Health pessimism among black and white adults: the role of interpersonal and institutional maltreatment

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Abstract

Using data from the 1995 Detroit Area Study (N = 1106) this paper finds that black adults report significantly worse self-rated health when compared to whites with similar levels of self-reported morbidity. This relationship, called health pessimism, persists despite statistical controls for age, gender, socioeconomic status, health care access, and health related behaviors. Interpersonal maltreatment is found to be positively associated with health pessimism and more importantly, when comparing adults who perceive similar levels of maltreatment, white and black adults do not differ with respect to health pessimism. This suggests that the increased risk of health pessimism among black adults is due in part to race differences in the perception of interpersonal maltreatment.

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Introduction

Health pessimism can be described as a characteristic among otherwise healthy individuals who perceive their health to be relatively poor (Ferraro, 1993; Idler, Hudson, & Leventhal, 1999; Van Doorn, 1999). In other words, among health pessimists there is a notable mismatch between subjective (i.e., self-rated health) and objective (i.e., self-reported morbidity or physician assessed health) health status. Previous research has described the social antecedents of health pessimism such as socioeconomic status (Idler et al., 1999) and gender (Idler, Russell, & Davis, 2000) but few researchers have specifically examined the way in which race factors into an individual's global assessment of his or her current health status. Black adults are two times more likely than whites to report that their health is “fair” or “poor” (NCHS, 2000) but physical health differences among blacks and whites do not account for this difference (Ferraro, 1993; Ferraro, Farmer, & Wybraniec, 1997; Maddox, 1962). To date, however, no existing research has investigated or identified the source of race differentials in the risk of health pessimism.

This paper examines the role of interpersonal and institutional maltreatment as an important determinant of an individual’s assessment of his or her global health status paying particular attention to the notion that the perception of unfair treatment is an important mechanism through which health pessimism rates among black and white adults diverge. In doing so, this paper draws an important connection between work that focuses on the meaning that individuals attach to self-rated health items (Krause & Jay, 1994) with research on the perception of rude or discriminatory actions from others as an independent contributor to population health differences (Finch, Kolody, & Vega, 2000; Krieger 1990, 2000; Krieger and Sidney, 1996; Williams, Yu, Jackson, & Anderson, 1997).
Race, maltreatment, and health pessimism

Race and health pessimism

Self-rated health (e.g., “Overall, how would you rate your health?”) is one of the most widely used measures of overall health status. This is due in part to the relative ease with which this information can be collected but also because this single item has consistently been found to be a valid measure of current health status among adults. For example, Idler and Benyamini (1997) and Benyamini and Idler (1999) review 46 studies in which self-rated health is used to predict subsequent mortality and find that individuals reporting “poor” health status have a significant increase in risk of death in 40 of the 46 studies. They conclude by calling self-rated health “an irreplaceable dimension of health status and in fact that an individual’s health status cannot be assessed without it” (Benyamini & Idler, 1999, p. 34).

It is less clear if the robust relationship between subjective and objective health status is similar among members of different racial and ethnic groups. Indeed, the notion that social context shapes the way in which individuals understand their physical health is nothing new to sociologists (e.g., Suchman, 1964; Zola, 1966). In one of the first papers to identify health pessimists Maddox (1962) finds that compared to whites with similar levels of health, as assessed by trained medical examiners, blacks consistently report worse self-rated health. Using more recent data, Ferraro (1993) finds that although blacks and whites report a similar number of chronic illnesses ($\mu_{\text{black}} = 1.88$; $\mu_{\text{white}} = 1.74$) when asked to rate their health from 1 (Poor) to 5 (Excellent), the average for blacks is 2.66 and the average for whites is 3.09. Whereas the difference in the number of chronic illnesses is not statistically significant across the two groups, the observed difference in self-rated health is ($p < 0.01$). Even after controlling for functional limitations and health-related efficacy, when comparing blacks and whites with similar levels of physical health, blacks continue to report worse self-rated health by roughly two-tenths of a point ($p < 0.01$). These findings are bolstered by Ferraro et al. (1997) who use three waves of data over 15 years and find that despite statistical controls for the presence of chronic illnesses, activity limitations, and disabilities, black respondents continue to report worse self-rated health compared to white respondents with similar objective health status. More recently, Ferraro and Farmer (1999) control for access to health care (e.g., lack of medical insurance and use of a regular physician), health-related behaviors (e.g., smoking and obesity), functional health status, and self-reported morbidity and find similar results as Ferraro (1993); among blacks and whites with comparable physical health status, blacks report approximately two-tenths of a point worse health on a five-point self-rated health item.

