

**The Impact of Race/Ethnicity,
Household Structure, and Socioeconomic
Status on Health Status in the Midwest,
2006-2008**

*by Jean Kayitsinga and Rubén Martínez,
Michigan State University*

Research Report No. 41

December 2008

Julian Samora Research Institute

MICHIGAN STATE UNIVERSITY

301 Nisbet Building
1407 S. Harrison Road
East Lansing, MI 48823-5286

Phone: (517) 432-1317

Fax: (517) 432-2221

E-mail: jsamorai@msu.edu

Web: www.jsri.msu.edu

The Midwest's premier Hispanic center undertaking research on issues of relevance to the Hispanic community in the social sciences and economic and community development.

JSRI is a unit of the College of Social Science and is affiliated with various units on the Michigan State University campus.

The Impact of Race/Ethnicity, Household Structure, and Socioeconomic Status on Health Status in the Midwest, 2006-2008

by Jean Kayitsinga and Rubén Martínez, Michigan State University

Research Report No. 41

December 2008

Abstract

This study focuses on the impact of race/ethnicity, household structure, and socioeconomic status on health and assesses how household structure and socioeconomic status explain the racial/ethnic gaps in health among adults in the Midwest. Data are drawn from the Current Population Survey (CPS) for 2006-2008. Findings indicate that the odds of fair/poor health are higher for African Americans, Latinos, and other race/ethnic groups than those of non-Hispanic Whites. Also, the odds of fair/poor health are higher for single male-headed householders and single female-headed householders than they are for householders in dual-headed households. As might be expected, higher levels of education and higher incomes are associated with lower odds of fair/poor health, even after controlling for age, foreign-born status, home ownership, nonmetropolitan residence, job quality, and health insurance coverage. Findings also reveal that the gaps in health between Whites and African-Americans persist even after accounting for household structure, socioeconomic status, job quality, and health insurance coverage, and that the gaps in health between White and Latinos are fully explained by household structure socioeconomic status indicators. Of all factors, socioeconomic status indicators are the most important source of reduction in racial/ethnic gap in health. The results imply that interventions to improve socioeconomic conditions and strengthen households, especially single female-headed households, may reduce the racial/ethnic gaps in health.

About the Authors

Dr. Jean Kayitsinga is a sociologist demographer for JSRI and Visiting Assistant Professor in the Department of Sociology at MSU, where he received his Ph.D. in sociology in 1999. His areas of specialization include rural sociology, sociology of families, demography, research methods and statistical methodologies.

Dr. Rubén O. Martínez is Director of the JSRI at MSU. He is a nationally known scholar with expertise in the areas of higher education, race, and ethnic relations and diversity leadership. His areas of specialization include leadership and institutional change, education and ethnic minorities, youth development, and environmental justice.

Regions of the United States are classified as follows:

Northeast: Connecticut, Maine, Massachusetts, New Jersey, New Hampshire, New York, Rhode Island, Vermont, and Pennsylvania.

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Virginia, West Virginia.

Southwest: Arizona, California, Colorado, New Mexico, and Texas.

West: Alaska, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

SUGGESTED CITATION

Kayitsinga, Jean (Ph.D.) and Rubén O. Martinez (Ph.D.). “The Impact of Race/Ethnicity, Household Structure, and Socioeconomic Status on Health Status in the Midwest, 2006-2008,” *JSRI Research Report #41*, The Julian Samora Research Institute, Michigan State University, East Lansing, Michigan, 2008.

The **Julian Samora Research Institute** is committed to the generation, transmission, and application of knowledge to serve the needs of Latino communities in the Midwest. To this end, it has organized a number of publication initiatives to facilitate the timely dissemination of current research and information relevant to Latinos.

- *Research Reports*: **JSRI**'s flagship publications for scholars who want a quality publication with more detail than usually allowed in mainstream journals. These are produced in-house. Research Reports are selected for their significant contribution to the knowledge base of Latinos.
- *Working Papers*: for scholars who want to share their preliminary findings and obtain feedback from others in Latino studies.
- *Statistical Briefs/CIFRAS*: for the Institute's dissemination of “facts and figures” on Latino issues and conditions. Also designed to address policy questions and to highlight important topics.
- *Occasional Papers*: for the dissemination of speeches, papers, and practices of value to the Latino community which are not necessarily based on a research project. Examples include historical accounts of people or events, “oral histories,” motivational talks, poetry, speeches, technical reports, and related presentations.

The Impact of Race/Ethnicity, Household Structure, and Socioeconomic Status on Health Status in the Midwest, 2006-2008

Table of Contents

Abstracta

Introduction1

Theoretical Background2

Data and Methods3

Results5

Conclusion.....8

References10

The Impact of Race/Ethnicity, Household Structure, and Socioeconomic Status on Health Status in the Midwest, 2006-2008

Introduction

Overall, the health status of the U.S. population continues to improve — life expectancy increased 3.4 years for males and 1.6 years for females between 1990 and 2004. At the same time, mortality from heart disease, stroke, and cancer continued to decline, as did infant mortality, which declined through 2001 but has not changed significantly since then. However, these improvements in health have not been equally distributed by income, race, ethnicity, education, and geography (NCHS, 2007). Significant racial and ethnic disparities still exist across a wide range of health measures, and indicators suggest they may be widening.

