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# Minority Health Status in Adulthood: The Middle Years

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*The objective of this article is to describe the racial and ethnic differences in health status during the “middle years” of life. We use data from National Vital Statistics Reports (Hoyert, Kochanek, and Murphy, 1999) to estimate excess mortality among racial and ethnic minority groups for the leading causes of death among adults. Also discussed are the current state of scholarship in minority health and suggestions for future directions for research on racial and ethnic differences in health status.*

## INTRODUCTION

It is well known that there is substantial racial and ethnic group variation in the health status. Demographic projections anticipate substantial changes in the racial and ethnic landscape of the United States in the coming decades. Consequently, it is becoming increasingly important to monitor the health status of racial and ethnic minorities. As racial and ethnic minorities comprise a larger percentage of the total population of the Nation, the overall health statistics for the country will increasingly be a reflection of the health status of these groups (Stiffman and Davis, 1990; Vega and Rumbaut, 1991; Williams, 1994).

Although there is much published research on the health of racial and ethnic minorities, most of that research has focused on the health of children and the elderly, neglecting persons in the middle years of life, ages 21-64. This is probably

because it is a healthy period of life when people consume relatively few health care resources. However, the middle years comprise an important period in which to explore racial and ethnic differentials in morbidity and mortality. This is because, for many racial and ethnic minorities, chronic diseases occur prematurely and preventive health services are underutilized. Power et al. (1997) showed that social gradients in health evident by age 22 persisted to age 33. They, therefore, may continue throughout life because chronic health problems increase with age. Thus, when studying health, early to middle adulthood—or the middle years—are important developmental stages in the life course. The middle years provide a window to project the future burden of disease and disability for individuals and to estimate burden in health care costs for society.

To achieve the goals outlined in *Healthy People 2010* (Department of Health and Human Services, 2000), i.e., to increase life expectancy, reduce health disparities and barriers to care, a better understanding is needed of the sociocultural factors that form the context for health differentials during young adulthood into middle age and beyond. Understanding the factors operating in the middle years will also help elucidate those factors affecting minority children's health status given that these adults are their parents and grandparents.

## Cost of Color

Disparities in morbidity and mortality among racial and ethnic groups can be viewed as the added burden of living in

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America as a racial minority expressed in terms of life and death. This additional burden, or health taxation, can be empirically expressed by calculating excess deaths. "Excess deaths" refers to the difference between the actual number of deaths among a minority group and the expected number of deaths if the mortality rate for that group were equal to the comparison group. In the United States, this comparison group is often white persons, given that they are the majority racial group. Excess deaths are calculated by multiplying white persons' death rate by the total population for the specific minority group. This results in an estimate of expected deaths among the minority group. Expected deaths are then subtracted from observed deaths. The difference can be referred to as excess deaths.

In 1997, there were 2,314,245 deaths in the United States including all ethnic and racial groups. Of those, 276,520 deaths were from all causes among black persons of all ages. If the death rate for black persons were equal to white persons' death rate, there would have only been 149,321 deaths. Thus, almost one-half (46 percent) of the deaths among black adults could be considered excess deaths.

#### Ages 15-24

Table 1 presents excess deaths for black persons and Hispanics for selected leading causes of death for the age group 15-24. Although adults age 21-64 are the subject of this article, the data to calculate excess deaths were only available for the age group/15-64 age group. Therefore analysis of the younger adults will include persons ages 15-20. As the causes of death in the age group 15-20 group typically does not differ significantly from the 21-24 age group we do not believe this will meaningfully impact our findings.

In each of the tables, excess death is calculated using American white persons as the comparison group because they are the only racial group for whom complete data are available. Excess death rates were not calculated for Asians and Native-Americans because the data are unavailable.

Relatively few deaths occur in young adulthood. Typically, deaths among young adults are attributed to external causes such as injuries or accidents. However, in recent decades, certain stigmatized causes of death such as homicide and Human Immunodeficiency Virus (HIV) infection have emerged as the leading causes among racial and ethnic minorities. Table 1 shows that, in 1997, for the age group 15-24, there were 3,429 excess deaths among black persons and 490 excess Hispanic deaths. Black persons' death rate was 80 percent higher than white young adults' rate and the Hispanic rate was 12 percent higher.

