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State–Level Sexism and Gender Disparities in Health Care Access and Quality in the United States

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Abstract

In this investigation, we examined the associations between state-level structural sexism—a multidimensional index of gender inequities across economic, political, and cultural domains of the gender system—and health care access and quality among women and men in the United States. We linked administrative data gauging state-level gender gaps in pay, employment, poverty, political representation, and policy protections to individual-level data on health care availability, affordability, and quality from the national Consumer Survey of Health Care Access (2014–2019; N = 24,250). Results show that higher state-level sexism is associated with greater inability to access needed health care and more barriers to affording care for women but not for men. Furthermore, contrary to our hypothesis, women residing in states with higher state-level sexism report better quality of care than women in states with lower levels of sexism. These findings implicate state-level sexism in perpetuating gender disparities in health care.

Keywords

gender inequity, health care access, state policy, structural sexism, United States

Health disparities between women and men in the United States are well documented. Women experience a higher incidence of chronic conditions, functional limitations, depression, and disability compared to men (Case and Paxson 2005; Leveille et al. 2000; Nolen-Hoeksema 2001), and rates of maternal morbidity and mortality in the United States have increased over the past several decades (Creanga et al. 2014). Women also experience more barriers to health care access (Ng et al. 2010; Rustgi, Doty, and Collins 2009), which may exacerbate gender gaps in health. Women are more likely to be adversely affected by barriers to health care access, in part, because women have greater need for health care services to manage chronic conditions and reproductive care (Case and Paxson 2005; Doyal 2000; Owens 2008). Unmet health care need is associated with higher rates of morbidity and mortality for women and higher infant mortality (Atrash et al. 2006; Kent, Patel, and Varela 2012).

Availability of care describes the volume and selection of existing services, including ability to get care when needed, consistency and timeliness of care, and choice of providers (Penchansky and Thomas 1981). Women are more likely than men to report unmet need for medical care (Long, Stockley, and Shulman 2011) and delays in receiving medical care (Ng et al. 2010). *Affordability* barriers, described as patient difficulty or inability to pay for health insurance, medications, medical tests, and other out-of-pocket health care costs (Penchansky

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and Thomas 1981), also disproportionately affect women. Women are more vulnerable to experiencing gaps or inadequacies in health insurance coverage and more often forgo medical care due to cost (Lavelle and Smock 2012; Rustgi et al. 2009). One important aspect of *quality* of medical care is patient–provider communication, characterized by attentive listening, answering patient questions, and involving patients in their own care (Jesus and Silva 2016; Vowles and Thompson 2012). Some studies find that women report higher satisfaction with provider communication than men (e.g., Elliott et al. 2012), and others show no gender difference in patient satisfaction with provider communication (e.g., Hall and Roter 1995). The extent to which women face structural inequities may explain some of the inconsistencies in prior research.

Sexism, defined as gender inequity in power and resources that systematically privileges men and disadvantages women (Ridgeway and Correll 2004), is a significant determinant of gender gaps in access to health care. The majority of past research on sexism and women's health care implicates provider gender bias and discrimination as important barriers to quality care (Chapman, Kaatz, and Carnes 2013; Hamberg 2008; Marcum 2017). However, provider bias and discrimination do not fully explain gender gaps in the availability and affordability of health care, which may also be rooted in sociopolitical inequities that intersect with the health care system, such as gender inequity in political representation, pay, and employment. In addition, the prevalence of provider bias and discrimination within the U.S. health care system may be influenced by sexism at the *institutional* level, such as the underrepresentation of women in policymaking and health care leadership. Literature examining racial disparities in health implicates structural racism as a determinant of poor quality of medical care among patients of color (Feagin and Bennefield 2014; Yearby 2018), but this rationale has not been applied to research exploring sexism as a determinant of women's health care access and quality.

To examine the role of sexism in U.S. health care inequities, the current investigation tested associations between state-level *structural sexism* and disparities in health care access and quality among women and men. Homan (2019) defines structural sexism as gender inequity in power and resources across institutional, interpersonal, and internalized levels of the gender system that collectively shapes gender disparities in health. Research has largely examined interpersonal and internalized levels of sexism rather than inequities institutionalized in the systems of our society (e.g., employment, governmental, legal). Although research on the health effects of gender discrimination and other interpersonal interactions (e.g., intimate partner violence) is important, a paucity of research at other levels may prevent us from understanding structural sexism. Because theoretical developments in health disparities research articulate the role of institutional power structures in shaping and perpetuating health inequities (Feagin and Bennefield 2014; Krieger 2001, 2020), we examine state-level sexism as one macrolevel dimension of the larger structural sexism system.

Based on existing studies examining state-level gender inequities and health (e.g., Homan 2019; Kawachi et al. 1999; Montez, Zajacova, and Hayward 2016), we constructed a multidimensional index of state-level sexism that measures gender inequities in wages and employment, policies that discriminate against women, underrepresentation of women in government, and restrictions on women's reproductive rights to investigate the role of institutional power structures in shaping access to quality health care among women and men. We examined associations between state-level structural sexism and (1) inability to get needed health care, (2) barriers in health care availability and affordability, and (3) quality of medical care received. We also tested whether associations between state-level sexism and health care access and quality differ by gender. This investigation provides novel insights about the connections between sexism at the institutional level and individual health care experiences, which have important applications in policymaking and health care reform.