The Latino population is the fastest growing population in the United States. It is projected to increase from 35,622,000 in 2000 to 102,560,000 in 2050, reaching 24.4% of the U.S. population in 2050. Latinos are more concentrated in the Southwest (56.1%) than in the West (5.1%), Northeast (13.6%), South (8.5%), and Midwest (9.0%) regions. Although, the Latino population has increased each year from 2000 to 2007 in all regions, greater changes are observed in the South (47.5%) and in the West (45.1%), followed by the Midwest (30.2%), than in the Southwest (23.8%) and Northeast (17.2%) regions.

Between 1990 and 2007, Latinos increased from 1.7 million to 4.1 million in the Midwest, reflecting an increase of 136%. The Latino population doubled in every Midwestern state, tripled in some, and nearly quadrupled in one (Minnesota). The five Midwestern states with the largest Latino populations are as follows: Illinois (1.2 million), Michigan (.40 million), Indiana (.31 million), Ohio (.28 million), and Wisconsin (.27 million). The states with the smallest Latino populations are North Dakota (12,002) and South Dakota (18,477). The remaining states have between 133,000 and 244,000 Latinos. Percentage population increases by state are as follows: Minnesota (279%), Iowa (260%), Nebraska (260%), South Dakota (251%), Indiana (217%), Wisconsin (189%), Missouri (187%), Kansas (159%), North Dakota (158%),

Illinois (111%), Ohio (102%), and Michigan (99%). As this population group continues to increase, health and other issues will become increasingly important.

Race and ethnicity remain strong predictors of health status (Williams and Collins, 1995). Additionally, socio-economic status (SES) continues to be a remarkably strong determinant of variations in the rates of illness and death (*Ibid.*). Numerous studies have found that individuals at higher SES levels do better on most measures of health status than their lower SES counterparts (Lynch and Kaplan, 2000; Robert and House, 2000).

The gaps in health status may also be due to differences in household structures. For instance, being married is generally healthier for individuals than being unmarried (Waite and Gallagher, 2000). Families and households have been changing in structure, as indicated by the increase in female-headed households and non-family households. The latter half of the 21st century in the U.S. was a period of widespread family change characterized by rising age averages at first marriage and first birth, and an increase in non-marital childbearing and cohabiting unions (Bumpass and Lu, 2000; Casper and Bianchi, 2002; Wu, Bumpass and Musick, 2001; Landale and Oropesa, 2007).

Disparities in health status, especially widening disparities, are puzzling and not only reflect continuing race/ethnic inequalities, but also more rapid gains in health status among high SES than among low SES groups or worsening health status for those at the lower end of the socioeconomic status continuum — or both. They may also reflect the deteriorating effects associated with changing family structures. In this study we investigate the relative and combined health effects of race/ethnicity, socioeconomic status, and household structure, and determine how socioeconomic status and differences in household structure explain the racial/ethnic gaps in health.

Theoretical Background

Generally, African Americans and Native Americans have higher mortality rates and poorer health status levels than other groups in the United States (Adler and Rehkopf, 2008; NCHS, 2007). While the gap in life expectancy between African Americans and Whites has narrowed, it nevertheless persists (NCHS, 2007). According to the National Center for Health Statistics, the infant mortality rate in 2004 for African Americans was more than twice that of Whites, and that for Native Americans was about 1.5 times that of Whites (NCHS, 2007). In contrast, the infant mortality rate was higher for non-Hispanic Whites than for Latinos and Asian Americans (Adler and Rehkopf, 2008; Adler, 2006; Singh and Hiatt, 2006). This fact about Latinos is often referred to as the “Hispanic Paradox” and it has attracted the attention of many scholars. Basically, the paradox is that Latinos tend to be of lower SES and, thus, are expected to have infant mortality rates reflective of that socioeconomic status, but such is not the case.

Relative mortality rates vary for specific causes of death across all groups. Also, variations exist within Latino subgroups. Puerto Ricans have higher infant mortality rates than do other Latino groups and non-Hispanic Whites while disparities in risk factors and morbidity exist by race/ethnicity (NCHS, 2007). Clearly, race/ethnicity and SES continue to be strongly associated with the health status of individuals in this country.

SES also affects health by impacting a broad array of biomedical, environmental, behavioral, and psychosocial risk factors for health. The mechanisms through which SES affects health include individuals’ exposure to both health-damaging conditions and health-protecting resources. Some exposures have direct effects on health while others influence psychosocial and behavioral factors related to disease and death, including cognition, emotion (e.g., depression, hopelessness, hostility, and lack of control), and behavior (e.g., use of cigarettes, alcohol, and other substances) (Adler and Rehkopf, 2008). Health-

damaging exposures include early life conditions, inadequate nutrition, poor housing, exposure to lead and other toxins, inadequate health care, unsafe working conditions, uncontrollable stressors, social exclusion, and discrimination (Adler and Rehkopf, 2008; Adler, Marmot and Stewart, 1999; Williams and Collins, 1995).

