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## Intersecting Structural Oppression and Black Sexual Minority Men's Health

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### Abstract

**Introduction:** Although evidence indicates Black gay, bisexual, and other sexual minority men experience vast psychological and behavioral health inequities, most research has focused on individual rather than structural drivers of these inequities. This study examines associations between structural racism and anti-lesbian, gay, bisexual, transgender, and queer (LGBTQ) policies and the psychological and behavioral health of Black and White sexual minority men.

**Methods:** Participants were an Internet-based U.S. national sample of 1,379 Black and 5,537 White sexual minority men during 2017–2018. Analysis occurred in 2019–2020. Structural equation modeling tested associations from indicators of structural racism, anti-LGBTQ policies, and their interaction to anxiety symptoms, depressive symptoms, perceived burdensomeness, heavy drinking, and HIV testing frequency. Separate models for Black and White sexual minority men adjusted for contextual and individual covariates.

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**Results:** For Black participants, structural racism was positively associated with anxiety symptoms ( $\beta=0.20$ ,  $SE=0.10$ ,  $p=0.04$ ), perceived burdensomeness ( $\beta=0.42$ ,  $SE=0.09$ ,  $p<0.001$ ), and heavy drinking ( $\beta=0.23$ ,  $SE=0.10$ ,  $p=0.01$ ). Anti-LGBTQ policies were positively associated with anxiety symptoms ( $\beta=0.08$ ,  $SE=0.04$ ,  $p=0.03$ ), perceived burdensomeness ( $\beta=0.20$ ,  $SE=0.04$ ,  $p<0.001$ ), heavy drinking ( $\beta=0.10$ ,  $SE=0.04$ ,  $p=0.01$ ), and negatively associated with HIV testing frequency ( $\beta= -0.14$ ,  $SE=0.07$ ,  $p=0.04$ ). Results demonstrated significant interaction effects, such that the positive associations between structural racism and both perceived burdensomeness ( $\beta=0.38$ ,  $SE=0.08$ ,  $p=0.001$ ) and heavy drinking ( $\beta=0.22$ ,  $SE=0.07$ ,  $p=0.003$ ) were stronger for individuals living in states with high levels of anti-LGBTQ policies. Neither of the oppression variables nor their interaction were significantly associated with outcomes for White sexual minority men.

**Conclusions:** Results highlight the intersectional nature of structural oppression and suggest racist and anti-LGBTQ policies must be repealed to rectify health inequities facing Black sexual minority men.

## INTRODUCTION

Over the past decade, major U.S. health organizations like the American Psychological Association<sup>1</sup> and Centers for Disease Control and Prevention<sup>2</sup> and have documented vast psychological and behavioral health inequities facing Black gay, bisexual, and other sexual minority men (SMM). Despite these reports, there is a dearth of research highlighting the structural causes of inequities like those in chronic psychological conditions<sup>1</sup> and HIV.<sup>3</sup> Indeed, most studies with Black SMM focus on individual-level explanatory variables<sup>4</sup> despite evidence suggesting that health inequities cannot be accounted for by differences in individual-level factors (e.g., health behavior) alone.<sup>5–8</sup> Research investigating the health effects of structural oppression has highlighted critical associations between structural racism and anti-lesbian, gay, bisexual, transgender, and queer (LGBTQ) policies with psychological and behavioral health outcomes.<sup>9,10</sup> However, these studies have not examined the synergistic effects of these 2 forms of structural oppression that both target Black SMM. To address this gap, the present study examines independent and conjoint associations between U.S. state-level structural racism and anti-LGBTQ policies and psychological and behavioral health outcomes among a national sample of Black and White SMM.

Structural racist and anti-LGBTQ oppression have their foundation in historically rooted cultural ideologies and interconnected institutions (e.g., law enforcement, local governments) that systematically label and marginalize Black sexual minority communities.<sup>11–16</sup> Structural oppression is unique from individual oppression because it is enacted through systems rather than just individuals with power and prejudice.<sup>17</sup> The intersectionality framework provides a theoretical lens through which to examine how systems of oppression (e.g., racism, heterosexism) intersect at the social-structural level to produce inequalities that drive persistent health inequities.<sup>18–20</sup> An example of how the intersection of structural racism and anti-LGBTQ policies operates in the U.S. is its carceral system, including law enforcement practices and HIV criminalization laws that vastly disproportionately affect Black SMM.<sup>21</sup> These policies, in turn, affect individual health by

increasing community-level stress.<sup>9,14,22</sup> Recent recommendations for best practices in population research assert these sources of structural oppression are consequential, yet understudied, drivers of health inequities among individuals with multiple interlocking stigmatized social positions like Black SMM.<sup>18,23,24</sup> Accordingly, there is a need for intersectionality research that investigates how structural racism and anti-LGBTQ policies jointly drive psychological and behavioral health inequities among Black SMM.

Although an accumulating body of empirical research provides evidence that structural oppression related to single axes of identity (e.g., race alone) is associated with negative health outcomes,<sup>9,10</sup> there is limited research documenting the mutually reinforcing effects of structural racism and anti-LGBTQ policies on Black SMM's health. This dearth of evidence reflects a substantial limitation in science studying the effects of oppression for Black SMM, who are a prime example of a community that is subjected to multiple, intersecting forms of oppression (e.g., racism, heterosexism).<sup>12</sup> For structural racism, available, albeit relatively limited,<sup>10</sup> research indicates that state- and county-level structural racism (e.g., White–Black inequities in housing, education, and incarceration) is associated with racial inequities in fatal police shootings,<sup>33</sup> access to health care,<sup>34</sup> myocardial infarction,<sup>35</sup> adverse birth outcomes,<sup>36</sup> BMI,<sup>37</sup> and circulatory disease–related deaths<sup>34</sup> among Black U.S. Americans.