BACKGROUND

Sexism as a Social Determinant of Health Care Access and Quality

Sexism is a significant determinant of women's health (Homan 2019; Molix 2014; Moss 2002). Most studies examining the impacts of sexism on health focus on the impacts of interpersonal discrimination and sexual harassment (Harnois and Bastos 2018; Krieger 2001; Molix 2014). Although these investigations provide insight into the effects of sexism on health, studies have reframed sexism as a multilevel construct that is expressed and reinforced within economic, political, and cultural institutions (Homan 2019; Krieger 2020). For example, Risman (2004) conceptualizes gender as a social structure, embedded in individual, interactional, and

institutional dimensions of society. In addition, Krieger's (2020) ecosocial theory of health examines how legacies of systematic oppression across institutions structure individual exposure to health risks and limit availability of health-promoting resources for oppressed groups.

Researchers examining the relationship between structural sexism and health have proposed that health care access and quality are important pathways through which structural inequities shape individual health outcomes (e.g., Homan 2019; Wisdom, Berlin, and Lapidus 2005). Indeed, the efficacy of the health care system in providing consistent and affordable medical care is highly contingent on economic and political contexts, such as the extent of income inequality, social welfare spending, and health care legislation (Dickman, Himmelstein, and Woolhandler 2017). However, no studies to date have examined the relationship between structural sexism and health care access and how this relationship differs among women and men.

We argue that sexism across economic, labor force, and political institutions acts as a fundamental barrier to women's health care access through multiple direct and indirect pathways. Labor markets that value the work of men over women systematically underpay, underinsure, and underemploy women, increasing the likelihood that women will be unable to afford medical care (Gijsbers Van Wijk, Van Vliet, and Kolk 1996). In addition, women's political representation influences health policies that shape access to care. Women policymakers are more likely to pursue policies that invest in health care, social welfare, and other determinants of public health, and the extent of women's political representation predicts the implementation of these policies (Bolzendahl and Brooks 2007; Park 2017). Finally, multiple studies document the impact of U.S. economic and health care legislation on barriers to women's health care access, including the lack of policy mandating paid family leave (Gault et al. 2014) and policies that restrict reproductive rights (Stevenson et al. 2016).

State-Level Sexism, Access to Health Care, and Women's Health

In the current study, we measure structural sexism at the state level. State-level sexism encompasses the gendered distribution of power and resources within economic, labor force, political, and cultural institutions among U.S. states. We posit that women's relative lack of power within these institutions produces barriers to health care access for women via multiple direct and indirect mechanisms, including cost barriers due to gender gaps in employment and wages, availability barriers due to women's underrepresentation in political decision-making regarding health care, and overall access barriers due to cultural norms that restrict women's reproductive choice. We chose to examine sexism at the state level because states vary widely in the extent of gender inequity (Hess et al. 2015), demonstrating the need to investigate how sexism at the state level contributes to gender disparities in health care.

State-level sexism is a robust predictor of women's morbidity and mortality, implicating gender inequities across economic, political, and cultural institutions as pathways leading to poorer health for women. Recent research documents higher mortality rates for women and infants residing in U.S. states with higher levels of economic inequity (Pabayo et al. 2019), and studies using state-level composite scores of economic inequity (e.g., gender gaps in wages, employment, and poverty) find higher mortality rates and poorer health for women residing in more inequitable states (Homan 2019; Montez et al. 2016). Within the political domain, underrepresentation of women in state legislature is associated with higher rates of female and infant mortality (Homan 2017; Kawachi et al. 1999), and the implementation of state policies designed to promote gender equity (e.g., paid family and maternal leave, gun ownership restrictions for domestic violence offenders) predicts better health and lower mortality rates for women (Doran et al. 2020; Lee et al. 2020; Wisdom et al. 2005). Finally, state-level policies regarding Medicaid eligibility and access to reproductive care have significant implications for the health of women (Hawkins et al. 2020; Johnston et al. 2018; Margerison et al. 2020).

Health care access and quality could underlie the robust associations between state-level sexism and women's health; however, existing literature has not adequately examined the relationship between state-level sexism and health care. Because the U.S. health care system relies heavily on private, employer-based health insurance, systemic state-level gender gaps in wages and labor force participation may reduce both women's insurance coverage and ability to afford health care. Indeed, women are more likely to depend on their spouses for health insurance and spend a higher share of their income on health care than men (Patchias and Waxman 2007), supporting the notion that gender inequalities in pay and employment increase barriers to care for women. In addition, the extent of women's political representation in U.S. state

legislatures is associated with the proposal and implementation of state policies investing in health care and overall welfare spending (Berkman and O'Connor 1993; Bratton and Haynie 1999). Such policies have unique implications for women's health care because state-level policy changes in Medicaid eligibility and health care funding affect the affordability of women's care and the availability of screening for breast and cervical cancers (Daniel et al. 2018; Johnston et al. 2018).

State social and economic policies may operate indirectly to shape health care or may signal broader policymaking contexts that fail to address women's health needs. Although no studies have examined the effect of state-mandated paid family and medical leave on women's health care access, the availability of paid family leave has been shown to increase continuity in women's labor force participation (Baum and Ruhm 2016), which has implications for women's wages and access to employment-based health insurance. State firearm laws may also be health-related policies that reflect the commitment of state legislatures to protect women's health and safety. States with fewer laws prohibiting possession of firearms for domestic violence offenders have higher rates of intimate partner homicide against women than states that have more of these laws (Sivaraman et al. 2019). Although gun laws are not health care policies per se, the lack of legislation protecting women from gun violence could signal the failure of state policymaking contexts to prioritize women's health and safety.