For instance, SES is known to affect health by exposing individuals to different stressful conditions. Disadvantaged environments, which vary by SES, expose individuals to greater uncertainty, conflict, and threats for which there are often inadequate resources to respond effectively. These experiences cumulate to create chronic stress among individuals subjected to prolonged exposure to such conditions (Adler and Rehkopf, 2008). Poor people are especially disadvantaged with respect to healthy lifestyles by engaging in greater cigarette consumption, unhealthier eating and drinking practices, and lower levels of participation in exercise across adulthood (Wickrama, Rand, Conger, Wallace and Elder, 1999; Snead and Cockerham, 2002; Cockerham, 2005). In contrast, upper- and middle-classes tend to adopt healthier lifestyles by engaging in leisure-time sports and exercise, healthier diets, moderate drinking, little smoking, more physical checkups by their physicians, and greater opportunities for rest, relaxation, and coping with stress (Robert and House, 2000; Snead and Cockerham, 2002; Cockerham, 2005).

According to Williams and Collins (1995), increasing economic inequality is apparently the major driving force behind widening health disparities. However, to understand the widening gaps in health status one has to look at the combined and separate effects of SES and race/ethnicity on health. Although SES often accounts for a large part of racial/ethnic differences in health, independent effects of race/ethnicity on health outcomes persist, depending on which health outcomes are studied (Adler and Rehkopf, 2008). Latinos and African Americans, in general, have lower income and wealth levels than non-Hispanic Whites and Asians (Braveman, Cubbin, Egerter et al., 2005).

Differences in household structure may also contribute to racial/ethnic gaps in health status. According to the marital resource model, marriage provides social, psychological, and economic resources that, in turn, promote physical health and longevity (Ross, Mirowsky, and Goldstein, 1990; Waite and Gallagher, 2000). Culturally, however, marriage has become less valued as a source of economic stability (Teachman et al., 2000) and individuals are less inclined to get or stay married (Liu and Umberson, 2008). It may also be the case that the increase of women in the labor force since the 1970s is associated with partners, especially wives, having less time and energy to provide social support to one another (Bianchi et al., 2000). In contrast, the stress model suggests that the strain of marital dissolution undermines the health of the divorced, the separated, and the widowed which, in turn, leads to marital differences in health (Williams and Umberson, 2004).

Marriage tends to enhance the health of men more than that of women, and marital dissolution seems to have more adverse effects on the health of men than women (Williams and Umberson, 2004). Marital patterns and experiences also differ by race/ethnicity. African Americans, in general, have lower rates of marriage than other race/ethnic groups (Oppenheimer, 1997) and they report higher levels of strain, which may reduce the health benefits of marriage (Umberson et al., 2005). In contrast, Latinos — particularly Mexican Americans — have higher rates of marriage than other groups. Mexican Americans are the most likely to have ever married, while non-Hispanic Blacks are the least likely. Other groups, such as Non-Hispanic Whites and Other Latinos (Puerto Ricans, Cubans, and Central/South Americans), fall on the spectrum somewhere between Mexican Americans and African Americans (Landale and Oropesa, 2007).

Data and Methods

The March Supplement of the Current Population Surveys (CPS) is used to examine the relationships among race/ethnicity, family structure, socioeconomic status, and residence and health status. The CPS is a hierarchical data file with

records of approximately 60,000 households. Only civilian working-age adult (between 18 and 64 years) householders in the labor force are used. Geographically, data were selected for the following states in order to focus on the health status of populations in the Midwest: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. Data from the 2006-2008 CPS files were combined to facilitate a detailed breakdown by race/ethnicity across the variables of interest.

The dependent variable used in the analyses is a measure of self-reported physical health. Self-related health has been shown to predict mortality (Benyamini and Idler, 1999; Idler and Benyamini, 1997), morbidity (Ferraro, Farmer, and Wybraniec, 1997), disability (Idler and Kasl, 1995; Kaplan et al., 1993), and health care utilization (Malastrom, Sundquist, and Johansson, 1999). Self-related physical health was assessed with a single item question: “Would you say (name’s/your) health in general is excellent, very good, good, fair, or poor?” The dependent variable was further recoded to create a dummy variable, classifying respondents based on whether they reported fair/poor health (coded 1), or good, very good, or excellent (coded 0).

This study uses three central independent variables. The first is race/ethnicity. Race/ethnicity measure was constructed by first identifying those respondents who were Latinos or non-Latinos, and then categorizing the non-Latinos by race as being White, Black, or Other Race (e.g., Native Americans, Asians or Pacific Islanders, or others). The second variable of interest was household structure. Household structure was measured in terms of gender and number of heads in the household. Specifically, each household was characterized as dual-headed household, single male-headed household, or single female-headed household. The third variable of interest was socioeconomic status, in this case using educational attainment and household income measures. Education was measured by nine categories: 4th grade or less; 5th to 8th grade; 9th to 12th grade, no diploma; high school graduate; some college, but no degree; Associate’s degree; Bachelor’s degree;