In addition to structural racism research, studies that have examined the effects of anti-LGBTQ policies (e.g., laws restricting public services to sexual and gender minorities) have demonstrated associations between state-level oppression and negative health outcomes among predominantly White sexual minority communities in the U.S. These include links to psychological distress,<sup>25</sup> generalized anxiety disorder,<sup>26</sup> post-traumatic stress disorder,<sup>26</sup> illicit substance use,<sup>27</sup> drinking,<sup>28</sup> lower awareness and engagement in biomedical HIV prevention,<sup>29</sup> and higher odds of sexual HIV risk.<sup>29</sup> Critically, studies have even found associations between structural anti-LGBTQ policies and severe psychological distress indicators like suicide attempts.<sup>30,31</sup> In addition, a recent study found that anti-LGBTQ and antiimmigrant policies interacted to predict HIV risk and prevention among SMM in European countries.<sup>32</sup> This important research notwithstanding, the authors are unaware of any studies that have investigated U.S. state-level structural racism and anti-LGBTQ policies as independent and conjoint drivers of psychological and behavioral health inequities for Black SMM.<sup>9</sup>

To promote the explanation and rectification of persistent health inequities facing Black SMM in the U.S., this study tests associations between state-level indicators of structural racism and anti-LGBTQ policies and anxiety symptoms, depressive symptoms, perceived burdensomeness (a psychological precursor to suicidality),<sup>38</sup> heavy drinking, and HIV testing among Black and White SMM. Given evidence that structural racism is associated with negative health outcomes within Black communities, but has null or beneficial effects for White communities,<sup>35</sup> researchers hypothesize that there are negative associations between structural racism and HIV testing, and positive associations with anxiety symptoms, depressive symptoms, perceived burdensomeness, and heavy drinking only among Black SMM. Given evidence illustrating the harmful psychological and behavioral effects of anti-LGBTQ laws for SMM,<sup>26–31</sup> researchers hypothesize that there are associations between

anti-LGBTQ policies and worse health outcomes for both White and Black SMM. Finally, in alignment with intersectionality frameworks<sup>18–20</sup> and empirical findings,<sup>39,40</sup> researchers hypothesize that structural racism and anti-LGBTQ policies are synergistic for Black SMM, such that living in states with higher levels of both forms of oppression is associated with exponentially higher levels of the aforementioned psychological and behavioral health outcomes.

## METHODS

### Study Sample

The study's sample drew from the baseline data of Understanding New Infections through Targeted Epidemiology study (UNITE), a national longitudinal cohort study with SMM to better understand risk factors for HIV infection.<sup>41</sup> Recruitment and data collection occurred from 2017 to 2018. Analyses occurred from 2019 to 2020. The study team recruited a non-random purposive sample through advertisements on geosocial networking apps, social media sites, and e-mail blasts. Interested respondents completed a brief online screener that assessed eligibility criteria, including: being aged ≥ 16 years, identifying as male (including transmen), not reporting heterosexual identity, reporting HIV-negative or unknown status, reporting using any app to find sex partner(s), and sexual HIV risk in the past 6 months. Additional information on eligibility criteria can be found in the UNITE methods manuscript.<sup>41</sup>

Following the screener, participants provided informed consent online and completed an online survey assessing stress, psychosocial variables, and HIV risk. Participants received a \$25 gift card for completing the baseline. The City University of New York IRB approved all study procedures.

In total, 3,982 Black SMM and 11,616 White SMM were eligible to participate and provided contact information. Of these, 1,439 (36.1%) Black and 5,656 (48.7%) White SMM completed the enrollment survey. The analytic sample consisted of the 1,379 Black and 5,537 White SMM participants who identified as non-Hispanic Black/African American only (i.e., not multiracial;  $n=1,439$ ) or White only (i.e., not multiracial;  $n=5,656$ ), were not living with HIV (Black:  $n=1,403$ ; White:  $n=5,600$ ), had a State Racism Index score because they did not live in Washington, District of Columbia or Puerto Rico (Black:  $n=1,386$ ; White:  $n=5,564$ ), and did not have missing data for any model covariates (Black:  $n=1,379$ ; White:  $n=5,537$ ). Models excluded cases missing on covariates because estimating them as endogenous in the models would have imposed a distributional assumption of normality,<sup>42</sup> which was untenable for categorical (e.g., income) and positively skewed (e.g., age) covariates. Participants excluded for covariate missingness did not significantly differ on any primary study variables from those that were included.

### Measures

Participants reported sociodemographic information, including: subjective social status,<sup>43</sup> income, formal employment status, insurance status, recent housing instability, age, sexual identity, gender identity, relationship status, sexual identity outness, sexual positioning, and

whether they were sexually active. A Rural–Urban Commuting Area<sup>44</sup> measure of rural–urban classification and commuting was calculated using participant addresses.

The State Racism Index measured structural racism, a metric created to capture statewide racism on a scale from 0 to 100 on the following dimensions: residential segregation, incarceration rates, educational attainment, economic indicators, and employment status.<sup>33</sup> Composite scores across these dimensions ranged from 25.9 to 74.9, with higher values indicating more racism. The State Racism Index is available for 50 states, excluding Washington, District of Columbia and Puerto Rico. Additional information on the calculation and validity of this variable is available in its original publication.<sup>33</sup>

The Human Rights Campaign’s 2018 State Equality Index<sup>45</sup> measured anti-LGBTQ policies. The State Equality Index is based on statewide anti-LGBTQ policies (e.g., HIV/AIDS criminalization; permitting hate crimes, conversion therapy, and discrimination in housing, employment, and public accommodations). States are grouped into 4 categories where lower values indicate more anti-LGBTQ policies (1=*high priority to receive basic equality* to 4=*working toward innovative equality*). Because >94% of participants were in states that received the highest or lowest score, the scale was dichotomized. All estimates in the results are reversed for interpretability.