Finally, state political contexts shape women's eligibility for health care coverage and access to reproductive health care. Women residing in states that expanded eligibility for Medicaid in response to the Affordable Care Act reported lower rates of uninsurance and better self-rated health compared to women in nonexpansion states (Johnston et al. 2018; Margerison et al. 2020). Furthermore, implementation of restrictive state-level abortion policies in several states has led to the closure of family planning clinics that once provided a wide array of health care services to women, including primary care, preventive screenings, and reproductive care (Lawrence and Ness 2017; Stevenson et al. 2016).

State-Level Sexism and Quality of Patient–Provider Communication

State-level sexism might also influence the quality of patient care. Patient–provider communication is an important determinant of patient treatment outcomes and disease management (Owens 2008; Street et al. 2009), but the ways in which institutional sexism shapes patient care have not been studied. Existing literature that explicitly connects institutional sexism to the quality of interpersonal interactions examines how organizational structures in the labor force relate to women's experiences of interpersonal workplace discrimination (Bobbitt-Zeher 2011; Ridgeway and Correll 2004). Aligned with ecosocial perspectives of the gender system, this body of research frames sexism as embedded in institutional structures in which systematic gender bias shapes women's experiences of mistreatment and discrimination (Ridgeway and Correll 2004). Therefore, we examine connections between state-level sexism and the quality of women's interactions with health providers, positing that women residing in states with high levels of institutional sexism may also report poorer quality of communication with health care providers.

The Present Study

This study examines the relationship between state-level structural sexism across economic, political, and cultural domains and gender gaps in health care access and quality. We tested the associations between state-level sexism and multiple dimensions of health care access and quality, including inability to access health care, lack of health insurance, barriers in the availability and affordability of care, and the quality of patient–provider communication among women and men who sought out health care within the past year. We also tested for gender differences in each of these associations. It is important to note that race, education, income, and other aspects of women's lived experiences play a role in health care. In the present study, we focus on elucidating differences as a function of gender, accounting for these other factors statistically. This study contributes to existing literature by drawing novel connections between macro-level institutional processes and individual health care experiences among women and men in the United States.

DATA AND METHODS

Data

State-level data were compiled from administrative data sources (e.g., Bureau of Labor Statistics, Current Population Survey, Guttmacher Institute) to capture gender inequity in economic standing, political representation, policy protections, and reproductive rights. Table 1 includes a full list of measures with corresponding administrative data sources.

Table 1. State-Level Data and Descriptive Statistics, 2014–2018 ($N = 51$; Averaged across Years).

Measure	Data Source	Mean (SD)	Range
State-level sexism index	Multiple sources	.00 (1.00)	−1.98–3.51
Earnings ratio (M:W)	Bureau of Labor Statistics	1.24 (.06)	1.13–1.44
Labor force ratio (M:W)	Bureau of Labor Statistics	1.15 (.04)	1.06–1.28
Poverty ratio (W:M)	IPUMS Current Population Survey	1.05 (.05)	.89–1.14
Proportion men in state legislature	Center for American Women in Politics	.75 (.07)	.59–.87
No paid family/medical leave policy	National Partnership for Women & Families	.94 (.24)	0–1
No state law restricting gun ownership for domestic violence offenders	State Firearms Laws Database	.65 (.45)	0–1
Proportion women without abortion access	Guttmacher Institute	.46 (.26)	0–.96
No Medicaid expansion	Kaiser Family Foundation	.28 (.45)	0–1
Proportion of white residents	U.S. Census Bureau	.77 (.13)	.25–.95
Proportion of people residing in urban areas	U.S. Census Bureau	.74 (.15)	.39–1.00
Proportion of people in poverty	U.S. Census Bureau	.13 (3.61)	.07–.22
Gini coefficient	U.S Census Bureau	.46 (.02)	.42–.53

Note: M = men; W = women.

Individual-level data came from the December 2014 to January 2019 waves of the Association of American Medical Colleges (AAMC) Consumer Survey of Health Care Access, a repeat cross-sectional, online survey of adults age 18 and older in the United States. Surveys were conducted by an external firm that maintains an active panel of potential study participants. Stratified sampling was used to collect data based on age and health insurance status, with oversamples of various subpopulations of interest (minority, rural, Medicaid recipients, etc.) in particular survey waves. U.S. census weights were available to account for nonprobability sampling procedures.

Of the 25,267 eligible participants in the AAMC survey, 24,250 (96%) participants had complete data for all variables in Stage 1 of the analysis (associations of state-level sexism with inability to access care and uninsured). The latter stages of the analysis were restricted to the 21,329 participants who had at least one medical care visit in the past year and had complete data for additional health care access and quality variables. Supplemental analysis revealed that participants who were excluded from the analysis were more likely to be female, younger (ages 18–34), nonwhite, and unmarried. Excluded participants also had lower household income on average, were less likely to have a college education, and were more likely to live in a rural residential setting. We did not use multiple imputation to impute missing data because the source of nearly all missing data was dependent variables, and imputed values for dependent variables are not typically included in regression analyses (von Hippel 2007).

Measures

Health care access. Inability to access health care was measured using the following item: "Thinking about the times you needed medical care in the last 12 months, how often were you able to get it?" Participants who reported always or sometimes being able to access care were considered "able to get care," and participants who reported never being able to get care were considered "unable to get care." Sensitivity analyses were conducted with alternative coding of inability to access care. Results were not driven by choice of coding (see Appendix Table A in the online version of the article).