TABLE 1. DESCRIPTIVE STATISTICS FOR VARIABLES IN THE ANALYSIS, 2006-2008

	<i>WHITE</i>		<i>BLACK</i>		<i>LATINO</i>		<i>ASIAN</i>	
	MEAN	STD. DEV.	MEAN	STD. DEV.	MEAN	STD. DEV.	MEAN	STD. DEV.
Self-Reported Health, Fair or poor, %	0.060	0.238	0.104	0.306	0.071	0.258	0.055	0.228
Age, years	42.599	11.605	40.136	11.301	37.353	10.822	38.580	10.352
Foreign-born status, %	0.024	0.155	0.052	0.222	0.526	0.499	0.829	0.376
<i>Household Structure, %</i>								
Dual-Headed	0.571	0.495	0.283	0.450	0.522	0.500	0.681	0.466
Single male-headed	0.208	0.406	0.224	0.417	0.251	0.434	0.166	0.372
Single female-headed	0.221	0.415	0.493	0.500	0.227	0.419	0.153	0.360
Number of children	0.745	1.066	0.956	1.205	1.285	1.313	0.900	1.110
<i>Education Attainment, %</i>								
4 grade or less	0.000	0.021	0.002	0.050	0.041	0.198	0.007	0.082
5th to 8th grade	0.006	0.077	0.007	0.082	0.133	0.340	0.012	0.109
9th to 12th grade, no diploma	0.038	0.191	0.085	0.278	0.148	0.356	0.036	0.185
High school graduate	0.305	0.461	0.321	0.467	0.309	0.462	0.114	0.318
Some college, but no degree	0.203	0.402	0.286	0.452	0.159	0.365	0.079	0.270
Some college degree	0.120	0.325	0.089	0.285	0.068	0.251	0.064	0.245
Bachelor's degree	0.225	0.418	0.144	0.351	0.097	0.296	0.334	0.472
Master's degree	0.076	0.265	0.052	0.223	0.030	0.172	0.223	0.416
Doctorate/professional degree	0.027	0.161	0.014	0.116	0.014	0.118	0.131	0.337
<i>Household Income, %</i>								
Less than \$10,000	0.024	0.153	0.095	0.293	0.052	0.222	0.019	0.135
\$10,000 to \$14,999	0.025	0.155	0.059	0.235	0.038	0.191	0.018	0.132
\$15,000 to \$19,999	0.032	0.175	0.077	0.266	0.056	0.231	0.027	0.163
\$20,000 to 24,999	0.041	0.198	0.072	0.259	0.085	0.278	0.037	0.189
\$25,000 to \$29,999	0.042	0.201	0.065	0.247	0.074	0.263	0.029	0.167
\$30,000 to \$39,999	0.097	0.296	0.124	0.330	0.145	0.352	0.080	0.271
\$40,000 to \$49,999	0.104	0.306	0.114	0.318	0.132	0.338	0.074	0.261
\$50,000 to \$69,999	0.189	0.391	0.159	0.365	0.178	0.383	0.173	0.378
\$70,000 to \$89,999	0.151	0.358	0.097	0.296	0.116	0.320	0.140	0.347
\$90,000 to \$99,999	0.056	0.230	0.034	0.182	0.030	0.172	0.056	0.230
\$100,000 and over	0.239	0.426	0.104	0.305	0.093	0.291	0.348	0.476
Home Ownership, % Owner	0.764	0.425	0.434	0.496	0.534	0.499	0.624	0.484
Residence, % Nonmetropolitan	0.250	0.433	0.034	0.182	0.117	0.321	0.045	0.207
<i>Job Quality, %</i>								
Service occupation	0.124	0.329	0.245	0.430	0.229	0.420	0.101	0.301
Full-time employment	0.824	0.381	0.762	0.426	0.823	0.382	0.888	0.316
Part-time employment	0.132	0.339	0.137	0.344	0.111	0.314	0.078	0.268
Unemployed/Not working	0.044	0.205	0.101	0.301	0.066	0.249	0.035	0.183
<i>Health Insurance Coverage, %</i>								
Private/other	0.683	0.465	0.604	0.489	0.525	0.499	0.734	0.442
Government	0.277	0.447	0.284	0.451	0.422	0.494	0.237	0.425
No insurance	0.040	0.195	0.112	0.315	0.053	0.224	0.029	0.169

master's degree; and doctorate or professional degree. Household income is measured using 11 categories: less than \$10,000; \$10,000 to \$14,999; \$15,000 to \$19,999; \$20,000 to 24,999; \$30,000 to \$34,999; \$35,000 to \$39,999; \$40,000 to \$49,999; \$50,000 to \$69,999, \$70,000 to \$89,999; \$90,000 to \$99,999; and \$100,000 and over. To provide the perspective on change, separate analyses were conducted for 2000-2002, 2003-2005, and 2006-2008.

Control variables included age, foreign-born status, number of children in the household, home ownership, nonmetropolitan residence, service occupations, part-time employment, unemployed or not working, and health insurance coverage.

The analysis in this study uses logistic regression models to predict the odds of fair/poor health and assess the relative effect of race/ethnicity, household structure, and socioeconomic status, controlling for the effects of age, foreign-born status, number of children in the household, nonmetropolitan residence, job quality, and health insurance coverage. All models are estimated with generalized linear models (logit link) with robust standard errors. Descriptive statistics of variables used in the analysis are weighted to produce reliable estimates of the population under study (Table 1), but logistic regression models use non-weighted data (Table 2).

Results

Model 1 in Table 2 presents coefficient estimates from a logistic regression model of fair/poor health on race/ethnicity, controlling for age and foreign-born status, providing a baseline comparison of subsequent models that add other explanatory variables. The outcome variable is ordered such that higher values reflect membership in worse health groups (i.e., those who reported fair or poor health as opposed to good, very good, or excellent health). African Americans, Latinos, and Other Races are significantly more likely than non-Hispanic Whites to report fair/poor health.

