Examining The Impact of State-Level Systems of Oppression on HIV Care Outcomes

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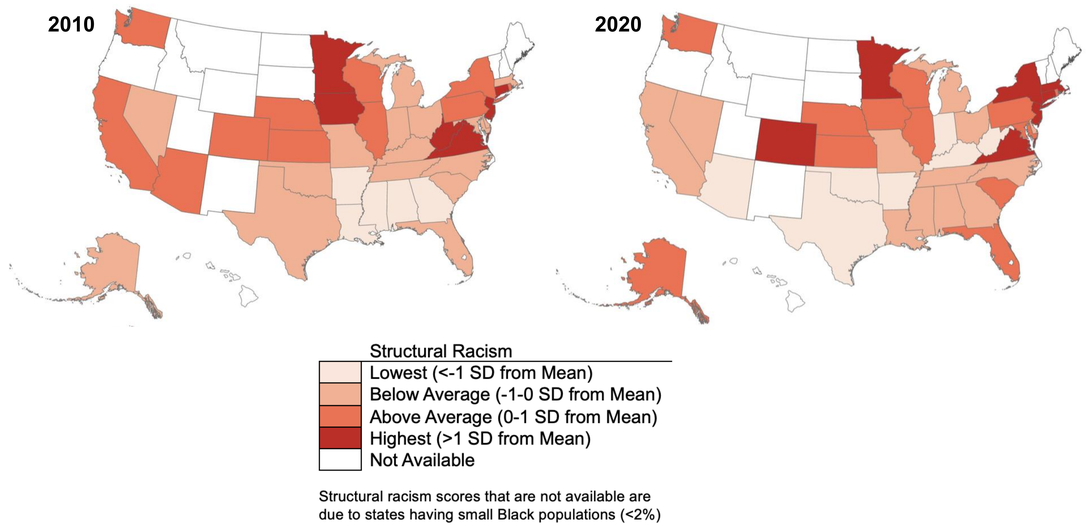
BACKGROUND

- **Our study examined how structural racism relates to HIV care retention and viral suppression in the United States (US).**
- Racialized groups are disproportionately affected by HIV and have lower rates of progression through the HIV care continuum.
- State laws can either reinforce or reduce structural racism, influencing care-continuum outcomes.
- Prior studies assessed proxies of structural racism, but none directly measured structural racism in relation to HIV care progression.

METHODS

- **Study Period**: 2010- 2023
- **Setting**: US states with ≥ 2% Black Population (N=38)
- **Data**: North American AIDS Cohort Collaboration on Research & Design (NA-ACCORD) and US Census
- **Independent Variable**: Time-varying state-level structural racism score created using factor analysis on indicators of Black-White disparity in incarceration, education, economic status, employment disparity, and segregation. Positive scores indicated higher-than-average exposure to structural racism, while negative scores indicated lower-than-average exposure.
- **Outcomes**: Clinical Retention - having ≥2 HIV care visits in a calendar year >90 days apart; Viral Suppression - less than 200 copies/mL for the last viral load measurement in a calendar year
- **Analysis**: Multivariable models fitted with generalized estimating equations (GEE) to assess how structural racism impacts clinical retention and viral suppression.
- **Sensitivity Analyses**: Stratified GEE models based on residing in the South and non-Southern regions

Figure 1. State-level structural racism index for US States for the years 2010 and 2020



Structural racism scores that are not available are due to states having small Black populations (<2%)

Table 1. GEE model of state-level structural racism and HIV treatment outcomes

	Clinical Retention[1] aOR (95% CI)	Viral Suppression[1] aOR (95% CI)
Structural Racism Score	1.02 (1.00, 1.04)	1.24 (1.21, 1.27)

aOR: Adjusted Odds Ratio; CI: Confidence Interval
[1]Multivariable models with structural racism as the exposure of interest were ran for each outcome. The models controlled for individual-level predictors (age, race/ethnicity, gender, risk group, and region of residence) and state-level predictors (multidimensional deprivation index and residing in urban areas).

Table 2. Region-stratified GEE models of state-level structural racism and HIV treatment outcomes

	Clinical Retention aOR (95% CI)	Viral Suppression aOR (95% CI)
Model 1: South Region Only[1] Structural Racism Score	1.21 (1.17, 1.24)	1.53 (1.47, 1.58)
Model 2: Non-Southern Regions[1] Structural Racism Score	0.83 (0.81, 0.85)	0.85 (0.83, 0.88)

aOR: Adjusted Odds Ratio; CI: Confidence Interval
[1]Multivariable models with structural racism as the exposure of interest were ran for each outcome. The models controlled for individual-level predictors (age, race/ethnicity, gender, and risk group) and state-level predictors (multidimensional deprivation index and residing in urban areas).

RESULTS

- States in the South had the lowest structural racism scores, while those in the Northeast had the highest (Figure 1).
- Of 69,664 participants in our study, 47% were Black, 77% were cisgender men, 52% identified as men who have sex with men, and 52% resided in the South.
- Among all study participants, living in states with higher structural racism scores was linked to increased odds of clinical retention and viral suppression. (Table 1)
- A stratified model that included only participants residing in the South indicates that living in the South increased the likelihood of clinical retention and viral suppression (Table 2).
- For participants outside the South, residing in states with higher structural racism scores was linked to lower clinical retention and viral suppression.

CONCLUSIONS

- Although our primary analysis found that living in states with higher-than-average structural racism scores was linked to better clinical retention and viral suppression, the probable main factor behind this association is residence in the South.
- We suspect that historical and contemporary policies in Southern states, which limited Black residents' access to education, jobs, and healthcare, hurt both Black and White communities. This likely reduced disparities in the indicators used to calculate the structural racism score, leading to lower scores.
- Next steps involve conducting further research to identify structural-level factors stemming from structural racism that explain the relationship we observed, especially for those in the South.

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