the old soil did not fare so well. Far fewer seeds sprouted, with the strong among them only making it to a middling height, while the weak among them died. It turns out that the old soil was poor and rocky, in contrast to the new potting soil, which was rich and fertile. The difference

in yield and appearance in the 2 flower boxes was a vivid, real-life illustration of the importance of environment. Those readers who are gardeners will probably have witnessed this phenomenon with their own eyes.

Now I will use this image of the 2 flower boxes to illustrate the 3 levels of racism. Let's imagine a gardener who has 2 flower boxes, one that she knows to be filled with rich, fertile soil and another that she knows to be filled with poor, rocky soil. This gardener has 2 packets of seeds for the same type of flower. However, the plants grown from one packet of seeds will bear pink blossoms, while the plants grown from the other packet of seeds will bear red blossoms. The gardener prefers red over pink, so she plants the red seed in the rich fertile soil and the pink seed in the poor rocky soil. And sure enough, what I witnessed in my own garden comes to pass in this garden too. All of the red flowers grow up and flourish, with the fittest growing tall and strong and even the weakest making it to a middling height. But in the box with the poor rocky soil, things look different. The weak among the pink seeds don't even make it, and the strongest among them grow only to a middling height.

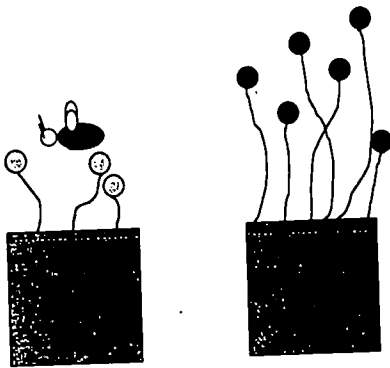
In time the flowers in these 2 boxes go to seed, dropping their progeny into the same soil in which they were growing. The next year the same thing happens, with the red flowers in the rich soil growing full and vigorous and strong, while the pink flowers in the poor soil struggle to survive. And these flowers go to seed. Year after year, the same thing happens. Ten years later the gardener comes to survey her garden. Gazing at the 2 boxes, she says, "I was right to prefer red over pink! Look how vibrant and beautiful the red flowers look, and see how pitiful and scrawny the pink ones are."

Personally mediated racism



- Intentional
- Unintentional
- Acts of commission
- Acts of omission
- Maintains structural barriers
- Condoned by societal norms

Internalized racism



- Reflects systems of privilege
- Reflects societal values
- Erodes individual sense of value
- Undermines collective action

This part of the story illustrates some important aspects of institutionalized racism. There is the initial historical insult of separating the seed into the 2 different types of soil; the contemporary structural factors of the flower boxes, which keep the soils separate; and the acts of omission in not addressing the differences between the soils over the years. The normative aspects of institutionalized racism are illustrated by the initial preference of the gardener for red over pink. Indeed, her assumption that red is intrinsically better than pink may contribute to a blindness about the difference between the soils.

Where is personally mediated racism in this gardener's tale? That occurs when the gardener, disdaining the pink flowers because they look so poor and scraggly, plucks the pink blossoms off before they can even go to seed. Or when a seed from a pink flower has been blown into the rich soil, and she plucks it out before it can establish itself.

And where is the internalized racism in this tale? That occurs when a bee comes along to pollinate the pink flowers and the pink flowers say, "Stop! Don't bring me any of that pink pollen—I prefer the red!" The pink flowers have internalized the belief that red is better than pink, because they look across at the other flower box and see the red flowers strong and flourishing.

What are we to do if we want to put things right in this garden? Well, we could start by addressing the internalized racism and telling the pink flowers, "Pink is beautiful!" That might make them feel a bit better, but it will do little to change the conditions in which they live. Or we could address the personally mediated racism by conducting workshops with the gardener to convince her to stop plucking the pink flowers before they have had a chance to go to seed. Maybe she'll stop, or maybe she won't. Yet, even if she is convinced to stop plucking the pink flowers, we have still done

nothing to address the poor, rocky condition of the soil in which they live.

What we really have to do to set things right in this garden is address the institutionalized racism. We have to break down the boxes and mix up the soil, or we can leave the 2 boxes separate but fertilize the poor soil until it is as rich as the fertile soil. When we do that, the pink flowers will grow at least as strong and vibrant as the red (and perhaps stronger, for they have been selected for survival). And when they do, the pink flowers will no longer think that red pollen is better than pink, because they will look over at the red flowers and see that they are equally strong and beautiful. And although the original gardener may have to go to her grave preferring red over pink, the gardener's children who grow up seeing that pink and red are equally beautiful will be unlikely to develop the same preferences.

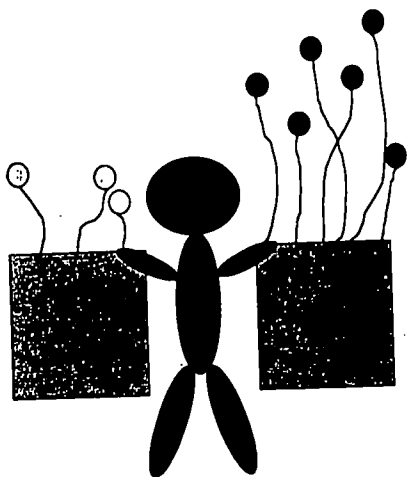
This story illustrates the relationship between the 3 levels of racism. It also highlights the fact that institutionalized racism is the most fundamental of the 3 levels and must be addressed for important change to occur. Finally, it provides the insight that once institutionalized racism is addressed, the other levels of racism may cure themselves over time. Perhaps the most important question raised by this story is *Who is the gardener?* After all, the gardener is the one with the power to decide, the power to act, and the control over the resources.

In the United States, the gardener is our government. As the story illustrates, there is particular danger when this gardener is not concerned with equity. The current Initiative to Eliminate Racial and Ethnic Disparities in Health by the Year 2010 is to be lauded as the first explicit commitment by the government to achieve equity in health outcomes.

Many other questions arise from this simple story. What is the role of public health researchers in vigorously exploring the basis of pink-red disparities, including the differences in the soil and the structural factors and acts of omission that maintain those differences? How can we get the gardener to own the whole garden and not be satisfied when only the red flowers thrive? If the gardener will not invest in the whole garden, how can the pink flowers recruit or grow their own gardener?

The reader is invited to share this story with family members, neighbors, colleagues, and communities. The questions we raise and the discussions we generate may be the start of a much-needed national conversation on racism. □

Who is the gardener?



Government

- Power to decide
- Power to act
- Control of resources

Dangerous when

- Allied with one group
- Not concerned with equity

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