Using model 1 in Table 2, the results show that the odds of fair/poor for African Americans are 2.00 times those of Whites (95% confidence interval [CI] for relative odds: 1.76, 2.27). The odds for Latinos are 1.44 times those of Whites (95% CI: 1.17, 1.76). The odds of fair/poor for those in Other Race/ethnic groups are 2.39 times those of Whites (95% CI: 1.92, 2.94). The odds of fair/poor for Asians are not significantly different from those of non-Hispanic Whites. The results in model 1 (Table 2) also show that the odds of fair/poor health are 1.03 times higher for each additional year increase in age (95% CI: 1.03, 1.04).

Model 2 reports the results of a model of self-related physical health that includes household structural characteristics – headship of the household and number of children under 18 years of age. Consistent with expectations and previous research, single male-headed householders and single female-headed householders are more likely than dual-headed households to report fair/poor health. The odds of fair/poor health for single male-headed householders are 1.53 times higher than those of householders in dual-headed households (95% CI: 1.35, 1.72). The odds of fair/poor health for single female-headed householders are 2.08 times higher than those of householders in dual-headed households (95% CI: 1.87, 2.30). Adding family structure indicators reduces the logistic regression coefficients that describes the gap between Blacks and Whites by 32%, implying that one reason Whites have better health than Blacks has to do with their differences in family structure. Blacks are more likely to live in single female-headed households than Whites. The odds ratio describing that gap drops from 2.00 to 1.61 (95% CI: 1.41, 1.83) when family structure is added. Adding family structure also reduces the gap between Whites and Latinos by 22%, suggesting that there is another factor that explains this gap given that Whites and Latinos have almost similar family structure. The odds ratio describing that gap drops from 1.44 to 1.33 (95% CI: 1.08, 1.62).

TABLE 2. LOGISTIC REGRESSION MODELS OF FAIR OR POOR PHYSICAL HEALTH ON RACE/ETHNICITY, FAMILY STRUCTURE, AND SOCIOECONOMIC STATUS, 2006-2008

Variables	MODEL 1 β (S.E.)	MODEL 2 β (S.E.)	MODEL 3 β (S.E.)	MODEL 4 β (S.E.)	MODEL 5 β (S.E.)
Intercept	-4.217 (0.099)***	-4.631 (0.117)***	-2.457 (0.148)***	-2.945 (0.157)***	-3.269 (0.166) ***
Race and Ethnicity					
Non-Hispanic Black	0.695 (0.065)***	0.476 (0.066)***	0.209 (0.070)**	0.201 (0.073)**	0.183 (0.074) *
Latino/Hispanic	0.365 (0.099)***	0.285 (0.099)***	-0.041 (0.109)	-0.018 (0.109)	-0.008 (0.108)
Asian	0.030 (0.181)	0.010 (0.182)	0.314 (0.190)	0.333 (0.190)	0.313 (0.190)
Other race	0.872 (0.109)***	0.748 (0.110)***	0.510 (0.112)***	0.481 (0.114)***	0.329 (0.118) ***
Age	0.032 (0.002)***	0.036 (0.002)***	0.046 (0.002)***	0.046 (0.002)***	0.047 (0.002) ***
Foreign-born Status	-0.039 (0.103)	0.050 (0.103)	-0.191 (0.114)	-0.147 (0.114)	-0.095 (0.113)
Household Structure					
Single Male-headed Household		0.422 (0.064)***	-0.137 (0.070)	-0.081 (0.071)	-0.021 (0.071)
Single Female-headed Household		0.730 (0.053)***	0.089 (0.063)	0.136 (0.063)*	0.157 (0.065) *
Number of Children		0.017 (0.022)	0.018 (0.023)	0.010 (0.023)	-0.020 (0.023)
Socio-economic Status					
Education Attainment			-0.171 (0.017)***	-0.163 (0.017)***	-0.158 (0.017) ***
Household Income			-0.150 (0.010)***	-0.116 (0.011)***	-0.094 (0.011) ***
Home Ownership			-0.481 (0.059)***	-0.454 (0.060)***	-0.414 (0.061) ***
Residence					
Nonmetropolitan				0.078 (0.051)	0.063 (0.052)
Job Quality					
Service Occupation				0.121 (0.060)*	0.096 (0.060)
Part-time Employment				0.441 (0.060)***	0.327 (0.062) ***
Unemployed/Not Working				0.805 (0.079)***	0.667 (0.082) ***
Health Insurance Coverage					
No Insurance					0.142 (0.055) **
Government Insurance					0.842 (0.082) ***

Model 3 reports the results of a model of self-related health that includes indicators of socioeconomic status. Consistent with previous research, higher levels of education and higher incomes are associated with lower ratings of self-related health, i.e., better health. The odds of fair/poor health are 0.84 times lower for each additional unit of the education scale (95% CI: 0.82, 0.87). The odds of fair/poor health are 0.86 times lower for each additional unit of the income scale (95% CI: 0.84, 0.88). Model 3 also controls for home ownership. The results in model 3 show that the odds of fair/poor health are 0.62 times lower for home owners than those of renters (95%

CI: 0.55, 0.69). Adding these socioeconomic indicators in model 3 altered the effects of race/ethnicity on self-related health. The effects of African-Americans and Other Races on self-related health are reduced while the effects of Latino become non-significant statistically. Adding socioeconomic status indicators reduces the logistic regression coefficients that describe the gap between Blacks and Whites by 56%, implying that one of the reasons Whites have better health than Blacks is that Whites have higher education and income than Blacks. Once socioeconomic status indicators are added in the model, the gap between Latinos and Whites disappear, suggesting that one

of the main reasons that Whites and Latinos differ in health has to do with their differences in socioeconomic status. Adding socioeconomic variables also rendered the effects of household structure not significant, meaning that the gaps in health between single-headed households and dual-headed households are fully explained by socioeconomic differences.