Participants completed the anxiety items of the Brief Symptom Inventory<sup>46</sup> assessing past-week anxiety symptoms. Response options ranged from 0 (*not at all*) to 4 (*extremely*). Models included items as indicators of an anxiety symptoms latent variable. The scale showed good internal consistency ( $\alpha=0.91$ ).

Participants completed the 10-item Center for Epidemiological Studies Depression scale.<sup>47</sup> Response options ranged from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). Consistent with past research on the scale’s factor structure,<sup>48</sup> models included subscale means across negative (depressed) affect and reverse-scored positive affect subscales. Models included subscale means as indicators of a depressive symptom latent variable. The scale showed good internal consistency ( $\alpha=0.85$ ).

The Interpersonal Needs Questionnaire assessed perceived burdensomeness, a proximal cause of suicidal desire.<sup>38</sup> Response options ranged from 1 (*not at all true for me*) to 7 (*very true for me*). Models included the perceived burdensomeness subscore as a mean across 6 items. The scale demonstrated good internal consistency ( $\alpha=0.94$ ).

The 3-item Alcohol Use Disorders Identification Test–Consumption assessed heavy drinking.<sup>49</sup> Each item has a unique 5-point scale with higher scores indicating higher levels of heavy drinking. Consistent with past research showing meaningful variation in drinking problems across the composite of the three scale items,<sup>50</sup> models included a summed continuous outcome. The scale demonstrated acceptable internal consistency ( $\alpha=0.78$ ).

Participants responded to a single item: *How often do you typically get tested for HIV?* Response options were on a 7-point scale (0=*never*, 1=*less than once a year*, 2=*about once a year*, 3=*once every six months*, 4=*once every three months*, 5=*once a month*, 6=*more than once a month*).

## Statistical Analysis

Structural equation modeling analyzed multiple associations simultaneously while accounting for measurement error.<sup>51</sup> Confirmatory factor analyses assessed latent depressive and anxiety symptoms variables run within *Mplus* version 8.6. Accepted model fit indices including chi-square, comparative fit index (CFI), Tucker–Lewis index (TLI), and root mean square error of approximation (RMSEA) that assessed the appropriateness of models and together account for important model fit factors (e.g., sample size, number of freely estimated parameters).<sup>52</sup> Independent but equivalent Black and White SMM structural equation models assessed hypothesized pathways. Models included main and interaction effects of the continuous structural racism and dichotomous anti-LGBTQ policies variables on latent anxiety and depressive symptoms variables and observed perceived burdensomeness, heavy drinking, and HIV testing variables. Models included interaction effects using an interaction term between the centered structural racism variable and the anti-LGBTQ policies variable. Models adjusted for theoretically meaningful contextual and individual covariates, including: rural–urban classification, SES, income, education, employment, insurance status, housing instability, age, sexual identity, gender identity, and relationship status. Given their relevance for HIV testing specifically, models adjusted for sexual activity, sexual identity outness, and sexual positioning. Models specified the manifest anxiety latent variable indicators as ordinal and used a variance-adjusted weighted least squares estimator. Observations were clustered by state to adjust for non-independence due to nesting within states. All data were complete other than income (99%), perceived burdensomeness (97%), HIV testing (95%), and depressive and anxiety symptoms (92%). Full information maximum likelihood estimation under the assumption that data were missing at random accounted for missing data,<sup>53</sup> which was tenable given there was no reason to expect systematic differences in the dependent variables based on missingness patterns.<sup>54</sup>

## RESULTS

Table 1 includes the sample's sociodemographic characteristics. Most participants were gay-identified (81%), single (74%), and college-educated (42%). Overall, this sample was younger (Mean age=34 years) and more formally educated, albeit with lower income, than average U.S. SMM communities.<sup>55</sup> Figure 1 depicts the national distribution of the sample and the structural racism and anti-LGBTQ policies scores by state. Correlations and descriptives among model variables are in Appendix Table 1.

Regarding latent variable specification, confirmatory factor analysis indicated that a 6-item 1-factor specification of anxiety symptoms fit the data adequately for Black participants ( $\chi^2[9]=74.06$ ,  $p$  0.001; CFI=1.00, TLI=0.99, RMSEA=0.08) and White participants ( $\chi^2[9]=510.91$ ,  $p$  0.001; CFI=0.99, TLI=0.99, RMSEA=0.10). Standardized factor loadings ranged from 0.62 to 0.84. For depressive symptoms, although it is not possible to consult fit statistics with an under-identified 2-indicator model, standardized factor loadings were 0.59–0.74.