A similar relationship is found even when a different measurement of objective health status is used. For example, McGee, Liao, Cao, and Cooper (1999) test the criterion validity of self-rated health and find that the relative risk of mortality associated with reporting “fair” or “poor” health to be greater for white ($RR = 2.5$) compared to black ($RR = 2.0$) men. In other words, poor self-rated health is more strongly associated with worse physical health status among whites compared to blacks. Taken together, these studies consistently highlight the same finding: comparing those with similar physical health status, blacks are significantly more likely than whites to report relatively poor self-rated health status. Said differently, the prevalence of health pessimism is higher among black compared to white adults. To date, however, no existing studies have successfully accounted for this elevated risk of health pessimism among blacks.

Race and maltreatment

This paper focuses on the possibility that the perception of maltreatment is associated with health pessimism and more importantly that race differences in perceptions of maltreatment helps to explain black–white differences in health pessimism. Sigelman and Welch (1991) analyze a number of nationally representative social surveys and find that among blacks, most believe that they have been treated unfairly within educational, residential, and employment settings at some point in their lives. According to Sigelman and Welch (1991, p. 165) among blacks “[n]early half believe that in their local area there is discrimination in housing and access to unskilled jobs, and two-thirds perceive discrimination in wages and access to skilled and managerial jobs.” They conclude by stating that “according to the world view of the typical black, significant racial discrimination persists and largely accounts for where blacks as a group stand today.” In other words, for blacks, perceptions of unfair treatment by white individuals and formal institutions are not understood as random or unrelated events rather, repeated exposure to rude, discriminatory, or hostile behaviors from others is a key aspect of global self-concept and agentive identity formation (Feagin, 1991; Hughes & Demo, 1989).

To illustrate, Table 1 presents prevalence rates of perceived maltreatment obtained from a sample of black and white adults residing in the Detroit Metropolitan area. Similar to the testimonials of blacks that Feagin (1991) reports, blacks are significantly more likely than whites to report that they have been treated with less courtesy and less respect, received poorer service, treated as though they are not smart, perceived that others were afraid of them, treated as though they were dishonest,
treated as though others were better than them, and insulted in their day-to-day activities. This pattern is observed among the perception of institutional-level maltreatment where blacks are significantly more likely than whites to feel as though they have been unfairly fired or denied promotion, unfairly not hired for a job, and unfairly stopped or searched by the police. With the exception of feeling threatened, race differences in perceived maltreatment from individuals are striking. For five of the nine indicators blacks are at least three times more likely than whites to perceive maltreatment in the course of their day-to-day lives. Likewise, perceived maltreatment from institutions is nearly a normative process among blacks as roughly two out of every five black adults feel as though they have been treated unfairly by employers or the police at some point in their life.

These differences are important to health researchers because a large and growing number of studies have established linkages between perceptions of unfair treatment and an increased risk of adverse physical health outcomes. This is particularly salient to this discussion and helps to clarify the primary aim of the present research. These researchers differentiate between self-rated health status as either a spontaneous assessment or an enduring self-concept. This distinction is important because it suggests that self-rated health represents either “health status or the self-concept of health, respectively” (pp. 203). If self-rated health taps the former then changes in objective health status such as the onset of disease or injury would not be accompanied by a corresponding decline in self-rated health. Alternatively, if the perception of maltreatment from individuals and institutions is associated with self-rated health status above and beyond controls for objective health status then it suggests that maltreatment is associated with health pessimism.