Model 4 introduces controls for living in a nonmetropolitan area and job quality, including service occupation, part-time employment, and unemployment. The results in model 4 indicate that the odds of reporting fair/poor health are significantly higher for individuals working in service occupations, part-time, and those who are unemployed. The odds of fair/poor are 1.13 times higher for those working in service occupations than for those in other occupations (95% CI: 1.01, 1.27). The odds of fair/poor are 1.56 times higher for individuals working part-time than for those of full-time workers (95% CI: 1.38, 1.75). The odds of fair/poor health are 2.34 times higher for individuals who are unemployed than for those of full-time workers (95% CI: 1.92, 2.60). The odds of fair/poor health for individuals in nonmetropolitan areas were not significantly different from those of individuals in metropolitan areas. Adding these controls in model 4 reduces the gap between Blacks and Whites by an additional 4% while the coefficient for Latinos remains nonsignificant. However, adding these controls rendered the coefficient for single female-headed households significant and positive, suggesting that one of the reasons single female-headed householders have poor health is the type of job they hold. They are more likely than those in dual-headed households to work in part-time and service occupations — jobs that tend not to provide health insurance coverage. Adjusting for job quality, however, changes the direction of the gap in health between householders in dual-headed households and those in single female-headed households, meaning that when the comparison is restricted to those who are employed full-time in non-service occupations (the reference categories), the odds of fair/poor health for single female-headed householders are significantly higher than those in dual-headed households.

Model 5, the final model in Table 2, controls for health insurance coverage. The results in model 5 show that those individuals without health insurance coverage and those with public health insurance coverage are significantly more likely to report fair/poor health than those with private health insurance coverage. The odds of fair/poor are 1.15 times higher for individuals with no health insurance coverage than for those with private health insurance coverage (95% CI: 1.04, 1.28). The odds of fair/poor are 2.32 times higher for individuals with public health insurance coverage than for those with private health insurance coverage (95% CI: 1.99, 2.71). Controlling for health insurance coverage reduces the gap between Blacks and Whites by an additional 9%. The coefficient for single female-headed householder is significant and the gaps in health between single female-headed households and dual-headed households increase by an additional 15%. This means that when the comparison is restricted to those with private/other insurance (reference group), the odds of fair/poor health for single female-headed householders remain significantly higher than those in dual-headed households.

Figure 1 plots the predicted probabilities across income levels by race/ethnicity. While higher income is noticeably associated with better health across all racial/ethnic groups, the probability of fair/poor health drops from almost 15% for Whites to less than 4%, and from 14% for Latinos to 4%. For others, it drops from about 12% for Asians to about 3%, from about 23% for African Americans to slightly above 5%, and from about 28% for other racial groups to 6% from the lowest income category (less than \$10,000) to the highest income categories (\$100,000 or more), respectively.

Figure 2 plots the predicted probabilities across income levels by household structure. Single female-headed households have higher predicted probabilities of fair/poor health at all income levels when compared to single male-headed households and dual-headed households. The probability of fair/poor health drops from almost 20% to less than 5% from the lowest income category (less than \$10,000) to the highest income categories (\$100,000 or more).

FIG. 1. PREDICTED PROBABILITY OF FAIR OR POOR HEALTH BY RACE/ETHNICITY BY HOUSEHOLD INCOME, 2006-2008

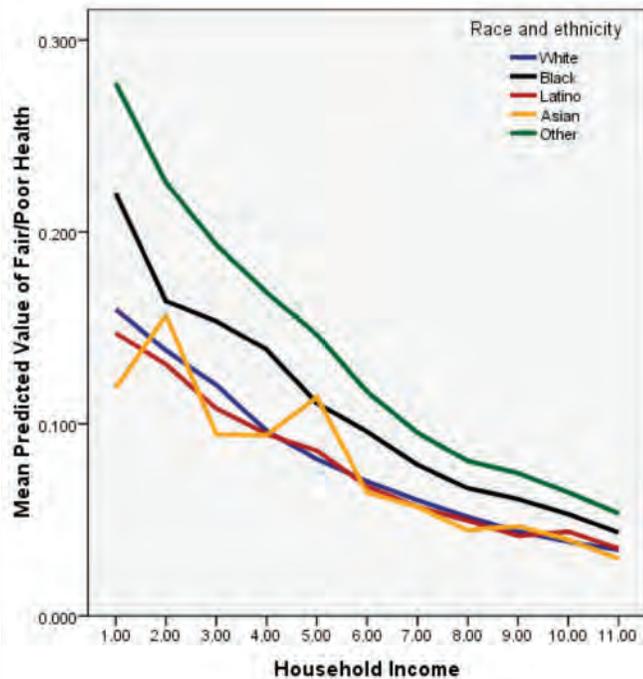
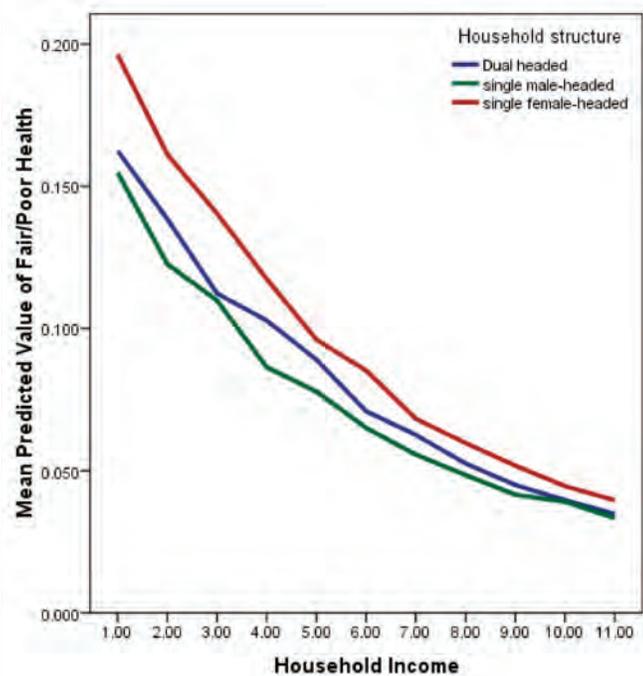