Homicide is the largest contributor to excess death for young adult black persons. Specifically, in 1997, homicide rates for black persons and Hispanics were 665 percent and 202 percent higher than white persons' homicide rate. However, death rates for black persons and Hispanics were substantially lower for motor vehicle accidents (25 percent and 15 percent, respectively) and suicide (23 percent and 26 percent, respectively). It is also instructive to observe that the HIV mortality rate for black persons age 15-24 was 7.75 times greater than the white rate and the Hispanic rate was double the rate for white persons. Taken together, HIV and homicide accounted for 3,219 black young adults' excess deaths and 998 Hispanic excess deaths in 1997. In all, these two causes of mortality accounted for almost one-half (48 percent) and one-third (30 percent) of the total deaths among black persons and Hispanics age 15-24, respectively.

Table 1

**Excess Deaths Compared with White Persons for Male and Female Black Persons and Hispanics, Age 15-24, in the United States: 1997**

Cause of Death	All Race Groups			White Persons			Black Persons			Hispanic Persons			Hispanic/White Rate Ratio	Black Excess Deaths	Hispanic Excess Deaths
	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths			
All Causes	86.2	31,544	77.5	22,567	139.2	7,738	1.80	4,482	87	4,482	1.12	3,429	490		
Motor Vehicle Accidents	27.9	10,208	29.5	8,591	22.0	1,226	0.75	1,289	25	1,289	0.85	-414	-230		
Non-Motor Vehicle Accidents	8.6	3,159	8.8	2,564	8.3	462	0.94	447	8.7	447	0.99	-27	-6		
Homicide	16.8	6,146	8.3	2,428	63.5	3,529	7.65	1,295	25.1	1,295	3.02	3,068	868		
Suicide	11.4	4,186	11.9	3,456	9.2	513	0.77	455	8.8	455	0.74	-149	-158		
HIV Infection	0.8	276	0.4	102	3.1	173	7.75	41	0.8	41	2.00	151	130		
Cancer	4.5	1,645	4.4	1,283	5.3	292	1.20	220	4.3	220	0.98	47	-7		
Diseases of the Heart	3.0	1,098	2.5	718	6.1	339	2.44	113	2.2	113	0.88	200	-16		
All Other Causes	13.1	4,826	11.8	3,425	21.7	1,204	1.84	622	11.7	622	0.99	551	-5		

NOTE: Age-adjusted death rates per 100,000 population in the specified group. Death rate ratios were derived by dividing the minorities' death rate by the white persons' death rate. Excess deaths were calculated by multiplying white persons' death rate by the total population for the specific minority group (i.e., black persons equal 5,150,621; Hispanic persons equal 5,150,621), then subtracting that number of expected deaths from the actual number of minority deaths.

SOURCE: (Hoyert, D.L., Kochanek, K.D., and Murphy, S.L., 1999.)

## Ages 25-44

Table 2 reports 1997 excess deaths for the age group 25-44. The table shows that HIV is the leading cause of death for black persons in this age group. A death rate of 51.6 per 100,000 persons accounted for 5,584 black deaths. HIV was the third leading cause of death among Hispanics age 25-44 and accounted for 1,573 Hispanic deaths. By comparison, the HIV death rate for white persons was 7.8 per 100,000, accounting for 5,371 deaths. Although black persons comprised only 12.9 percent of the age group 25-44, they accounted for one-half (50.5 percent) of all HIV deaths in that age group. Hispanics, who comprise 11.5 percent of this age group's population nationally, accounted for 14.2 percent of all HIV deaths. The findings are equally troubling for homicide, where black persons age 25-44 accounted for almost one-half (47.2 percent) of all homicide deaths in this age group and Hispanics accounted for 16.4 percent.