Recent work by Bailis, Segall, and Chipperfield (2003) is particularly salient to this discussion and helps to clarify the primary aim of the present research. These researchers differentiate between self-rated health status as either a spontaneous assessment or an enduring self-concept. This distinction is important because it suggests that self-rated health represents either “health status or the self-concept of health, respectively” (pp. 203). If self-rated health taps the former then changes in physical health status should lead to corresponding changes in self-rated health. Alternatively, it is also possible that declines in physical health status such as the onset of disease or injury would not be accompanied by a corresponding decline in self-rated health. In this case,
they argue that self-rated health can be conceptualized as an enduring aspect of an individual’s overall self-concept and should be more broadly understood as relatively stable over the life course. According to the results of their study, changes in self-rated health over time are modestly associated with improvements and declines in physical health status but the bulk of variation in self-rated health status over time is due to baseline self-rated health. This suggests that self-rated health status represents both a spontaneous assessment of an individual’s current health status but more importantly self-rated health captures a relatively static aspect of an individual’s global self-concept. If self-rated health status denotes an enduring aspect of global self-concept and exposure to unfair treatment is a critical aspect of identity formation among blacks (Sigelman & Welch, 1991; Feagin, 1991) then chronic perceptions of maltreatment among blacks may also explain black–white differences in health pessimism.

**Hypothesis 1.** Comparing adults with similar levels of objective health status, access to health care, and health related behaviors, blacks will report significantly poorer self-rated health than whites —i.e., blacks will be more likely than whites to be health pessimists.

**Hypothesis 2.** Adults who perceive that they are treated unfairly will be more likely than those reporting little to no unfair treatment to be health pessimists.

**Hypothesis 3.** Race differences in the perception of interpersonal and institutional maltreatment will account for the elevated risk of health pessimism among black respondents.

**Methods**

**Data**

All data for these analyses come from the 1995 Detroit Area Study (DAS). The 1995 DAS is one of a series of studies by the Survey Research Center and the Department of Sociology at the University of Michigan. Each Detroit Area Study poses a unique set of research questions and is headed by a different principal investigator every year. The primary investigators of the 1995 Detroit Area Study, James S. Jackson and David R. Williams, were fundamentally interested in identifying the social influences on individual health outcomes and individual’s access to important health resources. These data come from a multistage area probability sample of 1139 adult respondents 18 years of age and older residing in Wayne, Oakland, and Macomb counties in Michigan, including the city of Detroit.

Face-to-face interviews were completed between April and October of 1995 by University of Michigan graduate students in a research training practicum in survey research, and professional interviewers from the Survey Research Center. The overall response rate was 70%. All data are weighted such that parameter estimates pertain to the adult population in the Detroit Tri-County area. And, although somewhat limited because they are cross-sectional in nature, they provide an exceptional opportunity to study a number of important but to date unstudied relationships regarding race and health. There are a number of questions asked on this data set that are not available on similar data sets and these data have been used extensively in recent years to evaluate the social determinants of physical and psychological well-being among black and white adults (Boardman, in press; Boardman, Finch, Ellison, Williams, & Jackson, 2001; Ellison, Boardman, Williams, & Jackson, 2001; Schulz et al., 2000; Williams, 1997).