FIG. 1. PREDICTED PROBABILITY OF FAIR OR POOR HEALTH BY HOUSEHOLD STRUCTURE BY HOUSEHOLD INCOME, 2006-2008



Taken together, the analyses indicate that the odds of fair/poor health are higher for African Americans, Latinos, and Other Races than those of non-Hispanic Whites. The odds of fair/poor health are also higher for single male-headed householders and single female-headed householders than they are for householders in dual-headed households. Finally, higher levels of education and higher incomes (that is, higher socioeconomic status) are associated with lower odds of fair/poor health (i.e., better health, even after controlling for age, foreign-born status, home ownership, nonmetropolitan residence, service occupation, part-time employment, being unemployed or not working, and health insurance coverage).

Conclusion

This research study highlights the differentiated and relative effects of race/ethnicity, family structure, and socioeconomic status on self-reported physical health status among adults in the Midwest. The results show that 74% of the gap in health status between Whites and African Americans is explained by household structure, education, income, homeownership, job quality, and health insurance coverage. If the focus is on odds ratios rather than raw coefficients, 40% of the gap is explained. Of all factors, socioeconomic status indicators are the most important source of the gap reduction. The gap in health between Whites and Latinos is fully explained by household structure and socioeconomic status indicators.

The results also show that female-headed householders are more likely than those in dual-headed households to report poor health. About 78% of the gap in health between female-headed householders and householders in dual-headed households is explained by race/ethnicity, socioeconomic status, job quality, and health insurance coverage. If one looks at that gap in terms of odds ratios rather than raw coefficients, then 44% of the gap is explained.

These findings are consistent with previous studies that indicate that the gaps in health between Whites and Blacks persist even after accounting for household structure, socioeconomic status, job quality, and health insurance coverage. Although the original gap in health between Whites and Latinos is smaller than that between Whites and Blacks, the analysis nonetheless explained the entire gap in reported health status between Whites and Latinos. Reported poor health status among Latinos as compared with Whites was explained by a combination of family structure and socioeconomic status.

This study shows that individuals' social contexts, including race/ethnicity, gender and household structure, and socioeconomic status, are important factors in reported health status. It suggests that policies aimed at improving the health of race/ethnic minorities should focus on improving socioeconomic conditions of households, strengthening household structures by promoting dual-headed households, and providing support to single-headed households, especially single female-headed households. Such efforts may achieve the most effective results in closing the gaps in health status. The findings reported here call attention to labor market conditions that support all groups and household types. The gaps in health between different racial/ethnic groups and between different household structures are significantly reduced among higher income groups; this suggests that improving the economic well-being of disadvantaged groups may explain most of the disparities in health.

The limitations of the current study point to the areas where more research is needed. What are the actual mechanisms linking socioeconomic indicators to varying states of health decline? Common pathways between socioeconomic status and health status include health behaviors or lifestyles (e.g., smoking, drinking, eating, and physical activity). Unfortunately, health behaviors or lifestyles variables are not included in the CPS data.

It is also clear that the gaps in health are not fully explained just by household structure, socioeconomic status, job quality, and health insurance coverage, suggesting that other factors may account for this gap. Understanding health care, among other things, in addition to social context factors may be critical in understanding health disparities. Finally, the limitations in this study point in the direction of using data that would help account for effects of local labor market conditions and community structure and social processes on health. Local labor market and social conditions affect employment opportunities, incomes, and where people live. Therefore, these may contribute to the reduction in health gaps. Minorities, especially Latinos and African Americans, tend to live in communities that are structurally disadvantaged (Jargowsky, 1997; Massey and Denton, 1993; Wilson, 1987; 1996).

