



Perceived Discrimination During Prenatal Care at a Community Health Center

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Abstract

Introduction Discrimination in healthcare is associated with fetal growth restriction, preterm birth, and postpartum depression. A community-based participatory research study was designed to measure perceived discrimination and healthcare quality during prenatal care and delivery by a community health center, where the majority of patients served belong to historically marginalized ethnic and racial groups.

Methods A 34-question phone survey was administered to women 18 years and older who received prenatal care at the study site during 2020–2021. The primary outcome was perceived discrimination during obstetric care, measured by the 7-question Discrimination in the Medical Setting (DMS) survey. Secondary outcomes included the association of race with perceived discrimination, quality of care, trust of healthcare providers, and perceived control over medical choices.

Results Ninety-seven women completed the survey, 95 of whom were women of color. The sample was dichotomized into Black ($n=49$) and non-Black ($n=46$). Perceived discrimination for all participants was 21% (20/95), with 31% (15/49) of Black women reporting any discrimination during prenatal care and delivery. Compared to other women of color, Black women reported higher rates of perceived discrimination (31% vs 11%, aOR 3.9 [1.2–12.1], $p<0.05$), lower control over health choices (84% vs 98%, aOR 0.1 [0.0–0.8], $p<0.05$), and were more likely to perceive lack of respect (12% vs 2%, $p=0.045$).

Conclusion Although perceived discrimination at this community health center was low compared to prior studies, Black women experienced higher rates of discrimination than other women of color.

Keywords Birth outcomes · Perceived discrimination · Community health center

Introduction

Despite multi-faceted efforts to reduce health disparities, institutional racism continues to negatively impact health outcomes. In a recent nationally representative survey ($n=2137$), 21% of US adults reported experiencing discrimination in the healthcare system; females (OR 1.9, CI 1.5–2.3), non-Hispanic Blacks (OR 1.2, CI 0.9–1.5), and those reporting annual income $< \$50,000$ (OR 1.6, CI 1.2–2.1) had higher odds of reporting discrimination [1]. Some studies demonstrate that perceived discrimination rates can be as high as 50% in Black participants [2–5]. Individuals who report perceived discrimination in healthcare are up to twice as likely to experience poor quality of care, insufficient appointment time, and low decision-making involvement [2, 6].

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Perceived discrimination has been associated with adverse health outcomes, including lower cancer screening rates, poorer diabetes control, lower vaccination rates [5, 7, 8], and worse birth outcomes including preterm birth, low birth weight, and postpartum depression [3, 7–10].

While several factors may lead to perceived discrimination, race is a primary factor [11–13]. One validated tool to measure racism and perceived discrimination in the healthcare setting is the Discrimination in Medical Settings (DMS) scale [14]. This tool was used in a recent study in Chicago demonstrating 40% of participants had experienced discrimination in the health setting, including 56% of Black participants [2]. Perceived discrimination during pregnancy and delivery has been reported to be between 20 and 40%, with rates as high as 50% in Black women [3, 9, 15]. New evidence suggests that perceived discrimination and quality of care at delivery during the COVID-19 pandemic is even worse than initially reported values, with 43% of all women reporting discrimination in the subgroup who delivered between March and May 2020 [4].

Community health centers (CHCs), sometimes referred to as federally qualified health centers (FQHCs), have been delivering care to historically marginalized populations since the 1960s [16]. The populations CHCs predominantly serve include racial and ethnic minorities and those who are socioeconomically disadvantaged; thus, they are at greater risk for discrimination in medical settings when compared to White populations [9, 10]. There is evidence to suggest CHCs can improve access to prenatal care and birth outcomes in vulnerable populations, likely related to cultural competency initiatives to reduce health disparities [17]. However, published data are limited in describing perceived racism and discrimination in CHCs, and no study to our knowledge has investigated perceived discrimination during obstetric care at a CHC.

We hypothesized that overall discrimination scores would be lower than historically reported rates in a CHC with supportive cultural competency structures in place, but that Black participants would have higher rates than other women of color given long-standing systemic racism in society and the healthcare system. We therefore designed a study to measure perceived discrimination and quality of care during prenatal care and delivery in a CHC predominantly serving women of color.

Methods

Design

This cross-sectional study was designed to measure perceived discrimination, quality of care, and patient satisfaction during prenatal care and delivery of women whose

primary medical home was an urban CHC. The primary outcome was perceived discrimination, measured by a 7-question validated tool called DMS, described in detail below. Secondary outcomes included the association between race and perceived discrimination, quality of care, trust of healthcare providers, and perceived control over medical choices relating to prenatal care and delivery. This study was approved by the Washington University School of Medicine, IRB # 202005159.