**Measures**

Self-rated health is measured by the response the question “Would you say your health is excellent, very good, good, fair, or poor?” As with other work in this area (McGee, Liao, Cao, and Cooper, 1999) Poor/Fair Self-Rated Health is coded 1 if respondents listed “Fair” or “Poor” and 0 if otherwise. Physical morbidity is captured with a list of chronic and serious illnesses. Respondents were asked if a “doctor or health professional has told you that you have any of the following...?” Chronic illnesses include arthritis (20.1%), asthma (9.1%), ulcer (8.7%), chronic bronchitis (7.0%), blood circulation problem (7.5%), high cholesterol (20.7%), kidney problems (7.3%), and liver problems (2.7%). Likewise, serious illnesses include cancer (5.2%), diabetes (7.3%), heart attack (13.1%), hypertension (26.4%) or stroke (3.0%). Activity Limitations is measured by the response to three items posed to respondents who indicated any health problem. First, respondents were asked “How much do these health problems usually interfere with your life or activities.” Response options ranged from 1 “Not at all” to 4 “A lot”. Second, work-related interference is measured by the response to the following question “During the past 30 days, how many days out of 30 were you totally unable to work or carry out your normal activities because of this health problem?” Third, respondents were then asked “Aside from those days, how many days out of the past 30 days were you able to work but had to cut down on what you did because of this health problem?” Health-related activity limitations taps functional health status and represents the sum of these standardized measures of functional limitations (z = 0.68).
Three sociodemographic controls are used in all multivariate models: (1) age is a continuous variable measured in years; (2) sex is measured with a dummy variable coded 1 for female and 0 for male respondents; (3) race is measured by respondent self-identification and is coded 1 if respondents indicate that they were African-American or black \((N = 586)\) and 0 if they indicate that they were non-Hispanic and white \((N = 520)\). A small number of Hispanic \((n = 11)\), Asian American \((n = 15)\), and Native American \((n = 4)\) respondents, as well as respondents who reported another race/ethnicity \((n = 3)\), were deleted from the analyses because of small sample sizes. These deletions, which allow for more meaningful comparisons between African-American and non-Hispanic white respondents, yields a final sample size of 1106. Socioeconomic status is operationalized with the following two variables: (1) percent of poverty and (2) education. Respondents' yearly family incomes and family size are used in conjunction with federal guidelines for 1995 poverty definitions to create a variable that indicates respondents' yearly incomes relative to the official poverty line for a family of their size (US Department of Health and Human Services, 2000). For example, respondents with values less than or equal to one are considered to be poor by official standards. Education is measured with a continuous variable tapping the number of years of education.

Three measures are used to tap respondents' access to health care. First, marginalization from a health care provider is measured with a variable coded 1 if respondents report that (in the past 12 months) they had "wanted to see a doctor (for physical or mental needs) but did not because" it "would cost too much," they "couldn't get an appointment," they "would have to travel too far," or they "didn't have a way to get there." Second, respondents are asked "Is there a particular doctor or clinic that you usually go to when you are sick or need advice about your health?" The variable Regular Doctor was coded 1 if respondents indicate "yes" and 0 if otherwise. A third dummy variable is used to assess individuals' access to health care and was coded 1 if respondents had not been to see a doctor in the past year for a "routine physical examination or general check-up." Together, these three variables attempt to describe respondents' immediate access to and utilization of health care providers.1

Exercise, diet, and smoking are believed to be among the three most important behaviors related to any number of health outcomes (Martin & McQueen, 1989). Accordingly, physical inactivity is dummy variable coded 1 if respondents report that they did not engage in any strenuous physical activities in the past 2 weeks. Information on respondents' height and weight (measured by the interviewer with a scale and tape measure at the time of the interview) are used to construct the Body Mass Index (BMI). Respondent's BMI is calculated by dividing a person's weight (in kilograms) by their height (in meters) squared. Following the guidelines established by the World Health Organization (WHO, 1997), respondents are identified as obese if their BMI is greater than or equal to 30. Last, smoking is measured with a trichotomous variable indicating those who (a) never smoked, (b) ever smoked more than 100 cigarettes in their life but currently do not smoke, and (c) current smokers.