The higher motor vehicle accident fatality rate for white persons age 15-24 shown in Table 1 reversed in this older age group. Specifically, compared with white persons age 25-44, black persons have a 19-percent higher motor vehicle accident fatality rate and Hispanics have a 4-percent higher rate. However, death by suicide continues to be significantly higher for white persons age 25-44. The suicide rate of white persons is 70.2 percent higher than black persons and 90.5 percent higher than Hispanics. It is important to note that, in this age group, chronic conditions start to become a significant cause of death and contribute substantially to excess mortality among black persons. Although black persons' deaths from cancer and heart disease combined do not account for as many excess deaths as HIV, their cancer and heart disease mor-

tality rates are substantially higher than white persons (51 percent and 131 percent higher, respectively).

## Ages 45-64

In Table 3, excess mortality for the age group 45-64 is displayed. The table shows that chronic conditions are increasingly prominent causes of death in the older age group. Cancer and heart disease are the largest contributors to excess death in black persons followed by cerebrovascular disease and diabetes. Although black persons have substantially higher death rates from chronic diseases (i.e., cerebrovascular disease, diabetes mellitus) in this age cohort compared with white persons (213 percent and 186 percent higher, respectively), stigmatized causes of death continue to contribute to excess mortality among black persons. Homicide accounts for 625 black excess deaths in the age group 45-64. The black homicide rate is more than six times the rate for white persons. HIV is also a major cause of death for older black adults. They have a HIV mortality rate of 41.8 per 100,000 persons compared with a rate of 4.5 for white persons. With a black/white race differential that is 829 percent higher for black persons, HIV contributed to 2,159 excess deaths among black persons age 45-64.

The picture for Hispanics is quite different than that for black persons. They show a substantially higher HIV and homicide mortality rate compared with non-Hispanic white persons (68 percent higher for homicide and 227 percent higher for HIV). However, Hispanics have a lower mortality rate than white persons from several leading causes of death. Specifically, the Hispanics' cancer mortality rate is about 60 percent of the white rate, and the Hispanic heart disease mortality rate is about two-thirds (66.9 percent) the white rate. This

Table 2

**Excess Deaths Compared with White Persons for Male and Female Black Persons and Hispanics, Age 25-44, in the United States: 1997**

Cause of Death	All Race Groups			White Persons			Black Persons			Hispanic Persons			Hispanic/White Rate	Black Excess Deaths	Hispanic Excess Deaths
	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths			
All Causes	161.4	134,946	142.0	97,415	308.0	33,322	2.17	137	137	13,186	0.96	17,961	-2175		
Motor Vehicle Accidents	16.9	14,167	16.6	11,394	19.8	2,145	1.19	17.3	17.3	1,668	1.04	349	71		
Non-Motor Vehicle Accidents	15.5	12,962	15.2	10,406	19.9	2,150	1.31	15.7	15.7	1,506	1.03	506	43		
Homicide	10.5	8,752	6.3	4,338	38.2	4,133	6.06	14.9	14.9	1,435	2.36	3,452	829		
Suicide	14.8	12,402	16.0	10,996	9.4	1,020	0.59	8.4	8.4	809	0.52	-711	-731		
HIV Infection	13.2	11,066	7.8	5,371	51.6	5,584	6.61	16.3	16.3	1,573	2.09	4,750	822		
Cancer	26.0	21,706	24.6	16,900	37.2	4,027	1.51	17.2	17.2	1,655	0.67	1,366	-712		
Diseases of the Heart	19.8	16,513	17.2	11,768	39.8	4,306	2.31	9.8	9.8	941	0.57	2,445	-714		
All Other Causes	44.7	37,378	38.3	26,242	92.1	9,957	2.40	37.3	37.3	3,599	0.97	5,820	-96		

NOTES: W is white. HIV is human immunodeficiency virus. Age-adjusted death rates per 100,000 population in the specified group. Death rate ratios were derived by dividing the minorities' death rate by the white persons' death rate. Excess deaths were calculated by multiplying white persons' death rate by the total population for the specific minority group (i.e., black persons equal 10,817,355; Hispanic persons equal 9,622,835), then subtracting that number of expected deaths from the actual number of minority deaths.