Eligible participants were women age 18 years and older who received prenatal care at the study site during 2020–2021 (Affinia Healthcare [AHC]) and were delivered by one of the AHC obstetricians. Consent was obtained and surveys were administered over phone by research personnel, with an interpreter if applicable. Eligible participants were identified by delivery reports during the study period. Participants were contacted between 1 and 6 months postpartum, though a majority were within 3 months of delivery (72%). Surveys were completed between December 2020 and September 2021. Participants were mailed a \$25 gift card upon completion.

Study Site

Affinia Healthcare is a FQHC treating a historically marginalized population in St. Louis, MO, with five clinical sites that serve approximately 40,000 individuals annually. The patient population at AHC is diverse: 68% Black, 23% White, 6% unreported, 1% more than one race, 2% Asian; 11% identify as Hispanic/Latinx, and 10% prefer a language other than English. Ninety-two percent of Affinia Healthcare patients have incomes under 100% of the Federal Poverty Level, 10% are unhoused, 30% are uninsured, and 38% have Medicaid.

Obstetric providers deliver approximately 700 babies annually. A majority of these deliveries are at Barnes Jewish Hospital, the largest hospital in Missouri. Some prenatal care is delivered through group care (Centering, offered in English and Spanish), but this was temporarily suspended during the COVID-19 pandemic when a majority of the participants were pregnant. Obstetric clinicians are supported by a team of nursing staff in the office and by the maternal child department. This department consists of nurses, community health workers, and doulas who support prenatal and postpartum mothers, babies, and families as health consultants and system navigators.

Affinia Healthcare utilizes certified medical interpreters and provides translated health information in several languages for patients with limited English proficiency. Yearly education in cultural competence and trauma-informed care is required for all staff to recognize bias, to teach about social and structural determinants of health, and to provide compassionate and equitable care.

Study Tools

The survey was designed by both CHC and research team partners to incorporate research and patient satisfaction items beneficial to both parties. The survey included 34 questions with open-ended and Likert scale responses. The DMS was included at the end of the survey. This tool has been validated in several other studies, and was an adaptation from the Everyday Discrimination Scale (EDS) [14, 18]. Each question has five answer choices from “never” to “always” (1 = never; 2 = rarely; 3 = sometimes; 4 = most of the time; 5 = always). The patient satisfaction items included questions about quality of care, satisfaction, group prenatal care, impact of COVID, and breastfeeding practices.

Data Collection and Analysis

Target participation was 100, with approximately 50% of participants who speak a language other than English; this was due to funding limitations and community partner preferences rather than sample size calculations. The following variables were collected by a combination of survey and delivery report: age/ethnicity, race, preferred language, health insurance, marital status, parity. Survey responses were recorded in REDCap (version 10, hosted at Washington University School of Medicine). Outcomes were recorded in an ordinal Likert scale format, but converted to dichotomous outcomes, which is similar to prior studies utilizing these outcomes [4, 10]. For example, in the DMS survey questions, responses were converted to “never” vs “ever” experienced discrimination for each item.

DMS scores were reported as mean raw scores as well as rates of any perceived discrimination. Race/ethnicity was the primary variable utilized to determine association. This variable was also dichotomized as Black vs non-Black. Mean scores and discrimination rates related to race were compared for association with *t*-tests and chi-square, respectively. Fisher’s exact test was used to cross-validate statistical significance of all univariate analyses due to overall low subgroup size. Odds ratios were calculated by logistic regression for the study outcomes related to race. Multivariate regression involved a limited number of variables due to low sample size; race/ethnicity, parity, and age were considered the most clinically relevant. Analysis was performed by Stata v16.1 (StataCorp LP, College Station, TX).

Results

Table 1 summarizes the demographic information of participants, many of whom were age 25–34 with public-funded health insurance at the time of delivery. One hundred surveys were completed. However, one participant did not complete

Table 1 Demographics

Variable	N (%) (total N=97)
Age	
18–24	25 (26%)
25–34	48 (49%)
≥ 35	24 (25%)
Race/ethnicity	
Asian	10 (10%)
Black, non-Hispanic	49 (51%)
Latino/Hispanic	36 (37%)
White, non-Hispanic	2 (2%)
Language (preferred)	
English	47 (48%)
Spanish	34 (35%)
Other	16 (17%)
Insurance ^a	
Medicaid/CHIP	94 (97%)
Other	3 (3%)
Married or long-term partner	49 (51%)
Primiparous	23 (24%)

Primiparous = first live birth (parity = 1)

CHIP Children’s Health Insurance Program

^aInsurance status determined at delivery. Uninsured pregnant women at study site are enrolled in Medicaid or CHIP coverage during prenatal care

the DMS questions and was excluded. Two participants took the survey twice (by error). Only their first survey was included for analysis. White participants were excluded from analysis due to low participation ($n = 2$). Of note, the 10 Asian participants were from Myanmar ($n = 5$), Afghanistan ($n = 4$), and Nepal ($n = 1$), none of whom spoke English as her primary language. Six non-English speaking participants who identified as Black were from the Democratic Republic of Congo ($n = 4$), Somalia ($n = 1$), and a French speaker who did not report a country of origin.