Maltreatment is measured with two items similar to those used in previous research in this area (Schulz et al., 2000). Interpersonal Maltreatment is measured by response to the following nine questions: "In your day-to-day life, how often have any of the following things happened to you?": (a) "You are treated with less courtesy than other people;" (b) "You are treated with less respect than other people;" (c) "You receive poorer service than other people at restaurants and stores;" (d) "People act as if they think you are not smart;" (e) "People act as if they are afraid of you;" (f) "People act as if they think you are dishonest;" (g) "People act as if they're better than you are;" (h) "You are called names or insulted;" and (i) "You are threatened or harassed." Responses are coded 1 if respondents listed "Very Often" or "Fairly Often" and 0 if they responded "Not Too Often", "Hardly Ever", or "Never" and then summed across the nine items \((x = 0.77)\). Institutional Maltreatment is measured by the response to the following three questions: (1) "Do you think you have ever been unfairly fired or denied promotion?"; (2) "For unfair reasons, do you think you have ever not been hired for a job?"; and (3) "Do you think that you have ever been unfairly stopped, searched, questioned, physically threatened, or abused by the police?" Affirmative responses are summed to capture perceived maltreatment from institutions \((x = 0.53)\).

**Analytic strategy**

Ferraro (1993) distinguishes between addressing health pessimism either conceptually or analytically.

(footnote continued)

access and no measures that tap differences among blacks and whites in terms of the quality of health care are used. This should be considered when interpreting the results of this study.

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1Blacks are also significantly less likely than whites to be properly diagnosed by a physician which may contribute to the identification of blacks as relatively pessimistic regarding their health. For example blacks are less likely than whites to receive important and necessary medical interventions (Williams, 2001), aggressive treatment procedures (Schapira, McAuliffe, & Nattinger, 1995), or therapeutic procedures necessary for long term recovery (Harris, Andrews, & Elixhauser, 1997). In the present study, only relatively crude measures of health care...
Conceptually, “health pessimism may be said to exist when a person assesses his or her health as substantially poorer than others who have similar levels of morbidity and functional limitation—what we would expect in comparison to others with similar health problems” (p. 203). Analytically, the identification of health pessimism is “accomplished by regressing subjective health on objective health and determining whether the residual is significantly related to other characteristics” (p. 203). Accordingly, in this paper a multivariate logistic regression model is specified in which the dependent variable (poor/fair self-rated health) is modeled as a function of morbidity (serious and chronic illnesses), activity limitations, and race. If the coefficient for race (black = 1) is positive and statistically significant then black respondents are operationalized as health pessimistic compared to whites. If black adults are more likely than whites to be health pessimists because of exposure to maltreatment from individuals and institutions then the inclusion of controls for maltreatment should render the effect of race statistically non-significant.

In addition, statistical controls for three possible confounding characteristics are included in all models: (1) medical care access; (2) health-related behaviors; and (3) socioeconomic status. First, it is possible that the marginalization of black adults from quality health care providers (see Mayberry, Mili, & Ofili, 2000 for an extensive review of this literature) explains race differences in health pessimism. In a well-cited study, Blendon, Aiken, Freeman, and Corey (1989) show marked race differentials in access to, utilization of, and satisfaction with medical care among blacks and whites. Similarly, Bartman, Moy, and D'Angelo (1997) find that, net of socioeconomic status and current health levels, blacks are significantly less likely to have had physician contact in the past year. In addition, blacks are significantly more likely to be uninsured and less likely to have a usual source of health care compared to whites (NCHS, 2000). Because self-reported morbidity items are generally worded “Has a Doctor or health professional told you that you have any of the following…” poor ratings of subjective health status may be an accurate assessment of physical health status among black respondents that is not captured by knowledge of existing illnesses. Second, it is also possible that race differences in health-related behaviors explain race differences in health pessimism. For example, Idler et al., (1999) find that when asked why they chose a particular health self-rating, respondents referenced a number of specific health behaviors that they either engaged in or avoided that either negatively or positively affected their health, such as exercise, diet, and general activity. Related studies reiterate the importance of health-related behaviors in terms of individuals’ assessments of their overall health (Groves, Fultz, & Martin, 1992; Krause & Jay, 1994). Therefore, observed differences among blacks and whites in the rate of smoking (Leischow, Ranger-Moore, & Lawrence, 2000), physical inactivity, and obesity (Behavioral Risk Factor Surveillance System, 2000) may help to account for black–white differences in self-rated health.