No health insurance was measured using a single item from the AAMC survey: "What type of health insurance did you have the most recent time you needed medical care?" Participants who reported that they did not have health insurance were considered uninsured.

Six barriers to health care access were examined among participants who had at least one medical care

visit in the past year, including (1) inconsistency in ability to access care, (2) delay in accessing care, (3) limited choice in care, (4) inability to fill a prescription due to out-of-pocket cost, (5) inability to complete a medical test or treatment due to cost, and (6) difficulty paying medical bills. For a description of questionnaire items and coding, see Appendix Table B in the online version of the article.

Patient–provider communication. Three items were used to gauge the quality of patient–provider communication during the participants' most recent medical care visit. Participants were asked whether providers (1) "explain[ed] things in a way that was easy to understand," (2) "answer[ed] questions" to the participant's satisfaction, and (3) "spen[t] enough time" with the participant during the visit. For questionnaire items and coding, see Appendix Table B in the online version of the article.

State-level sexism. Aligned with other studies of structural gender discrimination (Chen et al. 2005; Homan 2019; Kawachi et al. 1999), state-level sexism was measured using publicly available data to gauge economic inequity, labor force inequity, political inequity, and lack of reproductive rights. State-level economic and labor force measures included ratios of men's to women's earnings, women's to men's poverty, and men's to women's labor force participation. Political inequity was measured using the proportion of state legislature seats occupied by men. Policy-based inequity was measured based on the absence of three state-level policies that disproportionately benefit women: paid family and medical leave, Medicaid expansion, and gun ownership restrictions for domestic violence offenders. Finally, lack of reproductive choice was measured using the proportion of women residing in counties without an abortion provider. We selected these measures because all were available annually from 2014 to 2018, with the exception of abortion access (available 2015, 2017). After using linear interpolation for abortion access missing data, we linked state-level measures to AAMC study participants based on year of participation. Participants in the final wave of the AAMC survey (January 2019) were linked to 2018 state-level measures. Consistent with Homan (2019), a continuous index of state-level sexism was created by standardizing state-level measures relative to the full observation period and then summing standardized scores to create a continuous index of state-level sexism (Cronbach's $\alpha = .70$). We then divided the index by its standard deviation so a one-unit change in state-level sexism reflects a 1 SD difference. Confirmatory factor analysis suggested a one-factor structure for the state-level sexism index (see Appendix C in the online version of the article). Supplementary analyses also ensured that results were not driven by any single item in the index (see Appendix Table D in the online version of the article).

Covariates. We adjusted for four state-level covariates, including the percentage of white residents, percentage of people residing in an urban area, poverty rate, and Gini coefficient (to capture state income inequity). Individual-level covariates included age group, race-ethnicity, marital status, presence of a child younger than18 years old in the household, urbanicity, income category, educational attainment, and frequency of needing medical care over the past year.

Analytic Methods

Descriptive statistics were computed for the state-level sexism measures and individual-level measures from the AAMC survey. Weighted individual-level descriptive statistics were computed separately for men and women, and Pearson's χ^2 and Mann-Whitney U tests were conducted to test for gender differences.

Logistic regression analyses were completed in three stages. First, we tested associations of state-level sexism with inability to access health care and lack of health insurance. Second, we tested associations between state-level sexism and specific barriers to health care access among participants who accessed medical care at least once over the past year. Third, we tested associations between state-level sexism and patient–provider communication.

For all analyses, regressions were first run separately for women and men, then run using the entire sample and including an interaction term to test for gender differences. All models adjusted for covariates listed previously. All analyses were conducted using STATA and employed U.S. census weights. To account for the nested nature of the data, multilevel analysis was employed by clustering by state.

RESULTS

Descriptive Statistics of State-Level Sexism

Table 1 shows descriptive statistics for the state-level structural sexism measures averaged across study years. The three economic measures of

state-level sexism are ratios, with values greater than 1 indicating gender inequity that favors men. The mean values for all three measures are greater than 1, meaning that at the state level, men have higher earnings, higher labor force participation, and lower poverty rates than women on average. Among the political measures of state-level sexism, representation of men in state legislature was calculated as a proportion, with .5 indicating gender equality and higher proportions indicating more representation of men in government relative to women. All states had higher representation of men in state government (range = .59–.87). In addition, the majority of states had no paid family/medical leave policy across the observation period (94%) and no policy prohibiting gun ownership for people charged with domestic violence (65%). Although the majority of states expanded Medicaid eligibility, 28% did not expand eligibility during the study time frame. Finally, the number of women residing in counties without an abortion provider was measured as a proportion, with higher proportions indicating lower abortion access. The percentage of women residing in counties without an abortion provider varied from 0% to 96%.

Descriptive Statistics of Health Care Access and Quality among Women and Men

Table 2 shows weighted descriptive statistics for the AAMC survey. Women were slightly more likely to report inability to access care compared to men ($p = .034$ for gender difference). There was no significant gender difference in being uninsured ($p = .351$) or inconsistent access to care ($p = .208$). However, women were more likely to report limited choice in care ($p < .001$), and men were more likely to report delay in accessing care ($p < .001$) and affordability barriers to care ($p = .005$ for unable to pay medical bills; $p < .001$ for medical tests and prescriptions too expensive). Women were also less likely to report that providers spent enough time with them during a recent visit ($p = .045$). Women and men in the sample also differed in most sociodemographic characteristics, including age, race, and ethnicity. Men were also more likely to have higher household income ($p < .001$), more years of education ($p < .001$), be married ($p < .001$), have children ($p = .002$), and live in an urban residential setting ($p < .001$). Finally, women reported significantly more frequent need for health care than men ($p < .001$).

