Racial Disparities in HIV Tests: Better Explanation Needed

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ABSTRACT

Black people, people of African ancestry, test positive for the human immunodeficiency virus (HIV) at rates that are a significant multiple of those for people of non-African ancestry.

There is no empirical evidence to support the widely accepted explanation that there is a significant frequency of surreptitious, unacknowledged homosexual behavior by black bisexual males. This recalls traditional racist myths about super-aggressive sexual behavior by black men. An alternate explanation, supported by the evidence, is that people of African ancestry produce stronger immune responses than others and also suffer disproportionately more from a number of negative health conditions that may produce false-positive HIV-test results.

Racial Disparities in HIV Tests

From the very earliest widespread testing for HIV and continuing to date, the rate at which people of African ancestry test "HIV-positive" has been a large multiple of the rate at which people of non-African ancestry test "HIV-positive."[1,2]

That is illustrated, for instance, in the testing of potential recruits by the U.S. armed forces, for which consistent data are available for about four decades, since the beginning of routine testing: From 1986 to 2004, black potential recruits tested HIV-positive between 5 and 10 times more frequently than white potential recruits. The most recent data show something like the same risk-ratio now as for teenaged potential recruits during those two decades. African-Americans constitute about 12% of the population but account for 40% of new HIV infections (ratio 0.3); by contrast, 61% of the population is classified as white but contributes only 26% of new HIV infections (ratio 2.35);[2] the relative-risk ratio is therefore nearly eight (2.35/0.3 = 7.8).

Aside from the widely accepted "down low" assumption,[3,4] there are hand-waving generalities, for example, "HIV stigma, racism and discrimination, homophobia, and socioeconomic conditions." These "also present higher barriers to treatment for people of color in the United States. All these factors are interdependent with a high rate of underdiagnosis."[5]

It is stated that "Black/African American people account for a higher proportion of new HIV diagnoses and people with HIV, compared to other races and ethnicities. Racism, HIV stigma, homophobia, poverty, and barriers to health care continue to drive these disparities…. Racism, systemic inequities, social and economic marginalization, residential segregation, and other longstanding barriers are key drivers of the disproportionate impact of HIV among Black or African American (hereafter referred to as Black) communities in the U.S."[6]

However, the supposedly explanatory circumstances of socioeconomic marginalization, residential segregation, poverty, etc. , affect indigenous Native Americans at least as much as they do African Americans; yet the frequency of testing HIV-positive among indigenous Americans is barely more than that among white Americans.[1]

Among insiders, moreover, the standard explanation is not this vague, unspecified pointing to socio-economic hardships; it indicts differential *behavior* by black males. Presumably, that is not emphasized in official public statements since it could remind people uncomfortably of traditional racist stereotypes of sexually aggressive black men.

When I had first sought an explanation for the racial disparities from the Centers for Disease Control and Prevention (CDC), I had presumed that the old stereotype would have long been discarded and that a specific and substantive explanation other than behavioral might be forthcoming. However, I received a reply stating that the racial disparities in HIV/AIDS *were* explainable on behavioral grounds: "The 'characteristic differentiation by race' that you note is *compatible* [emphasis in original] with a behavioral explanation."[3]

Furthermore, a technical publication from the CDC contributes details of the purported behavioral explanation:

> Conclusion: The high prevalence of HIV in the black community and the greater likelihood of bisexuality among black men place heterosexual black women at risk for HIV infection. However, the contribution of high-risk heterosexual black men to the rising HIV caseload among black women has been largely ignored. Future research must evaluate the relative contributions of bisexual men and exclusively heterosexual black men to HIV cases among black women.[4]

Other statements from CDC also reflect a presumption of much secret, unacknowledged homosexuality among black men: "Most (79%) new HIV diagnoses among African American/Black men were attributed to male-to-male sexual contact."[7]

This explanation gained sufficient prominence that it influenced some proportion of black women, and then became a subject of several studies.

> The phenomenon of down low sex, wherein men involved in monogamous relationships with women seek extrarelationship sexual relations with men, has gained recognition in recent years. Acceptance of this explanation stimulated such reactions from African-American women as "(a) being betrayed and losing trust; (b) reflecting upon the features of the past relationship; (c) seeking the positive aspects of the past relationship; (d) being ashamed before God, community, and family; and (e) assuming the caregiver role and sharing the burden of illness."[10]

Another article states:

> African American women are disproportionately affected by HIV…. Popular media discourse tends to refer to these men as "Down Low" or "DL" … [thereby stimulating] six central subcategories related to women's perspectives on the "DL": awareness; suspicion; coping with partner infidelity: male vs. female; sexual health communication; empathy; and religion. No major differences were identified between the HIV positive and HIV negative focus groups. Findings from this study provide insight into African American women's perceptions of African American male sexuality and how these perceptions serve to influence interpersonal relationship factors and women's exposure to HIV risk.[11]

On the other hand, actual investigation of sexual behavior among black men could find no support for the "down-low" hypothesis.