Third, previous research indicates that more educated adults are significantly less likely that those with relatively low levels of education to be health pessimists (Idler et al., 1999). Given the pronounced differences among black and white adults in terms of socioeconomic status (Blank, 2001) it is important to adjust for these characteristics when assessing race differentials in health pessimism. Accordingly, all multivariate logistic regression models (Table 3) include controls for socioeconomic status, access to health care providers, and health-related behaviors (these variables are described above).

**Results**

Table 2 presents morbidity rates for serious and chronic illnesses among black and white adults in the Detroit Area Study. Of the thirteen illnesses, blacks report higher rates on five outcomes, however only one (high blood pressure) is statistically significant. Whites report significantly higher rates of high cholesterol and cancer compared to blacks but apart from these differences there are no observed differences in serious or chronic illnesses among whites and blacks. Blacks do report slightly elevated rates of functional limitations compared to whites, but, this difference is only modestly significant (p < 0.09). Therefore, according to these measures of objective health status we might expect whites to report similar (or worse) self-rated health compared to blacks. Instead, 23.34% of black respondents compared to only 12.82% of whites report relatively poor self-rated health ($\chi^2 = 17.38, p < 0.001$). As with previous work in this area (Ferraro, 1993; Ferraro & Farmer, 1999; Maddox, 1962) the two-fold increase in the percentage of respondents reporting their health to be “fair” or “poor” compared to the moderate to negligible differences in physical morbidity provides initial support for Hypothesis 1 (blacks are more likely than whites to be health pessimists).

The estimates presented in Table 3 are obtained from two multivariate logistic regression models in which the dependent variable is coded 1 if respondents reported “Fair” or “Poor” health and 0 if otherwise. Model 1 controls for race, age, sex, socioeconomic status, self-reported morbidity, functional health status, health care access, and health related behaviors. According to these results more educated adults are less likely to be health pessimists compared to those with lower levels of education. Smoking status is strongly associated with
elevated risk of health pessimism such that current and former smokers are almost twice as likely as those who have never smoked to be health pessimistic. And physically inactive adults face a 75% increase in the relative odds of health pessimism compared to those who exercised recently. Likewise, as expected, when comparing person’s with similar health levels, those who wanted to see a physician in the past year but were unable to report worse self-rated health status compared to those who were able to see a doctor. Nevertheless, despite this extensive array of statistical controls, blacks continue to be more than twice as likely as whites to be health pessimists (OR=2.20). Not only is the magnitude of the effect large but this effect is highly significant \((p<0.01)\). As with descriptive statistics presented in Table 2, these findings provide further support for Hypothesis 1.

Hypothesis 2 and 3 are examined in the Model of Table 3. First, results indicate that those who perceive maltreatment from others in their day-to-day activities are significantly more likely (OR = 1.34, \(p<0.001\)) to be health pessimists compared to those who report relatively low levels of maltreatment (support for Hypothesis 2). The relationship between perceptions of institutional-based maltreatment and health pessimism, while operating in the expected direction, is not significantly different from zero. The inclusion of these two variables significantly improves the model fit as indicated by the likelihood ratio test (\(\chi^2 = 14.00, \text{d.f.} = 2, p<0.001\)) and more importantly, the coefficient for non-Hispanic black in Model 1 (OR = 2.20, \(p<0.01\)) is significantly reduced in Model 2 (OR = 1.57, \(p<0.25\)) and becomes statistically indistinguishable from zero. These findings indicate that the perception of maltreatment mediates the relationship between race and health pessimism observed elsewhere (Ferraro, 1993) and supports Hypothesis 3. It is also worth noting that Model 1 reports a 25% increase in the relative odds of reporting health pessimism among those who were marginalized from health care providers but this effect is eliminated after controlling for perceived unfair treatment suggesting that those who perceive elevated levels of unfair treatment may also perceive relative difficulties in accessing important health care resources.