Relationship between State-Level Sexism and Barriers in Access to Health Care

Table 3 shows results from logistic regression models of the association between state-level sexism, inability to access health care, and lack of health insurance. State-level sexism was associated with significantly higher odds of inability to access health care for women (odds ratio [OR] = 1.86, 95% CI, 1.51–2.30) and marginally higher odds for men (OR = 1.32, 95% CI, 0.98 –1.78), meaning that a 1 SD increase in state-level sexism was associated with 86% higher odds of inability to access care among women and 32% higher odds of inability to access care among men. Results from pooled-sample models that included an interaction term for state-level sexism and gender show no significant gender differences in the associations between state-level sexism and inability to access care. Higher state-level sexism was also associated with higher odds of being uninsured among both women and men (OR = 1.58, 95% CI, 1.25–2.00 for women; OR = 1.56, 95% CI, 1.14–2.12 for men). Pooled-sample models with the interaction term reveal no significant gender difference in this association.

Table 4 shows logistic regression results for the associations between state-level sexism and availability barriers to care (inconsistent access to health care, limited choice in health care, and delay in accessing care) among men and women who accessed medical care at least once during the past year. Overall, there was no gender difference in the associations between state-level sexism and barriers in availability to care. State-level sexism was positively associated with inconsistent access to health care among women (OR = 1.15, 95% CI 1.02–1.29) but not among men (OR = 1.08, 95% CI 0.91–1.29). However, pooled-sample models that include an interaction term for state-level sexism and gender show no significant gender difference in these associations. State-level sexism was not associated with limited choice in care or delay in accessing care for women or men.

Table 5 shows logistic regression results for the associations between state-level sexism and affordability barriers to care (unable to pay medical bills, unable to complete medical test due to cost, and unable to full prescription due to cost) among men and women who accessed medical care at least once during the past year. For all three affordability barriers, an increase in state-level sexism predicted a significant increase in the odds of experiencing a barrier for women but not for men. Women residing in states higher in sexism reported 17% higher odds

Table 2. Descriptive Statistics, Consumer Survey of Health Care Access (2014–2019).

	Women (n = 14,304)	Men (n = 9,946)	Gender Difference p Value[a]
Barriers to health care access			
Unable to access care	2.12%	1.57%	.034
No health insurance	8.14%	7.68%	.351
Availability barriers[b]			
Inconsistent access to care	10.54%	9.81%	.208
Limited choice in care	10.85%	5.44%	< .001
Delay in accessing care	23.13%	33.54%	< .001
Affordability barriers[b]			
Unable to pay medical bills	36.08%	38.61%	.005
Unable to complete medical test due to cost	29.69%	34.46%	< .001
Unable to fill prescription due to cost	28.91%	35.39%	< .001
Patient–provider communication[b]			
Provider spent time	91.04%	92.11%	.045
Provider explained	96.45%	95.85%	.093
Provider answered questions	93.02%	93.21%	.691
Controls			
Age group			
18–24	13.80%	7.63%	< .001
25–34	16.66%	20.87%	
35–44	15.11%	19.81%	
45–54	18.80%	16.79%	
55–64	16.69%	14.52%	
65 +	18.94%	20.38%	
Race-ethnicity			
Non-Hispanic white	65.71%	67.54%	.017
Non-Hispanic black	10.78%	10.53%	
Hispanic	16.07%	14.53%	
Asian	3.94%	4.54%	
Other	3.50%	2.86%	
Marital status			
Single, never married	25.69%	27.67%	< .001
Married/cohabiting	50.20%	59.15%	
Widowed	7.32%	2.98%	
Divorced	14.84%	8.80%	
Separated	1.95%	1.40%	
Child	39.96%	42.60%	.002
Urbanicity			
Suburban	45.46%	39.46%	< .001
Urban	31.25%	44.32%	
Rural	23.29%	16.22%	
Educational attainment			
Less than high school	4.94%	4.45%	< .001
High school degree or equivalent	32.59%	24.70%	
Some college	35.81%	31.15%	
College or more	26.65%	39.70%	
Income			
Under $25,000	25.71%	14.42%	< .001
$25,000–$49,000	26.10%	18.89%	
$50,000–$74,999	19.15%	20.00%	
$75,000–99,999	10.39%	17.63%	
$100,000 +	18.64%	29.05%	
Needed care 2+ times	49.51%	41.30%	< .001

[a]Pearson's χ^2 tests were conducted for nominal variables. Mann-Whitney U tests were conducted for ordinal variables.
[b]Women's n = 12,448; men's n = 8,881.

Table 3. Associations between State-Level Sexism, Inability to Access Care, and No Health Insurance among Women and Men; Odds Ratios, 95% Confidence Intervals (Consumer Survey of Health Care Access, 2014–2019).

	Women (n = 14,304)	Men (n = 9,946)	Full Sample (N = 24,250)
	Unable to access health care		
State-level sexism	1.86*** (1.51–2.30)	1.32 (.98–1.78)	1.43** (1.14–1.79)
Female			.81 (.61–1.09)
State-level sexism × Female			1.26 (.94–1.69)
	No health insurance		
State-level sexism	1.58*** (1.25–2.00)	1.56** (1.14–2.12)	1.50** (1.15–1.97)
Female			.85* (.74–.99)
State-level sexism × Female			1.07 (.95–1.20)

Note: All models are logistic regressions and control for age, race-ethnicity, state Gini coefficient, state racial composition, state population density, state poverty rate, household income, education, marital status, children in the household, urbanicity, and frequency of needing care.
*p < .05, **p < .01, ***p < .001 (two-tailed tests).