SOURCE: (Hoyert, D.L., Kochanek, K.D., and Murphy, S.L., 1999).

Table 3

**Excess Deaths Compared with White Persons for Male and Female Black Persons and Hispanics, Age 45-64, in the United States: 1997**

Cause of Death	All Race Groups			White Persons			Black Persons			Hispanic Persons			Hispanic/White Rate Ratio	Black Excess Deaths	Hispanic Excess Deaths
	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths			
All Causes	679.7	376,876	631.5	299,251	1178.9	68,258	1.87	494	20,365	0.78	31,695	-5,671			
Motor Vehicle Accidents	14.7	8,134	14.2	6,729	19	1,099	1.34	15	617	1.06	277	32			
Non-Motor Vehicle Accidents	16.9	9,387	15.7	7,446	29.1	1,687	1.85	16.1	664	1.02	778	17			
Cerebrovascular Disease	27.7	15,371	22.5	10,663	70.4	4,077	3.13	25.9	1,066	1.15	2,774	138			
Diabetes Mellitus	22.9	12,705	19.2	9,091	54.9	3,178	2.86	30.6	1,262	1.59	2,066	470			
HIV Infection	8.3	4,578	4.5	2,124	41.8	2,419	9.29	14.7	608	3.27	2,159	423			
Cancer	237.6	131,743	230	108,972	339.1	19,633	1.47	137.8	5,680	0.6	6,316	-3,803			
Diseases of the Heart	182.6	101,235	169	80,087	327.4	18,955	1.94	113.2	4,667	0.67	9,170	-2,301			
Homicide	5.2	2,899	4.1	1,824	27.4	708	6.68	6.9	286	1.68	625	101			
All Other Causes	169	90,824	156.5	72,315	297.3	16,502	1.9	133.7	5,515	0.85	8,152	-940			

NOTES: HIV is human immunodeficiency virus. Age-adjusted death rates per 100,000 population in the specified group. Death rate ratios were derived by dividing the minorities' death rate by the white persons' death rate. Excess deaths were calculated by multiplying white persons' death rate by the total population for the specific minority group (i.e., black persons equal 5,789,951; Hispanic persons equal 4,122,885), then subtracting that number of expected deaths from the actual number of minority deaths.

SOURCE: (Hoyert, D.L., Kochanek, K.D., and Murphy, S.L., 1999).

**Table 4**

**Age-Specific Death Rates for Male and Female Hispanic Ethnic Groups in the United States: 1997**

Ethnic Group	15-24 Years	25-44 Years	45-64 Years
All Hispanics	87.0	137.0	493.9
Mexican-Americans	92.3	126.7	479.9
Puerto Ricans	78.8	231.2	705.5
Cuban-Americans	67.1	116.0	572.2
All Other Hispanics	33.0	56.8	217.4

SOURCE: (Hoyert, D.L., Kochanek, K.D., and Murphy, S.L., 1999.)

explains why Hispanics have an all-cause mortality rate that is 22 percent lower than white persons in the age group 45-64. In fact, in the age group 45-64, non-Hispanic white persons have 5,671 excess deaths compared with Hispanics.