Figure 2 depicts the primary model for Black and White participants. Indices suggested good fit for Black ( $\chi^2[192]=363.00$ ,  $p$  0.001; CFI=0.98, TLI=0.97, RMSEA=0.03) and



White participants ( $\chi^2[192]=985.31, p < 0.001$ ; CFI=0.98, TLI=0.97, RMSEA=0.03). Among Black participants, structural racism was positively associated with anxiety ( $\beta=0.20, SE=0.10, p=0.04$ ), perceived burdensomeness ( $\beta=0.42, SE=0.09, p < 0.001$ ), and heavy drinking ( $\beta=0.23, SE=0.10, p=0.01$ ). Anti-LGBTQ policies were positively associated with anxiety ( $\beta=0.08, SE=0.04, p=0.03$ ), perceived burdensomeness ( $\beta=0.20, SE=0.04, p < 0.001$ ), and heavy drinking ( $\beta=0.10, SE=0.04, p=0.01$ ), and negatively associated with HIV testing ( $\beta= -0.14, SE=0.07, p=0.04$ ). The interaction term was positively associated with perceived burdensomeness ( $\beta=0.38, SE=0.08, p < 0.001$ ) and heavy drinking ( $\beta=0.22, SE=0.07, p=0.003$ ). These interactions are depicted in Figure 3. The plots show that the positive associations from structural racism to perceived burdensomeness and heavy drinking were stronger at high levels of anti-LGBTQ policies. No other associations were significant for Black participants. Neither of the oppression variables was significantly associated with health outcomes for White SMM (Figure 2).

## DISCUSSION

This study examined associations between U.S. state-level structural racism and anti-LGBTQ policies and psychological and behavioral health outcomes among Black and White SMM. Results showed that among Black SMM, structural racism and anti-LGBTQ policies were both independently positively associated with higher anxiety symptoms, perceived burdensomeness, and heavy drinking. Additionally, anti-LGBTQ policies were negatively associated with HIV testing. Critically, among Black SMM, participants living in states with high levels of both structural racism and anti-LGBTQ policies showed exponentially higher levels of perceived burdensomeness and heavy drinking than participants in states with lower levels of structural oppression. Among White SMM, there were no associations between either form of structural oppression and health outcomes. Overall, these results highlight the intersectional nature of structural oppression and suggest that, to address health inequities facing Black SMM like those in chronic psychological conditions<sup>2</sup> and HIV,<sup>3</sup> racist and anti-LGBTQ policies must be redressed.

The finding that structural racism was associated with negative psychological outcomes and substance use among Black SMM, including precursors to suicidality (i.e., perceived burdensomeness, heavy drinking), is consistent with extant research with Black participants broadly.<sup>10,33–36</sup> That structural racism was not significantly associated with any health outcomes for White SMM also conforms with evidence that state-level structural racism has a null or positive effect for White residents.<sup>35</sup> This highlights how structural racism uplifts the health of White communities at the expense of Black communities in the U.S.<sup>17</sup>

The finding that anti-LGBTQ policies were associated with negative psychological and behavioral health outcomes among Black, but not White, SMM suggests this oppression may disproportionately affect Black SMM communities. This was contrary to the hypothesis that anti-LGBTQ policies would be associated with negative health outcomes for White SMM, as found in past studies with predominantly White samples.<sup>25–29</sup> This result may reflect the reality that anti-LGBTQ laws, like HIV criminalization, are often disproportionately enforced against Black SMM relative to White SMM.<sup>56</sup> As such, it appears that anti-LGBTQ policies are uniquely harmful for Black SMM and may underlie

racial health inequities among SMM.<sup>2,3</sup> This is critical given studies often highlight racial health inequities among SMM without also highlighting the structural oppression that causes them.<sup>57</sup> Given these results, state-level policies like the prohibition of hate crimes and LGBTQ+ discrimination in employment, housing, and public accommodations, which dozens of states have not passed, may uniquely benefit Black SMM.<sup>21</sup>

The result showing that the interaction between structural racism and anti-LGBTQ policies was positively associated with perceived burdensomeness and heavy drinking supports intersectionality frameworks<sup>18–20</sup> and recent evidence for the effects of intersectional oppression among Black SMM.<sup>40,58,59</sup> Specifically, the results suggest that to reduce inequities in individual-level psychological and behavioral distress among Black SMM, scientists, practitioners, and policymakers must uproot interlocking structural oppression from racist and anti-LGBTQ policies that drive inequities in housing, education, and incarceration. This stands in contrast to public health interventions with Black SMM that seek to reduce health inequities through individual-level psychological/behavioral intervention only.<sup>57</sup> Findings suggest clinicians may effectively combat the negative health effects of structural oppression by screening for exposure among Black SMM,<sup>60,61</sup> while also supporting community-led policy advocacy.<sup>62</sup> This includes supporting policies that invest in reparations to promote Black LGBTQ health, wealth, and education<sup>63</sup> and advocating for the repeal of stop-and-frisk policing and drug criminalization laws<sup>21</sup> that mass incarcerate Black LGBTQ communities.

Research building on the present findings can look to replicate these results to ensure they are not driven by unique data patterns and examine mechanisms accounting for the associations between structural racism, anti-LGBTQ policies, and health outcomes. Researchers, policymakers, and clinicians should also consider the public health needs of Black SMM living in states where structural racism and anti-LGBTQ policies are most impactful (e.g., racially segregated Midwestern cities).<sup>18,23,24</sup> Finally, given this study did not find associations between structural oppression and depressive symptoms, future studies can examine this further.

## Limitations

This is one of few studies that has examined structural oppression and Black SMM's health and the first, to the authors' knowledge, to examine how different forms of structural oppression intersect to predict health among a national sample of Black SMM. These strengths notwithstanding, several limitations are worth noting. First, the study sample was connected to sexual networking apps and younger, with more formal education, and lower income than the average U.S. SMM community,<sup>55</sup> which may limit generalizability. Second, the measure of anti-LGBTQ policies did not disentangle policies targeting different groups within LGBTQ communities, which may not have targeted some participants (e.g., anti-trans bathroom laws). Additionally, the structural racism and anti-LGBTQ policies indices were related, but not directly comparable, as the latter is based on specific policies (e.g., HIV criminalization), whereas the former is based on proximal indicators of policies (e.g., incarceration inequities). There also was a difference in the measurement years of the 2018 anti-LGBTQ index, and the structural racism index, which is based on Census and



government data from 2010 to 2015. Although these indices are often highly consistent across time,<sup>10</sup> future research may benefit from multiyear longitudinal models that examine changes in structural racism and anti-LGBTQ policies.<sup>25,31</sup>