Table 4. Associations between State-Level Sexism and Barriers in Availability of Health Care Access among Women and Men; Odds Ratios, 95% Confidence Intervals (Consumer Survey of Health Care Access, 2014–2019).

	Women (n = 12,448)	Men (n = 8,881)	Full Sample (N = 21,329)
	Inconsistent access to health care		
State-level sexism	1.15* (1.02–1.29)	1.08 (.91–1.29)	1.08 (.94–1.24)
Female			.89 (.78–1.02)
State-level sexism × Female			1.05 (0.96–1.15)
	Limited choice in health care		
State-level sexism	1.07 (.98–1.17)	1.03 (.85–1.24)	1.11 (.96–1.28)
Female			1.72*** (1.53–1.93)
State-level sexism × Female			.94 (.83–1.06)
	Delay in accessing care		
State-level sexism	.95 (.85–1.07)	.96 (.88–1.05)	.93 (.84–1.02)
Female			.68*** (.63–.73)
State-level sexism × Female			1.05 (.98–1.12)

Note: All models are logistic regressions and control for age, race-ethnicity, state Gini coefficient, state racial composition, state population density, state poverty rate, household income, education, marital status, children in the household, urbanicity, and frequency of needing care.
*p < .05, ***p < .001 (two-tailed tests).

Table 5. Associations between State-Level Sexism and Barriers in Affordability of Health Care Access among Women and Men; Odds Ratios, 95% Confidence Intervals (Consumer Survey of Health Care Access, 2014–2019).

	Women (n = 12,448)	Men (n = 8,881)	Full Sample (N = 21,329)
	Unable to pay medical bills		
State-level sexism	1.17***	1.00	1.03
	(1.08–1.27)	(.91–1.10)	(.96–1.11)
Female			.90*
			(.83–.98)
State-level sexism × Female			1.14***
			(1.07–1.21)
	Unable to complete medical test due to cost		
State-level sexism	1.12**	1.03	1.03
	(1.03–1.22)	(.94–1.12)	(.95–1.11)
Female			.91
			(.82–1.01)
State-level sexism × Female			1.11*
			(1.02–1.21)
	Unable to fill prescription due to cost		
State-level sexism	1.12**	1.02	.98
	(1.03–1.22)	(.95–1.09)	(.92–1.05)
Female			.82***
			(.74–.89)
State-level sexism × Female			1.17***
			(1.08–1.26)

Note: All models are logistic regressions and control for age, race-ethnicity, state Gini coefficient, state racial composition, state population density, state poverty rate, household income, education, marital status, children in the household, urbanicity, and frequency of needing care.
*$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed tests).

of being unable to pay medical bills compared to women in states with lower sexism scores (OR = 1.17, 95% CI 1.08–1.27). In addition, women exposed to high state-level sexism had 12% higher odds of reporting that medical tests and prescriptions were too expensive (OR = 1.12, 95% CI 1.03–1.22). State-level sexism was not associated with affordability barriers for men. Pooled-sample models including interaction terms between state-level sexism and gender reveal that gender differences in the associations between state-level sexism and affordability barriers were significant.

Based on results from the pooled-sample interaction models, we plotted gender differences in the predicted probability of reporting each affordability barrier by state-level sexism scores (Figure 1). The predicted probability of inability to pay medical bills was 49% among women who resided in states with high sexism scores (3.5 SD above the mean), compared to 30% among women in states with low sexism scores (1.5 SD below the mean). In addition, the predicted probability of women reporting expensive medical tests was 40% in states high in sexism, compared to 25% in states with low sexism scores. A similar pattern was observed for women's reporting of expensive prescriptions (38% in high-sexism states compared to 23% in low-sexism states). Among men, the predicted probability of reporting affordability barriers showed little change as state-level sexism increased, remaining within 3 percentage points from the lowest state-level sexism score to the highest for each barrier. Supplemental analysis of average marginal effects of the interaction between gender and state-level sexism (see Appendix Table E in the online version of the article) shows that in states with low state-level sexism, the predicted probability of reporting an affordability barrier was significantly lower for women compared to men. Furthermore, in states with above average state-level sexism scores, the predicted probability of reporting an affordability barrier was significantly higher for women compared to men.

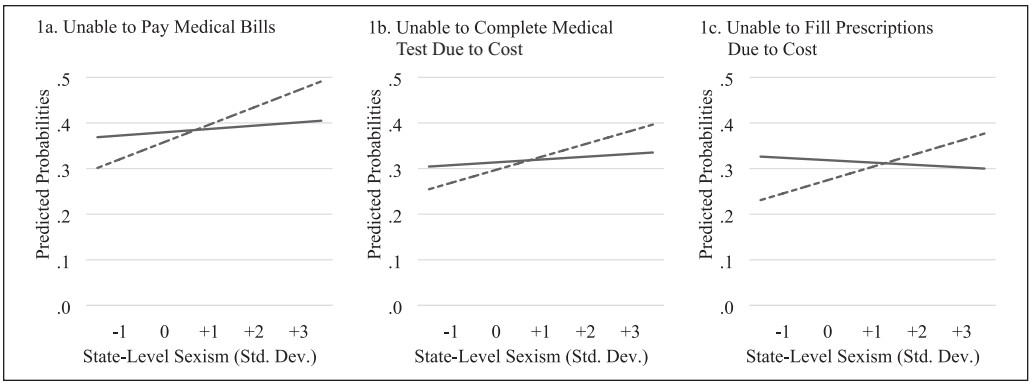

Figure 1. Gender Differences in the Association between State-Level Sexism and Barriers in Affordability of Health Care Access (Consumer Survey of Health Care Access, 2014–2019).