**Hispanic Health**

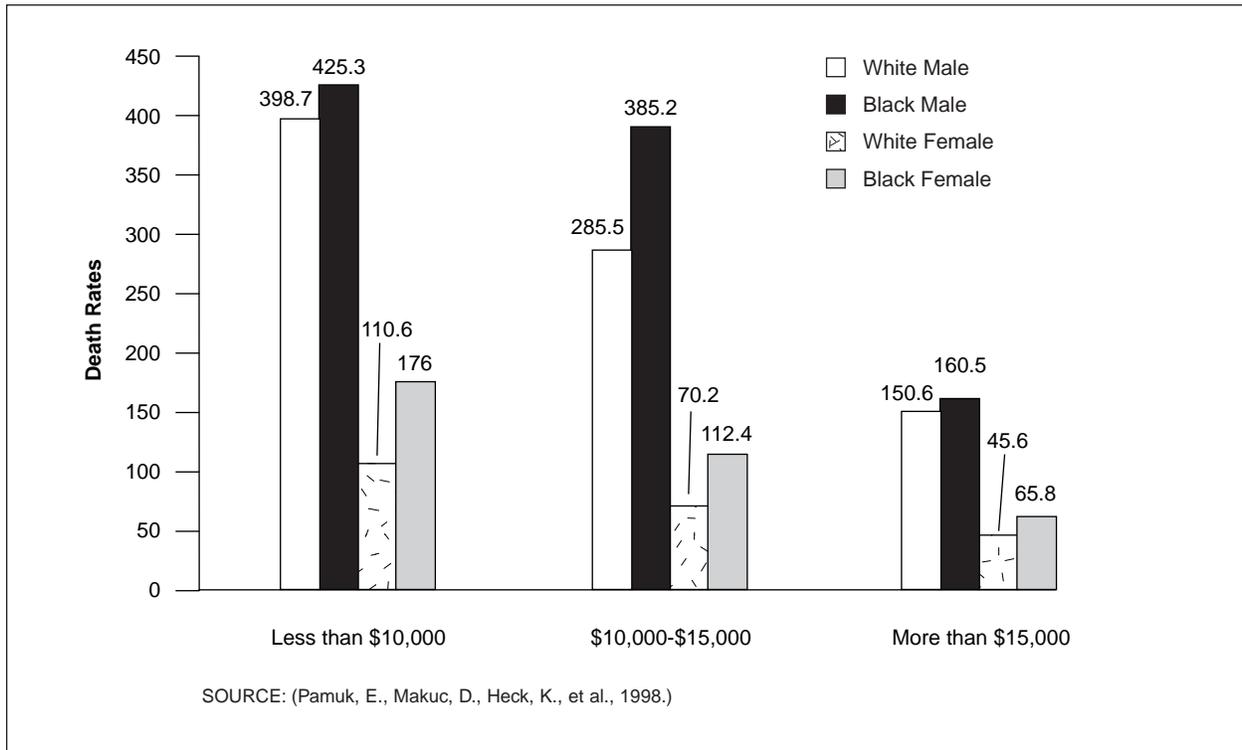
It is important to point out that the ethnic classification category Hispanic is conceptually problematic (LaVeist, 1996). Hispanic includes persons from a variety of countries whose cultures sometimes differ significantly and, in some cases, share little more than a common language. The various Spanish-speaking groups have substantially different histories in the United States and even differ in terms of legal status. As such, they are differentially impacted by social and economic forces. For example, Puerto Ricans are U.S. citizens and come to the mainland with full citizenship rights, while the U.S. immigration policy has been highly contentious regarding Mexicans and Cubans. Thus, whenever possible, it is advisable to disentangle the Hispanic category into its ethnic subgroups. This is often impractical because of insufficient sample size (LaVeist, 1995) but it can be achieved with these data. In 1997, 95,460 Hispanics died from all causes. Table 4 displays age specific mortality rates for Hispanic ethnic subgroups (Hoyert, Kochanek, and Murphy, 1999).

The table shows that, in 1997 Cuban-Americans age 15-24 had a substantially lower mortality rate compared with Mexican Americans, who had the highest mortality rate; Puerto Ricans held the middle position. The Mexican-American mortality rate was 37 percent higher than the Cuban-American rate and 17 percent higher than the Puerto Ricans rate. By age 25, the order changes. Cuban-Americans still had the lowest mortality rate, but Puerto Ricans had the highest. The mortality rate among Puerto Ricans in the age group 25-44 was double the rate for Cuban-Americans. In the age group 45-64, the pattern changed yet again. Mexican Americans had the lowest rate and Puerto Ricans had the highest.