## CONCLUSIONS

These findings highlight the importance of policies as a sources of oppression for individuals at the intersections of stigmatized social positions and support eliminating racist and anti-LGBTQ policies as essential interventions to promote health equity among Black SMM.<sup>10,45</sup>

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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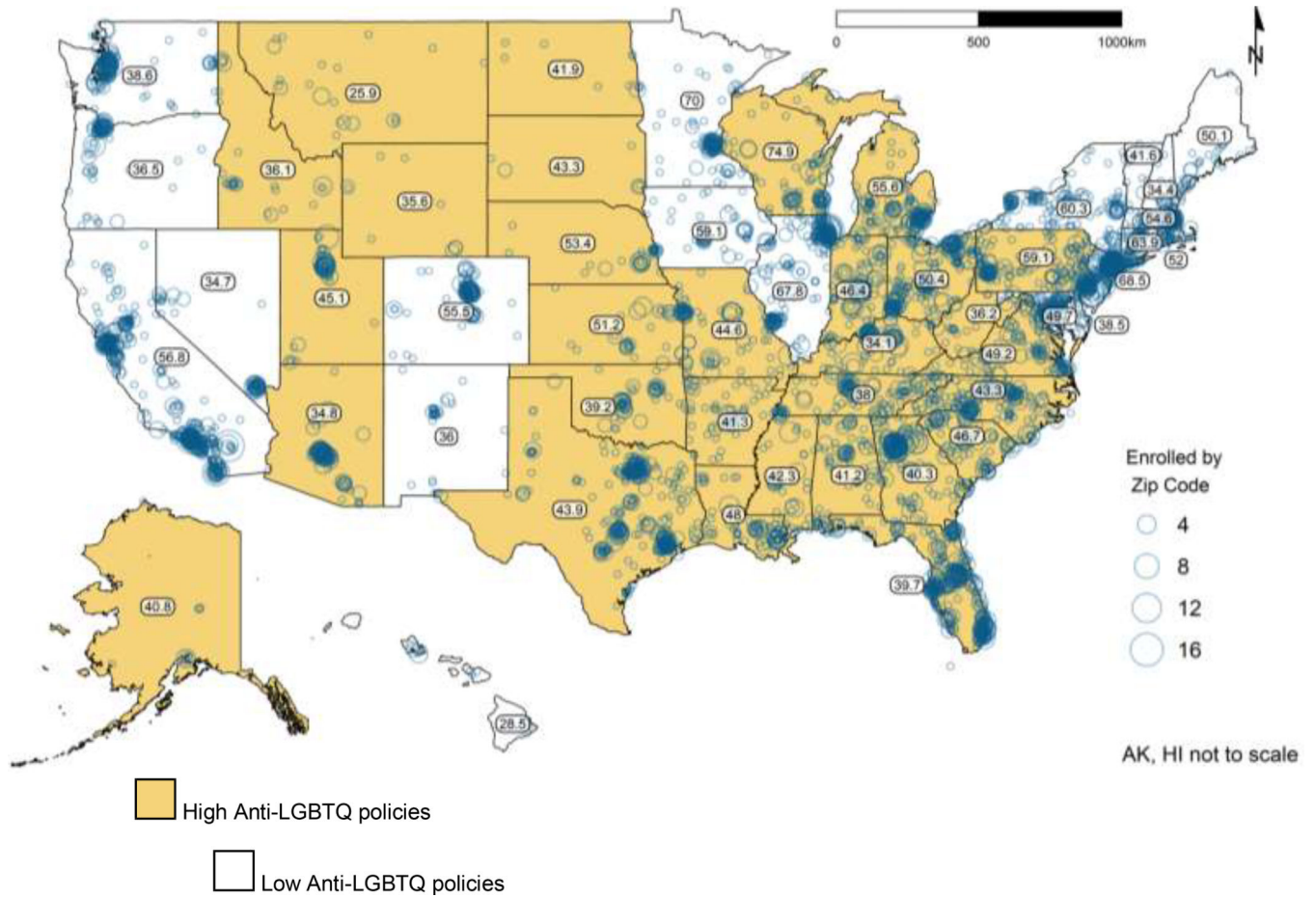
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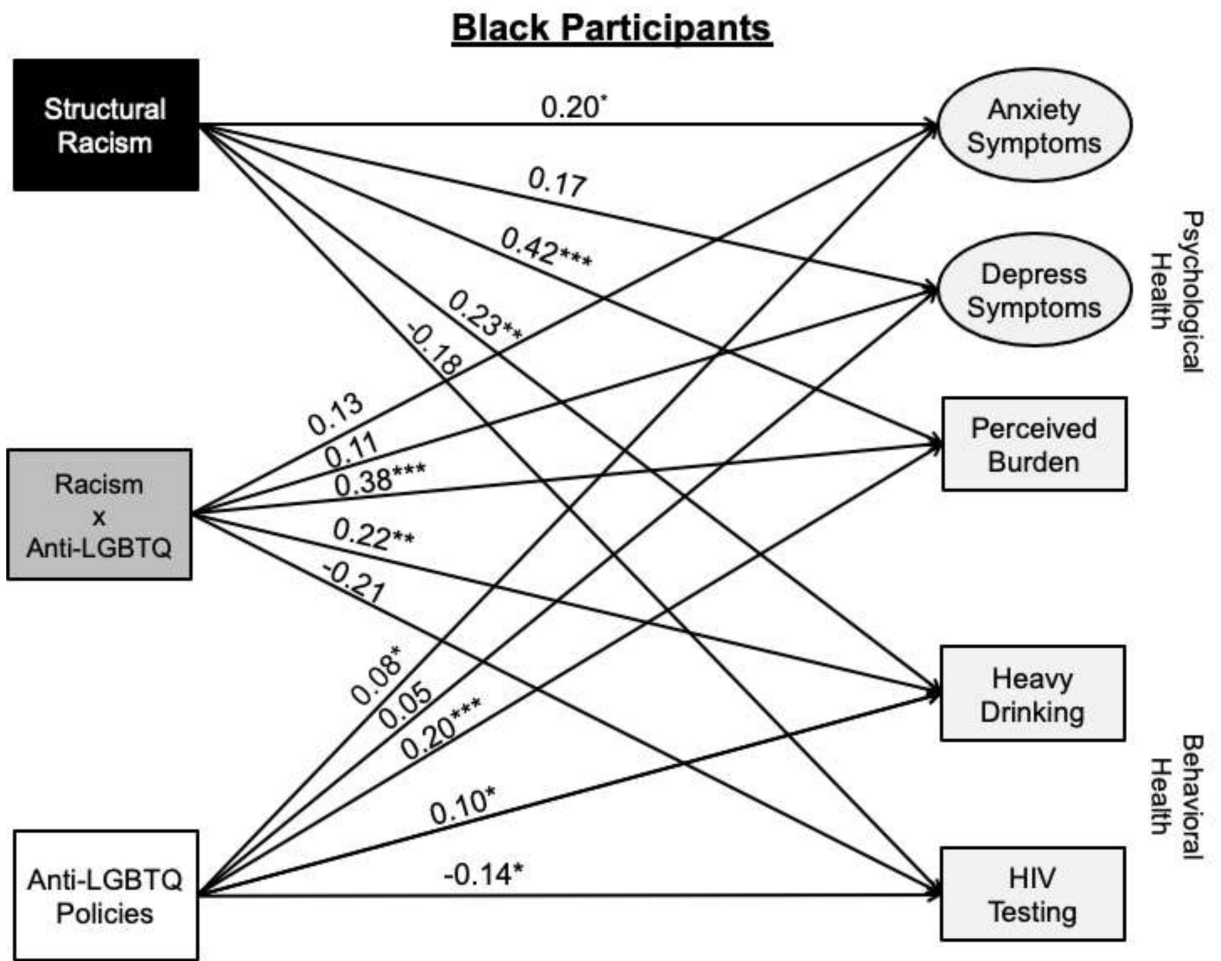
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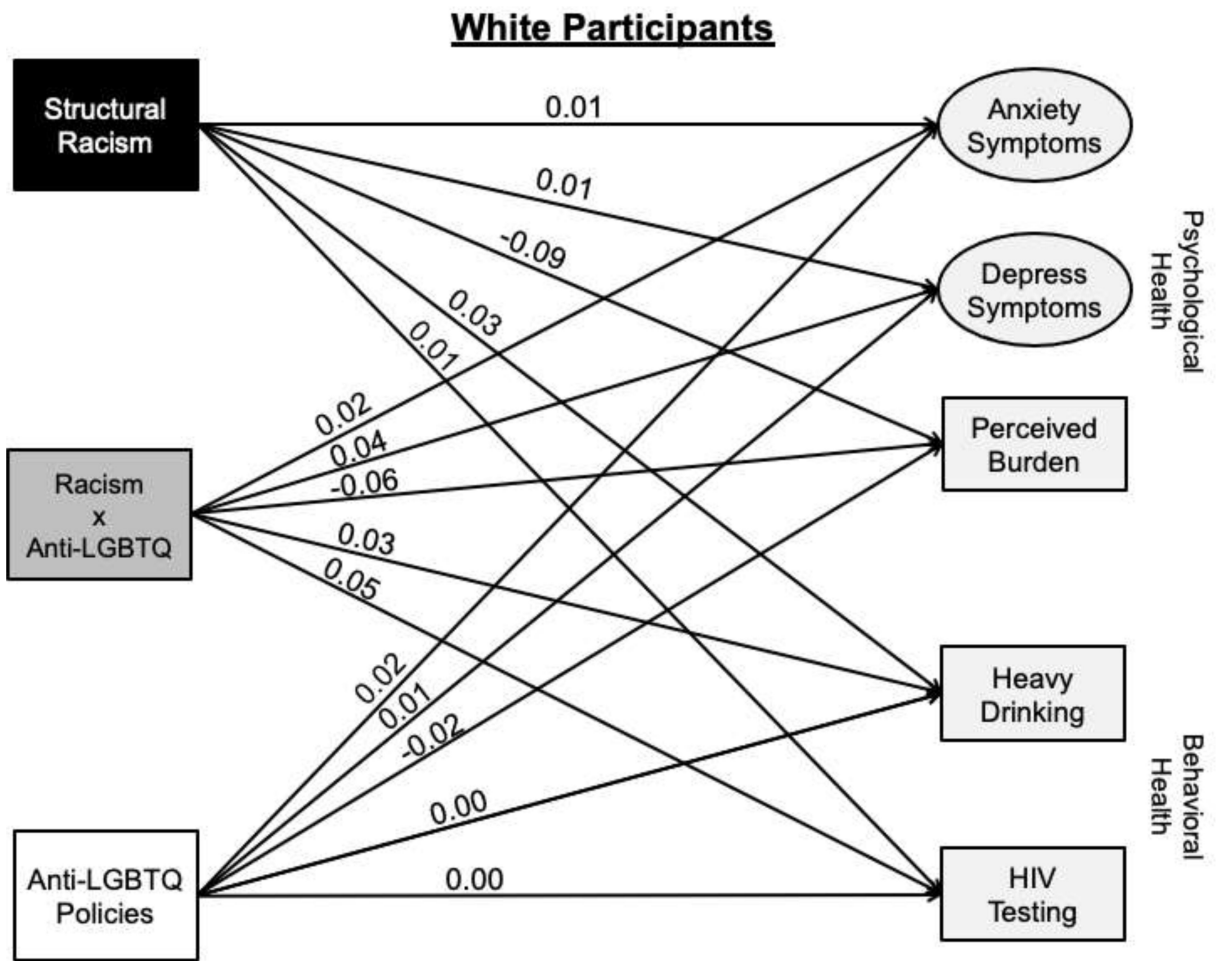


