

Editorial

When Does Race Matter?

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Public consciousness of race in American society has been greatly heightened over the past few years with the revelation of black deaths during police actions, the rise of the Black Lives Matter movement, and by various utterances, as well as policies against Mexicans and other immigrant groups by the current US President. The importance of race has long been observed by social epidemiologists studying wide disparities in health among race groups in the USA (US CDC, 2013). A key component of these disparities, and likely on the causal pathway between race and health, are the large and widening disparities in income, wealth, and educational attainment among racial groups, leading to unequal opportunities for high-quality employment (Burgard and Lin, 2013). At the same time, there is wide consensus among biologists and geneticists that race has little, if any biological importance (Lee *et al.*, 2008). For instance, the degree of inter-individual variability in genotypes vastly outweighs variability between groups of humans (Race Ethnicity and Genetics Working Group, 2005). As a result, the concept of race is now thought of as a ‘social construction,’ that is, a set of norms and assumptions largely agreed upon by a population. The social construction of race is affirmed by the fact that the definition of race changes over time and varies by country. For instance, the US defines race (White, Black, Asian, American Indian, Hawaiian, or Pacific Islander) and ethnicity (Hispanic, non-Hispanic) separately (NIH, 2001), South Africa defines race using historical legacies (African, Asian, Coloured, White), and France has long required “colour-blind” or race-neutral policies and practices.

Given the socio-economic and health disparities among race groups, and the lack of substantial biological differences among them, what role does race play in occupational health and hygiene? In a famous series of articles by Lloyd and co-workers in the 1970s (Redmond, 1983), it was demonstrated that while race was strongly associated with lung cancer risk among steelworkers, it was not the biology of race, but the social segregation of black workers to the most highly exposed jobs on the coke oven topsides that determined the strongly elevated risk. In addition to highlighting the inequity associated with racially determined job assignments, these studies helped demonstrate the central role that quantitative exposure assessment should play in understanding occupational risks. These analyses also help show why using race, even unintentionally, as a surrogate for differences in exposure can lead to highly misleading conclusions about susceptibility among groups of workers. Further, misuse of race or other social constructs in our research can inadvertently contribute to structural inequities in employment and health.

In this issue, Maganyi *et al.* (2017) from South Africa demonstrate a careful disentangling of socially determined race classification with biological differences which may give rise to differential exposures and risk. While considering the determinants of respirator fit among a diverse group of male and female health care and laboratory workers, they present results by officially defined South African racial categories, but do so in conjunction with race and gender-neutral measurements of relevant facial dimensions. While the demographic

classifications may help to explain some of the differential job assignments and availability of protective measures which lead to disparities in exposure and thus risk, it is facial dimensions and not race that are ultimately associated with the degree of respirator fit. When both demographic and facial dimensions are used in a multiple regression model, only the measured values remain significant predictors of respirator fit.

The *Annals of Work Exposures and Health* publishes studies that help us understand the determinants of work-related risks to health, whether those risks are socially defined, or biologically mediated. When those determinants include socially defined classes, such as race, gender, age, or other indicators of vulnerable populations, we endorse the use of such variables for analysis. However, if social demographics are used as a poorly defined surrogate for exposure, or for some unspecified biological differences, their use should be avoided. In all cases, we encourage authors to think clearly about how and why they are classifying people into demographic groups, and what is intended by those classifications. The rationale for use of demographic variables should be clearly delineated in any paper choosing to make such distinctions.

Declaration

The author declares no conflict of interest for this editorial.

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