Relationship between State-Level Sexism and Patient–Provider Communication

We tested associations between state-level sexism and patient–provider communication during the respondent's most recent health care visit (Table 6). State-level sexism was not associated with quality of patient–provider communication for men. Among women, the odds of reporting that providers explained things and answered questions increased as state-level sexism increased. Among women, a 1 SD increase in state-level sexism was associated with 19% higher odds that providers explained things well (OR = 1.19, 95% CI 1.04–1.36) and 14% higher odds that providers answered questions (OR = 1.14, 95% CI 1.05–1.24). However, pooled models showed no significant gender difference in these associations.

DISCUSSION

Summary of Findings and Connections to Existing Research

The current study examined the associations between state-level sexism, barriers to health care access, and health care quality among women and men who reported needing medical care within the past year. This study is innovative in examining the consequences of sexism at the *structural* level on health care experiences. Aligned with recent work investigating structural sexism as a determinant of health (Homan 2019), we used a measure of state-level sexism that encompassed economic, political, and cultural domains of the gender system. We also incorporated several measures of health care access and quality to assess ability to access health care, specific barriers in the availability and affordability of care, and the quality of patient–provider communication.

Consistent with our hypotheses, as state-level sexism increased, the odds of being unable to get health care increased for women. This association was robust after adjusting for covariates, suggesting that state-level sexism may shape ability to access care above and beyond other individual- and state-level determinants of access to care. Higher state-level sexism was associated with higher odds of being uninsured for both women and men. Higher levels of sexism may be equally detrimental for women's and men's access to health insurance because health care policies in states with higher state-level sexism (e.g., Medicaid eligibility) uniformly restrict access to health insurance. Indeed, supplemental analysis that tested the associations between Medicaid expansion and insurance coverage showed that both women and men residing in states that did not expand Medicaid during the study period were more likely to be uninsured. However, restrictions in Medicaid eligibility have been shown to disproportionately affect women's barriers to health care access and subsequent health (Margerison et al. 2020; Stimpson, Pintor, and Wilson 2019). We may not have observed such difference because men and women reported similar rates of being insured in the current sample.

More state-level sexism was associated with more affordability barriers to care (unable to pay for medical bills, medical tests, and prescriptions) for women but not for men. Although the mechanisms

Table 6. Associations between State-Level Sexism and Patient–Provider Communication among Women and Men; Odds Ratios, 95% Confidence Intervals (Consumer Survey of Health Care Access, 2014–2019).

	Women (n = 12,448)	Men (n = 8,881)	Full Sample (N = 21,329)
		Provider spent time	
State-level sexism	1.09 (1.00–1.18)	.91 (.79–1.03)	.95 (.85–1.07)
Female			.95 (.85–1.06)
State-level sexism × Female			1.12* (1.03–1.23)
		Provider explained	
State-level sexism	1.19** (1.04–1.36)	1.02 (.84–1.25)	1.06 (.89–1.27)
Female			1.21* (1.00–1.46)
State-level sexism × Female			1.10 (.95–1.27)
		Provider answered questions	
State-level sexism	1.14** (1.05–1.24)	.99 (.87–1.14)	1.02 (.90–1.14)
Female			1.09 (.93–1.27)
State-level sexism × Female			1.12 (.97–1.30)

Note: All models are logistic regressions and control for age, race-ethnicity, state Gini coefficient, state racial composition, state population density, state poverty rate, household income, education, marital status, children in the household, urbanicity, and frequency of needing care.
*$p < .05$, **$p < .01$ (two-tailed tests).

linking state-level sexism to individual-level affordability of care cannot be determined in our analyses, we found that associations between state-level sexism and affordability barriers were not explained by individual sociodemographic and health-related characteristics. These results suggest that state-level sexism may shape women's ability to afford health care in ways that go beyond individual-level socioeconomic standing. Future studies should investigate the ways in which state-level sexism shapes community-level contexts that affect health care affordability for women.

Interestingly, in plots showing gender differences in the association between state-level sexism and barriers to health care access, it appears that women residing in states with higher than average state-level sexism reported more affordability barriers to care compared to men, whereas women in states with lower than average state-level sexism reported fewer barriers than men. The finding that women residing in states with lower sexism scores reported fewer barriers to care compared to men warrants further research. Perhaps states with lower levels of sexism have more comprehensive health care legislation that specifically targets the health care needs of women (e.g., expanded Medicaid eligibility for women of reproductive age or widely available and affordable reproductive care), and this legislation substantially reduces affordability barriers to care for women but not for men. A growing literature has identified the benefits of health care legislation for women's health care access (Johnston et al. 2018; Stevenson et al. 2016), but little research has examined the impacts of similar legislation on men's access to care. Alternatively, given the greater health care needs of women on average, state-level social and economic conditions might have a more substantial impact on access to affordable care for women compared to men. Further research is needed to identify strategies that both improve women's access to care and promote equitable access for women and men.