**Intersection of Race, Ethnicity, and Social Class**

Among the earliest observations of public health research is that socioeconomic status (SES) is a determinant of health status. Since the early 20th Century, researchers have observed a link between standard of living and mortality and morbidity (Ogburn and Thomas, 1922; Tugan-Baranowsky, as quoted in Thomas, 1925; Newsholme, 1910). The SES/health status gradient has since been demonstrated in ecological studies (LaVeist, 1990) as well as studies at the individual level of analysis (Williams, 1999 ). It has been one of the

**Figure 1**  
**Heart Disease Death Rates Per 100,000 Adults Age 25-64, by Family Income Race, and Sex:**  
**1979-1989**



most enduring findings in public health research. Likewise, it is well-documented that black persons and other racial and ethnic minorities have lower SES compared with white persons. These facts have led to speculation that racial and ethnic differences in health status can be explained by underlying differences in SES (Navarro, 1990; Stolley, 1999). This section will examine this proposition by describing racial and ethnic differences in health status within socioeconomic categories.

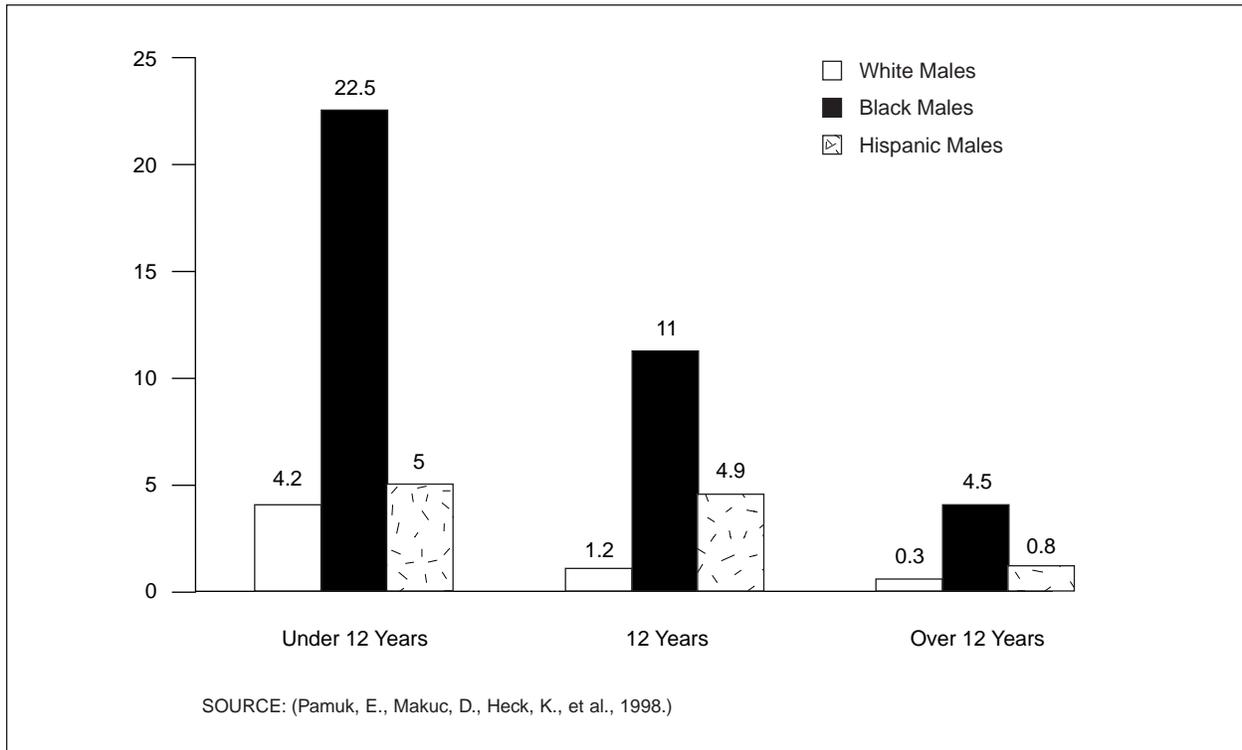
In Figure 1, using National Center for Health Statistics data, heart disease death rates among adults age 25-64 are presented by sex, race, and family income (Pamuk et al., 1998). The figure shows a pattern whereby black males have a higher mortality rate than white males at each income category. Although the racial gap is substantially less pronounced among the high-

est income category, black males in the middle income category have a heart disease mortality rate that is nearly as high as the rate for white males in the lowest income group.

