Does SES Explain More of the Black/White Health Gap than We Thought? Revisiting our Approach Towards Understanding Racial Disparities in Health

Extended Abstract

Elucidating and explicating the sources of the enduring black/white health disparities in the U.S has been shown to be a formidable challenge. Given the strong linkages between health and SES, and the well-documented differences in SES across racial/ethnic groups, it follows that SES may account for racial/ethnic disparities in health. Yet, while most research indicates that racial disparities in health are substantially reduced after accounting for differences in SES across racial groups, they are rarely fully explained. On a consistent basis, analyses of black/white health disparities exhibit unexplained residual variation net of measured differences in socioeconomic status.

The stakes for appropriately accounting for residual variation in racial health disparities are high. The inability of social factors to explain existing disparities has become the rationale for a new class of genetic studies that suggest genetic factors which are differentially distributed across sub-populations are the cause of racial health disparities. Often this takes the form of the hypothesizing genetic mechanisms as the cause of a disparity after adjusting for a set of covariates fails to explain the difference.

We contend that the residual variation that has proven so persistent may be the result of methodological problems that have prevented past studies from fully accounting for racial differences in health outcomes. These include inadequate attention to the measurement and conceptualization of SES and inadequate adjustments for SES differences across racial groups. This paper examines the black/white disparity in self-rated health and attempts to overcome the aforementioned weaknesses by utilizing longitudinal data from the 1997-2007 Panel Study of

Income Dynamics, improved, multi-level measures of SES (i.e., long term income, wealth, and neighborhood poverty), and a statistical adjustment strategy that allows for greater transparency for determining whether covariate balance has been achieved (i.e., propensity-scoring weighting).

Research Questions

We attempt to better specify the relationship between race and health by using long-term and multi-level measures of SES to more comprehensively capture the heterogeneous socioeconomic histories between blacks and whites that single point measures cannot. Moreover, we focus on achieving covariate balance between blacks and whites so that proper comparisons and inferences can be made. As opposed to conventional regression strategies which do not explicitly distinguish the treatment variable from the host of covariates included in the regression model, we use a propensity score strategy which directly models group membership (i.e., black vs white) and tests for covariate balance. Both approaches help reduce potential levels of residual confounding that lead to bias in racial health disparity estimates.

The two key research questions are: 1) how much of the black/white health disparity can be accounted for with a better operationalization of SES? and 2) how much of the black/white health disparity can be accounted for by utilizing statistical models that directly attempt to achieve covariate balance between blacks and whites?

Results

This study investigated two possible explanations for the persistence of the black/white health gap, net of conventional adjustments for socioeconomic status. We first examined whether adjustments using better and more complete measures of socioeconomic status (i.e., long-term

family income, wealth, and neighborhood poverty) further explained the black health disadvantage. Although greatly attenuated, a significant racial health disparity remained unexplained even after adjusting for our complete list of individual and neighborhood factors. In comparison, the combined propensity/regression adjustment was able to account for the entire black/white health gap.

The results suggest two salient conclusions: 1) single point measures of socioeconomic status do not adequately capture the life-course experiences between blacks and whites, and 2) divergence in results between the conventional regression models and propensity score regression adjustments suggests that previous studies may have inadequately adjusted for differences in SES across race and relied on extrapolation based on model specification. Collectively, our results imply that previous studies may have underestimated the extent to which socioeconomic factors can explain racial health disparities. That is, the racial health gap that has persisted even after adjustments for socioeconomic factors in previous studies may be due to poorly measured and/or omission of socioeconomic factors and insufficient covariate balance with which to make proper comparisons. In contrast, the results from the propensity score models favor a strictly socio-structural explanation for racial health disparities, rather than an explanation that relies on post hoc hypothesis of residual/unexplained health disparities. Our conclusions suggest that the practice of using unexplained variation in racial health disparities as a rationale for post-hoc hypotheses, such as genetic predisposition, has been premature. At least in the case of self-rated health, more nuanced measures of SES and a more precisely designed statistical strategy that directly models race membership account for the entirety of observed racial health disparities.