Two important dimensions of this relationship were also considered. First, as discussed elsewhere (see Krieger, 2000 for a review), people may perceive that they are being treated unfairly for a number of reasons including but not limited to their racial or ethnic identity. The analyses presented here do not differentiate between unfair treatment because of respondents’ race, age, gender, sexual orientation, or disability. Rather, perceptions of unfair treatment are considered to be more globally understood. It is also important to consider the possibility that the specific reason individuals understand themselves to be treated unfairly could have important consequences with respect to health outcomes. For example Krieger and Sidney, (1997) find

| Table 2 |
| Race differentials in physical morbidity, functional health, and self-rated health |
| | Non-Hispanic white \((n = 520)\) | Non-Hispanic black \((n = 586)\) | Pr \(|W − B| = 0\) |
| **Self-reported morbidity** | | | |
| High blood pressure | 24.78 | 31.31 | 0.032 |
| Stroke | 3.26 | 2.34 | 0.452 |
| Heart attack | 13.79 | 11.09 | 0.251 |
| Diabetes | 6.62 | 9.23 | 0.153 |
| Cancer | 6.06 | 2.60 | 0.032 |
| Arthritis | 19.22 | 22.70 | 0.215 |
| Ulcer | 8.45 | 9.30 | 0.677 |
| Asthma | 8.95 | 9.62 | 0.748 |
| Liver problem | 3.12 | 2.31 | 0.494 |
| Kidney problem | 7.29 | 7.12 | 0.921 |
| Bronchitis | 7.61 | 5.15 | 0.171 |
| Blood circulation problem | 7.20 | 8.45 | 0.506 |
| High cholesterol | 22.54 | 15.15 | 0.012 |
| **Functional health status** | | | |
| Activity limitations | −0.04 (0.69) | 0.04 (0.85) | 0.088 |
| **Self-rated health (good, very good, excellent)** | | | |
| Fair or poor | 12.82 | 23.34 | 0.001 |

Source: 1995 Detroit Area Study \((N = 1106)\); all data have been weighted.

Note: Cell entries represent percentages for categorical variables and means (standard deviation) for continuous variables.
that the elevated rates of perceived maltreatment among gay and lesbian men and women were moderated in important ways by gender and race. More importantly, Cochran and Mays (1994) find that mental health outcomes are more strongly affected by perceptions of discrimination and maltreatment when the reason for the maltreatment is made explicit (e.g., race related or gender specific). For each aspect of perceived maltreatment from institutions and in a summary fashion for all aspects of perceived individual maltreatment, the Detroit Area Study asked respondents to report “the main reason for these experiences” including ethnicity.
gender, race, age, religion, physical appearance, sexual orientation, and class. To examine these relationships empirically, a number of ancillary analyses (results not shown) were performed but in all cases the inclusion of controls for the source of perceived maltreatment did not change the substantive findings presented above. Second, two important papers (Saldago de Snyder, 1987; Finch et al., 2000) find elevated rates of depression among adults who perceive that they are being treated unfairly or discriminated against. Because depression has been linked to changes in self-rated health status, independent of changes in physical health status (Han, 2002) additional analyses were performed (results not shown) in which statistical controls for depressive symptoms were included in the multivariate models presented in Table 3 however this control did not change the substantive findings above.