The pattern for males is similar for females. Black females consistently have a higher heart disease mortality rate at all income levels. The rate for black females in the highest SES category is relatively similar to the rate for white females in the middle income category. In Figure 2, the 1994-1995 homicide rates for males age 24-44 are presented by educational level (Pamuk et al., 1998). The figure shows that at all income levels, black males have a higher homicide rate compared with both white and Hispanic males.

For black males, Figure 2 shows that education appears to be protective against homicide. This is because the homicide

**Figure 2**  
**Homicide Rates Per 100,000 Adult Males Age 25-44, by Education, Race, and Hispanic Origin:**  
**1994-1995**



rate for black males with 12 years of formal education is about one-half the rate for those with fewer than 12 years. Furthermore, black males with more than 12 years of formal education have one-half the homicide rate of black males who did not go beyond a high school education. Nonetheless, the homicide rate for the most highly educated black men is higher than the rate for white males at the lowest educational level.

Although there is a clear linear relationship between educational attainment and homicide risk for black and white males, the relationship is somewhat different for Hispanic males. Figure 2 shows that educational attainment does not protect Hispanic men from homicide when they have 12 years of education compared with those with less education. However, the homicide rate for Hispanic males with more than 12 years of education is sub-

stantially less than the rate for less well educated Hispanic males. These data illustrate the complex interaction among race, ethnicity, education, and mortality. Examining cultural differences may help explain these relationships.

### **Influence of Culture**

Cultural differences among racial and ethnic groups also contribute to health status differentials. Cultural beliefs, attitudes, and values can affect how patients perceive illness and disease, make decisions about medical treatments, and cope with health outcomes, including quality of life and disability (Holland, 1999). Ethnic and minority populations show patterns of health status, health care use, and mortality that are different from the white population; each of the groups brings its own unique set of cultural patterns (Cooper-Patrick et al., 1999).

The role of cultural differences among racial and ethnic groups is highly complex. In one sense there may be aspects of cultures that can influence health and illness behavior. In another sense, observed behavioral differences among various racial and ethnic groups may be reflections of the different experiences the groups have had in the larger American culture. For example, black persons are more likely to report mistrust of the health care system, which leads to less willingness to use health services (LaVeist, Bowie, and Nickerson, 2000). However, an attitude of distrust is not an aspect of black culture, rather distrust is more likely a reaction to exposures to discrimination and differential treatment (Ren, Amick, and Williams, 1999).

Furthermore, differences in the availability and use of firearms, alcohol, and illicit drug use influence higher mortality rates. These influences can lead to erroneous conclusions that greater use of illicit drugs, firearms, alcohol, and substances are an aspect of the culture of minority groups, rather than a consequence of larger societal factors.

In a study that examined the effect of cultural differences on breast cancer, Lannin et al. (1998) showed that race, socioeconomic factors, and cultural factors interacted to influence breast cancer stage at the time of diagnosis. Black females, in contrast with white females, were more likely to hold beliefs that included fundamentalist religious tenets that prayer and a reliance on God would heal their disorder, beliefs about cancer that “lumps that aren’t bothering you are best left alone,” or fears that the disease would impact their relationships with husbands/partners. The study found that these cultural beliefs about cancer lead to delay in seeking care. Thus breast cancer in black females was diagnosed at a later stage in the progression of the disease when treatment is less effective.