**Figure 1.** National distribution of participants in the analytic sample.  
*Note:* Numbers within states correspond to the State Racism Index Score. Participants in Puerto Rico and Washington DC not included in the analytic sample. LGBTQ, lesbian, gay, bisexual, transgender, queer.

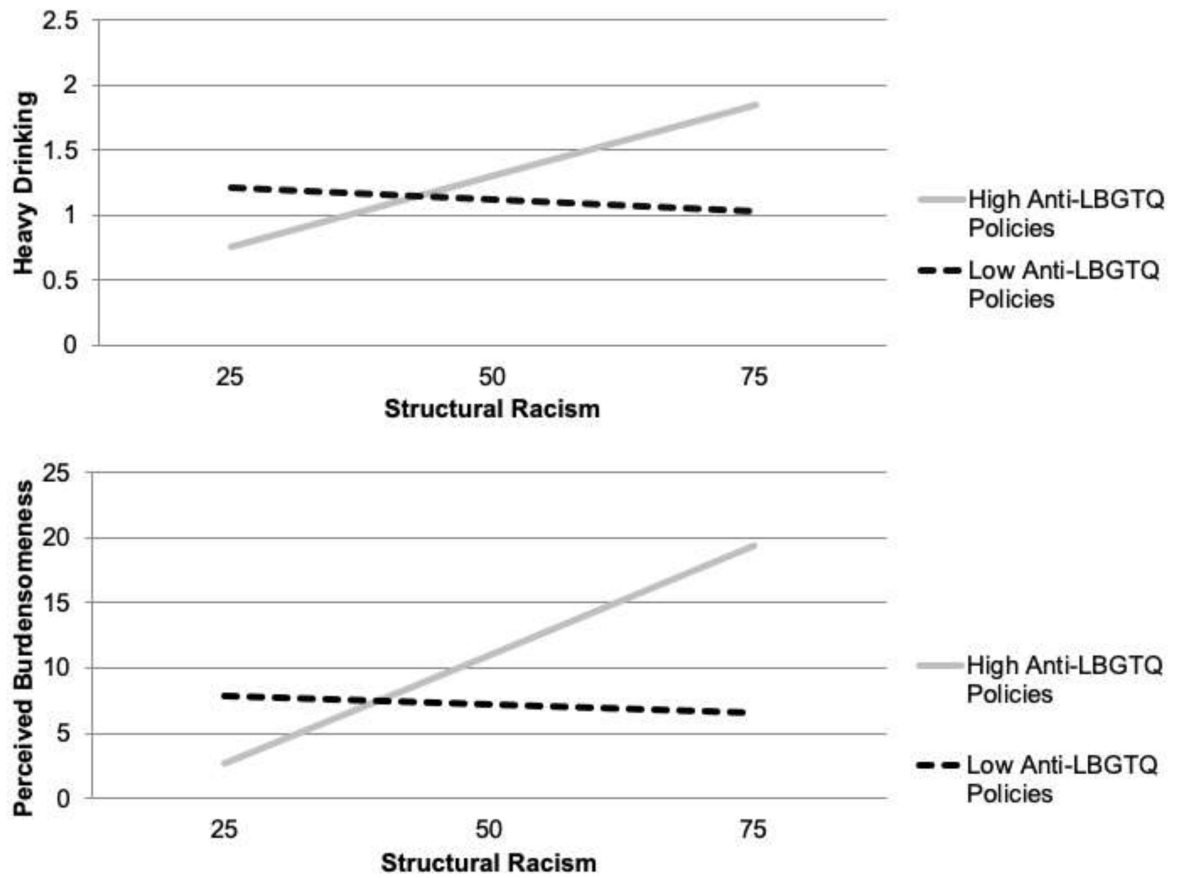








**Figure 2.** Structural equation models with structural racism and anti-LGBTQ policies predicting psychological and behavioral outcomes for Black and White SMM.  
*Note:* \*\*\* $p$  0.001; \*\* $p$  0.01; \* $p$  0.05; † $p$  0.10. Standardized estimates. Depress symptom= Depressive symptoms. This model is adjusted for rural-urban classification, subjective SES, income, formal employment status, insurance status, housing instability, age, sexual identity, gender identity, relationship status, sexual activity (HIV testing), sexual identity outness (HIV testing), and sexual positioning (HIV testing).  
 LGBTQ, lesbian, gay, bisexual, transgender, queer; SMM, sexual minority men.



**Figure 3.** Interactions between structural racism and anti-LGBTQ policies on heavy drinking and perceived burdensomeness among Black SMM. LGBTQ, lesbian, gay, bisexual, transgender, queer; SMM, sexual minority men.