An interview on National Public Radio was entitled: "Myth: HIV/AIDS Rate Among Black Women Traced To 'Down Low' Black Men."[12]

Bond et al.[13] assessed the relationship between down-low identification and sexual risk outcomes among 1151 Black MSM. Down-low identification was not associated with unprotected anal or vaginal sex with male or female partners".[13]

Researchers at Public Health Management Corporation found that "black men on the down low spread HIV/AIDS at same rate as non-down low men."[14]

Nevertheless, HIV/AIDS theory itself seems to entail inevitably an explanation for the racial disparities in HIV testing that is not very different from the "down low." The theory takes as axiomatic that HIV is an infectious, sexually transmitted agent, and that the risk of transmission is significantly greater with homosexual practices than with "vanilla" heterosexual activity. Therefore, when an identifiable group "has HIV" more frequently than other groups, what other explanation than sexual behavior can there be?

Global Distribution of Frequency of HIV-positive Tests

Most of the detailed information about HIV tests, and those explanations for racial disparities, are specific to the U.S. But the racial disparities show up all over the world. In the United Kingdom, 37% of HIV+ diagnoses in 2021 were people of African ancestry,[15] who constitute only about 3% of the population; the risk ratio is about 12. In South Africa, that ratio is enormous at approximately 55 (20.45/0.37).[16]

The disproportionality is in fact *global*, as illustrated in Table 1, which lists the 18 countries where the World Bank's data reports[17] an HIV+ prevalence appreciably greater than 1%. Dark skin or black-African ancestry is the obvious commonality, with only Guyana and Suriname in South America as outliers, both with small populations where minority groups could contribute disproportionately to the overall average. All the other listed countries lie in the southern half of Africa.

Country	Population size x 10^6	% HIV-positive[17]
Eswatini	1.2	14.9
Lesotho	2.3	8.1
South Africa	60	6.9
Botswana	2.6	6.0
Equatorial Guinea	1.7	5.8
Namibia	2.6	5.2
Zambia	20	4.0
Congo Republic	6	3.8
Uganda	47	2.4
Zimbabwe	16	2.4
South Sudan	11	2.0
Guinea-Bissau	2.1	1.6
Tanzania	66	1.6
Gambia	2.7	1.4
Kenya	54	1.2
Suriname	0.6	1.2
Gabon	2.4	1.1
Guyana	0.8	1.0

Table 1. HIV positivity and size of population

It seems that dark skin is associated quite disproportionately with a tendency to test HIV positive. For example, the population-average rate of HIV-positive in the United States is only 0.2%; in Ukraine 0.3%; in Afghanistan 0.1%; in Australia, 0.0% (i.e. <0.1%). That seems more likely to come about if testing "HIV-positive" has a genetic component and does not simply detect a retrovirus—in other words, if *false-positive* HIV test-results are common in people with black-African ancestry.

HIV tests are indeed very nonspecific; a great number of illnesses produce false-positive "HIV" tests. As previously noted, "the test is evidently a nonspecific illness test. Patients with many illnesses may react 'HIV-positive.' After the test had been in use for some time, moreover, it turned out that it could read 'positive' for conditions that are not even illnesses, such as vaccinations or pregnancy."[5]

Dark skin would be associated with a disproportionate frequency of "HIV-positive" tests if it were also associated with a disproportionate frequency of conditions conducing to *false-positive* "HIV" tests, in other words the presence of physiological stress or stimulation of the immune system. In fact, there is evidence of that. African ancestry is indeed associated with more pronounced immune-system activity than found in people of non-African ancestry: "African Americans have higher levels of oxidative stress than whites."[18] The "immune system of African Americans responds more strongly to bacterial infection."[19] Additionally, "individuals of African descent, as identified by Ancestry Informative Markers (AIMS) and those that self-identify as African American, suffer disproportionately from…inflammatory and autoimmune disease, and neurological dysfunction."[20]

Black people suffering from any of a large variety of illnesses are therefore highly likely to be told that they are HIV-positive, in addition to any other overt illness that might be present. But even asymptomatic people of African ancestry will also generate false-positive HIV tests at a higher rate than others in general population-screening surveys, because they are more likely to have such relatively asymptomatic or undiagnosed chronic conditions as cardiovascular disease or diabetes, and they are also somewhat more likely to be obese or to smoke.[6]

Discussion

A non-behavioral explanation for the frequent association between black-African ancestry and positive HIV-tests is feasible based on highly nonspecific nature of the tests and the high rate of false-positive results, together with the known association between African ancestry and readier stimulation of the immune system. The currently accepted behavioral hypothesis is also questionable since it implies that behavioral traits are hereditary, which was the basis for the long-discredited eugenics movement.

A non-behavioral explanation is desirable not only for avoiding old racial stereotyping and the psychological strains on HIV-positive black women in wondering about their partners' activities. A recognition of the high frequency of false positives should bring with a "positive" test result a determined search for other morbidities than HIV, rather than an automatic prescribing of antiretroviral drugs. And perhaps it could lead to better, more specific tests. Both possible consequences could decrease the number of people taking antiretroviral medications with their commonly toxic side effects.

Conclusion

There is a large discrepancy in the rate of HIV-positive tests between black and white patients. There is no empiric evidence for the presumed behavioral explanation. Many of the results are

likely false positives, based on genetic traits and a higher incidence of chronic conditions.

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