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Comments on Potential for Conceptual Bias in Studies of Racial Disparities in HIV Infection

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We appreciate Scheim et al.'s¹ careful read of our article and find little to disagree with in their comments. We are gratified that they found our hypotheses well matched to our analysis methods and appreciate that their concerns are with the interpretation of our results—and results like ours—and not our methods or analyses. Here, we respectfully disagree with some points of their commentary; we believe that their primary criticisms arose from asserting that our interpretation of our results was a conclusion based on a study hypothesis and from failing to fully distinguish our measure (perceived homophobia at the individual level) from higher-order (institutional and structural) homophobia or racism.

Because our results did not support our hypothesized association between perceived homophobia and prevalent HIV infection in either black or white men who have sex with men (MSM), we suggested that perceived homophobia was not a good candidate for explaining the disparity in HIV infection between black and white MSM. Perceived homophobia was measured in both black and white men: medians were somewhat higher in black men but distributions were roughly similar, and in neither group was it associated with prevalent HIV infection (also true for resiliency). We think this is a reasonable interpretation of our results—and one that would be strengthened if these correlational results are replicated by others. But it remains an interpretation of our findings, not a specific hypothesis of our study. Scheim et al. write that we conclude our findings “do not support the hypothesis that perceived social discrimination explains the disparity...” We would prefer “do not support the interpretation...” because readers might mistakenly conclude that our research hypotheses were about disparity. In fact, our research aims were clearly enumerated and did not include analyses of disparities as a research aim.

True, in our discussion section we wrote that “Overall, our findings *suggest* [italics added] that the perceived social discrimination does not explain the striking racial disparity in HIV infection between black and white MSM.” Subsequent sentences, which did not mention perceived racial discrimination, clarified that in this context social discrimination is about perceived homophobia. Nonetheless, perhaps instead of the more general term *social discrimination*, we should have written that perceived homophobia did not explain the

disparity. Which brings us to the central issue of Scheim's et al.'s concern about conceptual bias.

Scheim et al. suggest an interesting extension to the concept of Type III error^{2,3} to include not just methods and analysis, but interpretation as well. As Shiem et al. (citing Schwartz and Carpenter) noted, Type III error can occur when there is a mismatch between the *intended research question* and the *analysis methods* used to address the question. When (a) the primary question concerns the cause of group difference (e.g., what causes the racial disparity in HIV infection rate between black and white MSM), and when (b) the cause of the disparity between groups is different from the cause of variation within groups, and when (c) only within-group analyses are used (e.g., the analyses stratified by race as in our article), then the mismatch between question and methods results in Type III error—providing the right answer for the wrong question. Our research questions concerned associations of HIV infection with perceived homophobia and resiliency in white MSM and with perceived homophobia, perceived racism, and resiliency in black MSM; thus Type III error is not an issue for these inherently within-group comparisons. However, when interpreting our findings as claiming that perceived social discrimination does not explain the racial disparity in HIV infection, Scheim et al. suggest that Type III error may have been introduced in the interpretation of the results.

If, in the context of our discussion section, social discrimination is understood as perceived homophobia as we intended, then Type III error does not seem an issue. If understood as also including racial discrimination, then matters become more complex. It is important to distinguish—as we, Scheim et al., and many others do—between perceived racial discrimination (something that can vary among individuals) and interpersonal and structural racism (something that can distinguish groups). When discussing Type III error, Schwartz and Carpenter were especially concerned with unidentified, largely invariant factors that distinguish groups and may cause group differences. One of their examples concerned black-white differences in infant mortality, which are found even within similar socioeconomic strata. They noted that a risk factor that is ubiquitous within a group (exposure to discrimination is their example) would not be identified by within-group analyses. True, but invariant features of groups, which are often conceptual and assumed as opposed to measured, are myriad: Can simply naming plausible ones be sufficient to guard against interpretive Type III error?

In our study, perceived racism varied among black men and was not associated with HIV infection; this is simply the result of a within-group analysis of an individual-level variable. If we had interpreted this as indicating that racism was not responsible for the black-white disparity in HIV infection, we would certainly be making the sort of Type III conceptual error with which Scheim et al. are rightly concerned. Worse, we would be conflating individual-level perceived racism with structural racism, a presumed invariant feature that distinguishes the groups. Scheim et al. write of our analysis that it “did not assess the interaction between being black and experiencing greater levels of racism, an interaction implied by the interpretation concerning the racial disparity in HIV prevalence.” As we hope has now been made clear, this is not an implication we intended.

Instead—and here we absolutely agree with Scheim et al. when they write that “Understanding underlying mechanisms for disparities in HIV prevalence and incidence remains an important focus in HIV research”—the challenge is to identify those relatively invariant features of black and white groups that do account for the HIV infection disparity. As mentioned previously, simply naming ways in which groups differ is not enough: mechanism-revealing research of the sort Scheim et al. suggest is sorely needed.

In sum, when Scheim et al. write that “it is premature to conclude that social discrimination does not explain disparities in HIV infection,” they may be conflating several concepts—one of which (perceived homophobia) we suggest likely does not account for disparities, and several of which (institutional and structural racism and homophobia) we explicitly state “may not be sufficiently demonstrated by perceived discrimination.” In our discussion, we suggested some pathways through which higher-order discrimination might indeed shape disparities, and Scheim et al. suggested more. If, as they suggest, we have inspired them (or anyone else) to “reinvigorate research in the area of social predictors of HIV disparities,” we would be extremely gratified.

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