References

- Adler, N.E. and D.H. Rehkopf. 2008. "U.S. Disparities in Health: Descriptions, Causes, and Mechanisms." *Annual Review of Public Health*, 29: 235-52.
- Benyamini, Y. and E.L. Idler. 1999. "Community Studies Reporting Association between Self-Related Health and Mortality." *Research on Aging*, 21: 477-500.
- Bianchi, S.M., M.A. Milkie, L.C. Sayer, and J.P. Robinson. 2000. "Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor." *Social Forces*, 79: 191-228.
- Braveman, P., C. Cubbin, S. Egerter, S. Chideya, K.S. Marchi et al., 2005. "Socioeconomic Status in Health Research – One Size Does Not Fit All." *JAMA*, 294: 2879-88.
- Bumpass, L.L. and H.H. Lu, 2000. "Trends in Cohabitation and Implications for Children's Family Contexts in the United States." *Population Studies*, 54: 29-41.
- Casper, L.M. and S.M. Bianchi. 2002. *Continuity and Change in the American Family*. Thousand Oaks, CA: Sage.
- Cockerham, W.C. 2005. "Health Lifestyle Theory and the Convergence of Agency and Structure." *Journal of Health and Social Behavior*, 46 (March): 51-67.
- Ferraro, K.F., M.M. Farmer, and J.A. Wybraniec. 1997. "Health Trajectories: Long-Term Dynamics among Black and White Adults." *Journal of Health and Social Behavior*, 38: 38-54.
- Idler, E.L., and Y. Benyamini. 1997. "Self-Related Health and Mortality: A Review of Twenty-seven Community Studies." *Journal of Health and Social Behavior*, 38: 21-37.
- Idler, E.L. and S. Kasl. 1995. "Self-ratings of Health: Do They Also Predict Change in Functional Ability." *Journal of Gerontology: Social Sciences*, 50B: S344-S353.
- Jargowsky, P.A. 1997. *Poverty and Place: Ghettos, Barrios, and the American City*. New York: Russell Sage Foundation.
- Landale, N. and R.S. Oropesa. 2007. "Hispanic Families: Stability and Change." *Annual Review of Sociology*, 33: 381-405.
- Liu, H. and D.J. Umberson. 2008. "The Times They Are Changin': Marital Status and Health Differentials from 1972 to 2003." *Journal of Health and Social Behavior*, 49 (3): 239-53.
- Lynch, J.W., and Kaplan, G.A. 2000. "Socioeconomic Position." Pp. 13-35 in L.F. Berkman and I. Kawachi (eds.), *Social Epidemiology*. New York: Oxford University Press Inc.
- Malastrom, M., J. Sundquist, and S. Johansson. 1999. "Neighborhood Environment and Self-Reported Health Status: A Multilevel Analysis." *American Journal of Public Health*, 89: 1181-86.
- Massey, D., and Denton, N.A. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Boston: Harvard University Press.
- National Center for Health Statistics. 2007. *Health United States, 2007: With Chartbook on Trends in the Health of Americans*. U.S. Department of Health and Human Services, Center for Disease Control and Prevention, National Center for Health Statistics, Hayattsville, MD.
- Oppenheimer, V. K. 1997. "Women's Employment and the Gain in Marriage: The Specialization and Trading Model." *Annual Review of Sociology*, 23: 431-53.
- Robert, S.A., and House, J.S. 2000. "Socioeconomic Inequalities in Health: An Enduring Sociological Problem." Pp. 79-97 in C.E. Bird, P.C., and A.M. Fremont (eds.), *Handbook of Medical Sociology*, 5th ed. Upper Saddle River, NJ: Prentice Hall.
- Ross, C.E., J. Mirowsky, and K. Goldsteen. 1990. "The Impact of Family on Health: The Debate in Review." *Journal of Marriage and Family*, 52: 1059-78.
- Snead, M.C., and Cockerham, W.C. 2002. "Health Lifestyles and Social Class in the Deep South." *Research in Sociology of Health Care*, 20: 107-22.
- Teachman, J.D., L.M. Tedrow, and K.D. Crowder. 2000. "The Changing Demography of America's Families." *Journal of Marriage and the Family*, 62: 1234-46.
- Umberson, D.J., K. Williams, D.A. Powers, and M. Chen. 2005. "As Good As It Gets? A Life Course Perspective on Marital Quality." *Social Forces*, 84: 493-511.
- Waite, L.J. and M. Gallagher. 2000. *The Case for Marriage: Why Married People Are Happier, Healthier, and Better Off Financially*. New York: Double Day.
- Wickrama, K.A.S., Conger, R.D., Ebert Wallace, E. and Elder, Jr., G.H. 1999. "The Intergenerational Transmission of Health-Risk Behavior." *Journal of Health and Social Behavior*, 40: 258-72.
- Williams, K. and D.J. Umberson. 2004. "Marital Status, Marital Transitions, and Health: A Gendered Life Course Perspective." *Journal of Health and Social Behavior*, 45: 81-98.
- Williams, David R. and Chiquita Collins. 1995. "U.S. Socioeconomic and Racial Differences in Health: Patterns and Explanations." *Annual Review of Sociology*, 21: 349-86.
- Wilson, W.J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: University Press.
- Wilson, W.J. 1996. *When Work Disappears*. New York, NY: Knopf.
- Wu, L.L., L.L. Bumpass, and K. Musick. 2001. "Historical and Life Course Trajectories of Nonmarital Childbearing." Pp. 3-48 in *Out of Wedlock: Causes and Consequences of Nonmarital Fertility*, ed. L.L. Wu. New York: Russell Sage Found.