By contrast, a study that reflected the effect of the larger culture on the behaviors of individuals examined racial differences in the use of crack cocaine (Lillie-Blanton, Anthony, and Schuster, 1993). This study demonstrated that black persons are not more likely than white persons to use crack cocaine, as had been previously believed (National Institute on Drug Abuse, 1990). Lillie-Blanton and colleagues (1993) showed that there was no racial difference in use of crack cocaine once indicators of cocaine availability were included in the analysis. Thus, it is the greater availability of the crack in segregated urban communities that accounted for a greater prevalence of crack cocaine use among black persons. This may explain cigarette use and other black illness behaviors. For example, LaVeist and Wallace (2000) found that liquor stores were substantially more likely to be located in urban segregated black communities compared with white communities.

### **Minority Health Research Agenda**

The comparisons reported in this article have shown that there are significant health disparities among racial and ethnic groups. Much of the previously published research on minority health is descriptive or merely takes for granted that non-white persons have a worse health profile compared with white persons. But, as the observations in this article have demonstrated, the pathways to these racial and ethnic differences in morbidity and mortality are complex. The blanket statement that racial and ethnic minorities have a worse health profile than white persons is inaccurate. For some causes, white persons have higher death rates. However, it should be noted that the overall health profile of black persons is substantially worse than all other minority groups.

Why do some racial and ethnic groups live sicker and die younger than others? The answer to this question has motivated decades of health science research, yet the answer continues to be allusive. For most of the conditions that affect ethnic minority adults, biological and genetic factors play—at best—a modest role in producing racial and ethnic differences. While cultural differences exist among racial and ethnic minority groups, they are insufficient to produce such large differences in health status. However, there are well-documented differences among racial and ethnic groups in terms of social factors. For example, differences have been documented in exposures to environmental forces (Bullard, 1983), quality of life (Kutner and Brogan, 1994), and occupational stressors (Robinson, 1985; 1989). It is among the social variables that future minority health research must search for the reasons for racial and ethnic health disparities. Such a study would build analytic models that simultaneously examine social/contextual and behavioral factors, while measuring environmental exposures. These studies need to be longitudinal and follow persons over the lifespan.

A series of analyses of scientific journal articles (Jones, LaVeist, and Lillie-Blanton, 1991; Williams, 1994; Hernandez and LaVeist, 1999) determined that the majority of analytical articles on U.S. populations used race in their analyses. The most common uses of race were in sample selection and as a control variable in regression analyses. As such, the majority of articles published in these journals failed to offer insights into the causes of health disparities among racial and ethnic groups. That is, the objective of controlling a variable is to set aside its effects to permit a more refined investigation of the independent variables that are of interest to the researcher. Thus, by definition, when race

is “controlled” in regression analyses, the objective is not to understand how race contributes to the outcome under study; rather, the objective is to hold race constant to allow for the systematic examination of other variables. Thus, the effects of race are not the subject under study.

As for the use of race in sample selection, it is obvious that selecting a racially homogeneous sample will not provide information about groups that were not involved in the study. Therefore, the most commonly used techniques of analyzing race provide no information on what is among the most compelling issues facing public health and medical researchers. That is, why do black persons and other racial minorities live sicker and die younger than white persons?

There are other problems with the study of minority health. LaVeist (1992) demonstrated that there is substantial variation in conceptual definitions of race. Not only is race not clearly defined, it is often confounded by other related concepts such as ethnicity or nationality. Additionally, operational definitions of race have been continuously affected by political factors. The U.S. decennial census has used different operationalizations of race in each census (Close, 1997).

The study of race in health presents many challenges, but this does not indicate that researchers should abandon the use of race, as has been suggested (Stolley, 1999). There should, in fact, be more studies of racial differences in health. However, future studies need to have improved methodology and better execution. There must be a paradigmatic shift from studies that merely describe race differences in health status to studies that seek to explain them. While it is still necessary to occasionally describe race differences to track progress, as we have done in this article, the state of research in this

area needs to move beyond mere description. As was stated years ago, future research should explicate the causal pathways that connect race with health, disentangle race from ethnicity, nationality, and SES, and develop measures of race that capture its multidimensional nature (LaVeist, 1994).

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