**Table 1.**

## Demographic Characteristics of Study Sample

| Characteristic                     | Total (n=6,916) | Black men (n=1,379) | White men (n=5,537)         |
|------------------------------------|-----------------|---------------------|-----------------------------|
|                                    | n (%)           | n (%)               | n (%)                       |
| Sexual identity                    |                 |                     | $\chi^2(2)=41.15, p<0.001$  |
| Gay                                | 5,608 (81.1)    | 1,040 (75.4)        | 4,568 (82.5)                |
| Queer                              | 165 (2.4)       | 32 (2.3)            | 133 (2.4)                   |
| Bisexual                           | 1,143 (16.5)    | 307 (22.3)          | 836 (15.1)                  |
| Gender identity                    |                 |                     | $\chi^2(1)=6.23, p<0.05$    |
| Cisgender man                      | 6,858 (99.2)    | 1,375 (99.7)        | 5,483 (99.0)                |
| Transgender man                    | 58 (0.8)        | 4 (0.3)             | 54 (1.0)                    |
| Formal educational attainment      |                 |                     | $\chi^2(3)=76.44, p<0.001$  |
| High school diploma, GED, or less  | 1,162 (16.8)    | 274 (19.9)          | 888 (16.0)                  |
| Some college or Associate's degree | 2,889 (41.8)    | 675 (48.9)          | 2,214 (40.0)                |
| 4-year college degree              | 1,810 (26.2)    | 286 (20.7)          | 1,524 (27.5)                |
| Graduate school                    | 1,055 (15.3)    | 144 (10.4)          | 911 (16.5)                  |
| Formal employment status           |                 |                     | $\chi^2(2)=20.36, p<0.001$  |
| Unemployed, student, disability    | 1,181 (17.1)    | 255 (18.5)          | 926 (16.7)                  |
| Part-time (<40 hours/week)         | 1,298 (18.8)    | 308 (22.3)          | 990 (17.9)                  |
| Full-time (≥ 40 hours/week)        | 4,437 (64.2)    | 816 (59.2)          | 3,621 (65.4)                |
| Income                             |                 |                     | $\chi^2(3)=119.86, p<0.001$ |
| <\$20,000                          | 2,186 (31.6)    | 544 (39.8)          | 1,642 (29.9)                |
| \$20,000–\$49,999                  | 2,763 (40.0)    | 588 (43.0)          | 2,175 (39.6)                |
| \$50,000–\$74,999                  | 1,010 (14.6)    | 156 (11.4)          | 854 (15.6)                  |
| ≥\$75,000                          | 894 (12.9)      | 78 (5.7)            | 816 (14.9)                  |
| Subjective social status           |                 |                     | $\chi^2(4)=26.58, p<0.001$  |
| 1–2                                | 180 (2.6)       | 43 (3.1)            | 137 (2.5)                   |
| 3–4                                | 1,198 (17.3)    | 249 (18.1)          | 949 (17.1)                  |
| 5–6                                | 2,738 (39.6)    | 605 (43.9)          | 2,133 (38.5)                |
| 7–8                                | 2,473 (35.8)    | 438 (31.8)          | 2,035 (36.8)                |
| 9–10                               | 327 (4.7)       | 44 (3.2)            | 283 (5.1)                   |
| Insured                            |                 |                     | $\chi^2(2)=93.05, p<0.001$  |
| No                                 | 1,299 (18.8)    | 352 (25.5)          | 947 (17.1)                  |
| Yes                                | 5,510 (79.7)    | 981 (71.1)          | 4,529 (81.8)                |
| Unknown                            | 107 (1.5)       | 46 (3.3)            | 61 (1.1)                    |
| Housing instability                |                 |                     | $\chi^2(1)=12.40, p<0.001$  |
| No                                 | 6,323 (91.4)    | 1,228 (89.1)        | 5,095 (92.0)                |
| Yes                                | 593 (8.6)       | 151 (10.9)          | 442 (8.0)                   |
| Relationship status                |                 |                     | $\chi^2(1)=35.51, p<0.001$  |
| Single                             | 5,089 (73.6)    | 1,102 (79.9)        | 3,987 (72.0)                |
| Partnered                          | 1,827 (26.4)    | 277 (20.1)          | 1,550 (28.0)                |
| Outness                            |                 |                     | $\chi^2(3)=120.36, p<0.001$ |

| Characteristic                        | Total (n=6,916) | Black men (n=1,379) | White men (n=5,537)        |
|---------------------------------------|-----------------|---------------------|----------------------------|
|                                       | n (%)           | n (%)               | n (%)                      |
| Not at all                            | 441 (6.4)       | 106 (7.7)           | 335 (6.1)                  |
| Somewhat                              | 1,211 (17.5)    | 355 (25.7)          | 856 (15.5)                 |
| Mostly                                | 1,696 (24.5)    | 368 (26.7)          | 1,328 (24.0)               |
| Completely                            | 3,568 (51.6)    | 550 (39.9)          | 3,018 (54.5)               |
| Sexually active                       |                 |                     | $\chi^2(1)=54.23, p<0.001$ |
| No                                    | 492 (7.1)       | 161 (11.7)          | 331 (6.0)                  |
| Yes                                   | 6,424 (92.9)    | 1,218 (88.3)        | 5,206 (94.0)               |
| Age, mean (SD)                        |                 |                     | $t(6,914)=-13.54, p<0.001$ |
| Range: 68, Median=31                  | 34.03 (12.26)   | 30.08 (9.24)        | 35.01 (12.71)              |
| Rural—urban classification, mead (SD) |                 |                     | $t(6,914)=-6.10, p<0.001$  |
| Range:9.4, Median=1                   | 1.63 (1.61)     | 1.39 (1.25)         | 1.69 (1.69)                |

*Note:* The total *n* for income does not equal 100% because participants under 18 were not asked.