**Discussion**

The findings from this paper make several important contributions to the social epidemiology of race and ethnicity. First, the increased risk of health pessimism among blacks is important because perceptions of global health status are consistently evidenced to impact subsequent health and disability. When comparing those with similar levels of objective health status, those who report relatively poor self-rated health status in initial observations are more likely to have worse objective physical health in follow up studies. For example, Ferraro et al. (1997) find that self-rated health acts as an independent contributor to individuals’ health trajectories. In their words, “[d]espite changes in chronic illness across waves, there is something unique about health assessments that is related to change in disability” (Ferraro et al., 1997, p. 48). Similarly, Lyness et al. (2004) follow 247 older adults and find that initially poor levels of self-rated health contribute to significant declines in functional abilities independent of changes in physical health status and conclude by issuing an attention to clinicians to regularly assess their patients’ self-assessed health status. This conclusion is bolstered by evidence from Idler and Benyamini (1997) as well. For example, Indler & Benyamini, (1997) find that poor self-rated health status is associated with increased risk of health problems, less engagement in preventive or proactive health practices, and increased risk of poor health behaviors such as smoking and physical inactivity (Idler & Benyamini, 1997). Moreover, health pessimists may be more likely to ignore a doctor’s recommendations, less likely to take prescribed medication regularly, and less likely to pursue a specialist for treatment. Although it is not possible to test these relationships with the data in these analyses, the finding that black adults are more than twice as likely as white adults to be relatively pessimistic about their health is particularly important because it is possible that increased risk of poor health outcomes and subsequent mortality among blacks (Rogers, Hummer, & Nan, 2000) may be due in part to poor health assessments earlier in life.

Second, researchers have long known that perceptions of unfair treatment from others because of gender (Krieger, 1990; Mays & Cochran, 2001), sexual orientation (Meyer, 1995; Krieger & Sidney, 1997), disability status (Li & Moore, 1998; Mudrick, 1997), and race/ethnicity (Krieger, 1990; Krieger & Sidney, 1996; Williams et al., 1997; Amaro, Russo, & Johnson 1987; Finch et al., 2000; Kessler et al., 1999; Brown et al., 2000) is associated with a host of important mental and physical health outcomes. Despite this large body of work, researchers remain somewhat unclear about the psychological and physiological processes that link perceptions of unfair treatment to physical health. Indeed, some have described work in this area to be in its “infancy” (Krieger, 2000, p. 36). One of the explicit goals of this paper was to address some of the substantive shortcomings in this important body of work. In particular, based on the findings presented here, it is possible that some of the observed impact of perceived maltreatment on health is operating through increased risk of health pessimism among blacks and other groups who routinely perceive maltreatment from others. It is not possible to evaluate the impact of health pessimism on black and white health trajectories with the data used in the present analyses however this relationship should be given careful consideration by researchers in this area.

Third, these findings highlight the importance of differentiating between the measure of unfair treatment and the level at which perceived maltreatment is occurring. Krieger (2000) explains that discrimination may impact health either indirectly or directly. These effects not only differ from one another conceptually but the ways in which researchers measure these phenomena differ as well. For example, indirect effects are only identified by inference based on social, physical, and economic characteristics that are believed to be associated with processes of discrimination and unfair treatment. The traditional method to identify indirect effects of discrimination is to control for all “known risk factors” (e.g., socioeconomic status, exposure to stressors, access to health-related resources) and any remaining difference among racial and ethnic groups is operationalized as due to discrimination. And although this approach has furthered our understanding of the social determinants of health, as Krieger (2000, p. 47) says: “existing research relying upon indirect strategies to measure health effects of discrimination provides precisely this: indirect evidence.”

Direct effects, such as the measures used in the present analyses, rely on measurements of perceived unfair
treatment obtained from respondents and they differ from indirect effects in that they are observed phenomena. Although the question format, time period, reference group, and setting differ across studies, researchers will typically ask respondents to report how frequently they perceive that they have been discriminated or treated unfairly against by others. This paper elaborates on this distinction by differentiating between direct effects operating at both the interpersonal and institutional levels. In other words, it is important to describe and document modern and aversive forms of racism (Bonilla-Silva, 1997; Dovidio, Gaertner, Anastasio, & Sanitioso, 1992) but it remains critical to social scientists and social epidemiologists to continue collecting information regarding the frequency with which racial and ethnic minorities perceive discriminatory and unfair treatment in the course of their day to day lives and to continue their efforts to highlight the social determinants of health, disease, and disability (Berkman & Kawachi, 2000).

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