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Relative differences in outcomes tend to be larger where the outcomes are rarer

In exploring effects of the interactions of race and class on racial disparities in health, Kawachi et al. [1] note that "it is not uniformly the case that racial disparities are largest among the most socioeconomically disadvantaged groups (as would be suggested if class position were the major mediating factor between race and health). For notable health outcomes, such as low birthweight (a major contributor to infant mortality), the black-white disparity in the prevalence of this condition actually increases with higher levels of educational attainment." They then note that the finding is "incompletely understood," though unlikely to be a result of biological differences.

Without commenting on the implications of the described pattern with regard to interpreting interactions of race and class, I suggest that the reason for the pattern ought to be clear enough. The rarer an outcome the greater tend to be relative differences between rates of experiencing it (though the smaller tend to be relative differences between rates of avoiding it). Thus, racial disparities in adverse outcomes tend to be large among the better-educated and other higher-socioeconomic groups simply because adverse outcomes rates tend to be low among such groups (while racial disparities in rates of avoiding those outcomes tend to be small among such groups).[2-7] (References 3 and 5 specifically discuss the article cited by Kawachi et al. regarding low birthweight disparities.) For the same reasons, socioeconomic differences in adverse outcomes tend to be larger among whites (where such outcomes are rarer) than among blacks (where such outcomes are more common), while socioeconomic differences in avoiding those outcomes tend to be larger among blacks than whites, as discussed in references 3 and 4.

The failure to understand these tendencies (as well as the way other measures of differences between rates are affected by the overall prevalence of an outcome) of course calls into question any effort to quantify the size of health disparities. But, as reflected by the discussion of Kawachi et al. as to the ways the comparative size of disparities within particular subgroups may affect the interpretation of roles of race and class, the failure to understand these tendencies may affect the interpretation of a variety of issues. For example, in the United Kingdom, the fact that relative differences in mortality rates are greater among British civil servants (a comparatively advantaged and homogenous group) than in UK society at large has been found to suggest that psychosocial factors may play as important a role in socioeconomic inequalities in health as material deprivation. Such interpretation overlooks that among British civil servants relative differences in mortality will tend to be large (and relative differences in survival will tend to be small) simply because mortality is low among British civil servants.[7] Thus, mastering measurement issues is often a crucial precondition to the analysis of causal factors.

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