We found no association of state-level sexism with barriers in the availability of care for women and men. These results were unexpected given that women are more likely to report unmet health care needs and delays in receiving care than men (Long et al. 2011; Ng et al. 2010; Rustgi et al. 2009) and that state policies can affect the availability of care for women (Johnston et al. 2018; Stevenson et al. 2016). Because results could be a function of overall measurement and/or availability of health care in the present sample, future research should test this relationship using various measures of health care availability in different samples.

Surprisingly, across two of the three measures of patient–provider communication, women who resided in states with higher levels of sexism reported more positive interactions with their providers compared to women in states with lower levels of sexism. We propose several explanations. Because some gender stereotypes may entail benevolent sexism, defined as seemingly innocuous and patronizing behaviors that may appear complimentary to some individuals (Glick and Fiske 1996), perhaps women in states high in structural sexism do not interpret sexist patient–provider communication as negative.

Women may also be more likely to minimize interpersonal experiences of sexism that are more ambiguous as a coping mechanism (Ruggiero and Taylor 1995, 1997), particularly in contexts where women feel that they may not be believed or may be retaliated against (Kaiser and Miller 2001; Sechrist and Delmar 2009). Perhaps women in states where sexism is the structural norm utilize this coping mechanism more frequently to preserve their psychosocial health (Bosson, Pinel, and Vandello 2010) in the otherwise toxic state-level environment. Conversely, they may be putting more effort into communication with providers given the hostile structural-level environment and, in the process of doing so, getting more positive outcomes due to their own self-advocacy, in line with research on confronting sexism (Ayres, Friedman, and Leaper 2009; Good et al. 2019). Such propositions highlight the importance of further research that will incorporate examination of the social psychological aspects of gender and the gendered system, which we were not able to do given data limitations.

Finally, provider communication with patients may not necessarily reflect institutional and cultural contexts where they are currently practicing medicine but instead reflect communication skills developed through medical training from institutions in other geographic areas.

Suggestions for Future Research

Although this study enhances our understanding of the relationship between structural sexism and health care access and quality, several limitations should be addressed in future research. Because data utilized in this study were observational and cross-sectional, our results do not imply causality. Although sampling was stratified by age and insurance status and all analyses incorporated U.S. census weights, study participants were more likely to be insured and were less likely to be unable to get care compared to U.S. national averages (Azam and Moy 2016). Therefore, our estimates are likely to be conservative and do not necessarily generalize to the U.S. population. In addition, although we utilize multiple measures of state-level sexism that mirror dimensions of structural inequity explored in existing research (e.g., Homan 2019; Wisdom et al. 2005), these measures are not exhaustive. State legislation relating to reproductive rights and spending on public assistance programs were not included in the present study due to gaps in the availability of data during the study years. We could not examine the relative importance of indicators of structural sexism given multicollinearity. Consequently, we cannot glean which dimensions are particularly important.

Although we adjusted for potential state-level confounders in the relationship between state-level sexism and barriers to care, other state-level characteristics may contribute to the results we observed. Future research is needed to identify additional state-level economic, political, and cultural factors that may contribute to health care disparities. In addition, we limited our measurement of structural sexism to the state level and did not examine county-, neighborhood-, or household-level indicators of sexism. Policies and inequalities at the state level impact individual health and health care (Hawkins et al. 2020; Lee et al. 2020; Montez et al. 2016), but state-level measures do not account for within-state variation in economic, political, and cultural contexts.

We did not analyze relationships between state-level sexism and barriers to health care access among transgender and nonbinary populations due to data limitations. Growing literature documents extensive barriers to health care access for trans and nonbinary people due to discriminatory policies at the federal and state levels (Bakko and Kattari 2019; Goldenberg et al. 2020). Future data collection efforts must adopt inclusive measures of

gender identity to further this area of research using national samples.

CONCLUSION

State-level sexism appears to increase barriers to health care access among women in the United States by affecting women's ability to afford medical care. These results were robust after adjusting for individual-level sociodemographic characteristics, suggesting that state-level sexism acts on environmental or organizational contexts to directly shape women's access to health care. Our findings are consistent with existing research that documents the negative impacts of structural gender inequities on women's health and longevity (Homan 2019; Montez et al. 2016; Wisdom et al. 2005). Furthermore, in our analysis, state-level sexism appears to have no effect on men's access to health care. This counters some research that finds structural gender inequity to be universally harmful for both women's and men's health (Homan 2019; Kawachi et al. 1999) and instead suggests that macro-level structural sexism is uniquely detrimental for women's health care access. Finally, women in states with higher levels of structural sexism reported better quality of patient–provider communication compared to women in states with lower levels of sexism. Further research is needed to unpack these associations.

These findings demonstrate the need to use a multilevel approach to understand and act on the social determinants of women's health care access and quality. The implications of these findings are vital given that multiple states have enacted legislation to restrict women's access to reproductive care and weakened antipoverty programs that provide needed assistance to millions of women and mothers (Kogan et al. 2019; McKernan and Ratcliffe 2018; Reingold and Gostin 2019). Meanwhile, the gender gap in wages has remained stagnant in the United States since 2004, and women continue to be severely underrepresented in federal, state, and local government (Homan 2017; Patton and Fording 2020; U.S. Bureau of Labor Statistics 2019). Findings from the current investigation implicate sexism across economic, labor force, and political institutions as a key determinant of women's barriers to accessing health care. As the future of U.S. health care reform continues to be debated, we urge lawmakers to also consider social and economic policies as essential forms of health care legislation.

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SUPPLEMENTAL MATERIAL

Appendices A through E are available in the online version of the article.

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