Mean DMS scores and discrimination rates of individual survey items and their association with race are reported in Table 2. Black participants had higher mean scores for every question of the DMS, though perceived disrespect was the only item achieving statistical significance (1.31 vs 1.02, $p = 0.045$); discrimination rates of this item were not significant (12% vs 2%, $p = 0.060$). Black women also reported higher rates of ever feeling not listened to (20% vs 7%, $p = 0.049$).

The association of race on the four outcomes (perceived discrimination, quality of care, trust, and control of choices) are reported in Table 3. Perceived discrimination during prenatal care and delivery for all participants was 21% (20/95). Compared to other women of color, Black women reported higher rates of perceived discrimination (31% vs 11%, aOR 3.9 [1.2–12.1], $p < 0.05$) and lower

Table 2 Responses to perceived discrimination in the medical setting for prenatal care, delivery, and postnatal care

Variable	Total (N=95) ^c	Black (N=49)	Non-Black (N=46)	p value ^d
Treated with less courtesy				
Mean (95% CI) ^a	1.25 (1.09–1.40)	1.39 (1.11–1.67)	1.11 (0.98–1.24)	0.078
Any discrimination ^b	12/95 (13%)	9/49 (18%)	3/46 (7%)	0.082
Treated with less respect				
Mean	1.17 (1.02–1.31)	1.31 (1.04–1.58)	1.02 (0.98–1.07)	0.045*
Any discrimination	7/95 (7%)	6/49 (12%)	1/46 (2%)	0.060
Receive poorer service				
Mean	1.18 (1.05–1.31)	1.27 (1.03–1.51)	1.09 (0.98–1.19)	0.184
Any discrimination	10/95 (11%)	7/49 (14%)	3/46 (7%)	0.218
Treated as not smart				
Mean	1.09 (1.03–1.16)	1.12 (1.03–1.22)	1.07 (0.97–1.16)	0.399
Any discrimination	8/95 (8%)	6/49 (12%)	2/46 (4%)	0.116
Afraid of you				
Mean	1.03 (1.0–1.13)	1.06 (1.0–1.13)	1.00 (1.00–1.00)	0.090
Any discrimination	3/95 (3%)	3/46 (6%)	0/46 (0%)	0.088
Acts as if he/she is better than you				
Mean	1.03 (0.99–1.08)	1.06 (0.97–1.15)	1.00 (1.00–1.00)	0.193
Any discrimination	2/95 (2%)	2/49 (4%)	0/46 (0%)	0.166
Not listening to you				
Mean	1.26 (1.11–1.41)	1.41 (1.13–1.68)	1.11 (0.98–1.24)	0.055
Any discrimination	13/95 (14%)	10/49 (20%)	3/46 (7%)	0.049*

^aEach question has five answer choices from “never” to “always” (1=never; 2=rarely; 3=sometimes; 4=most of the time; 5=always)

^bDiscrimination results reported as fraction (raw %)

^cFor analysis, white race (n=2) was excluded

^dComparison of means performed by *t*-test; discrimination rates analyzed by chi-square tests

*Denotes statistical significance, $p < 0.05$

Table 3 Association of race on selected survey responses

Variable	Total	Black	Non-Black	Unadjusted OR ^a	Adjusted OR ^b
Perceived discrimination	20/95 (21%)	15/49 (31%)	5/46 (11%)	3.6 (1.2–11.0)*	3.9 (1.2–12.1)*
Perceived low quality of care	7/95 (7%)	6/49 (12%)	1/46 (2%)	6.3 (0.7–54.3)	6.2 (0.7–54.9)
Perceived Trust	82/95 (86%)	40/49 (82%)	42/46 (91%)	2.4 (0.7–8.3)	2.4 (0.7–8.7)
Perceived control of choices	86/95 (91%)	41/49 (84%)	45/46 (98%)	0.1 (0.0–0.9)*	0.1 (0.0–0.8)*

^aAnalysis by logistic regression, comparing Black to non-Black participants

^bAdjusted by age and parity, comparing Black to non-Black participants

*Denotes statistical significance, $p < 0.05$

perceived control over health choices (84% vs 98%, aOR 0.1 [0.0–0.8], $p < 0.05$). Specifically, Black women had 3.9 times higher odds of perceived discrimination, and had 10 times lower odds of perceiving they had substantial control over their healthcare choices. Black women also reported lower perceived quality of care (12% vs 2%) and trust in healthcare providers (82% vs 91%), though these results did not achieve statistical significance.

Discussion

This study shows that Black women had a nearly four-fold greater odds of experiencing discrimination during pregnancy compared to other women of color at a community health center. These findings are consistent with prior studies of perceived discrimination during prenatal care and delivery [4, 9, 14].

There are notable differences between our study and prior published studies. These studies, in general, had a higher sample size, more White participants, and often used the White population as the control group. Our study included only non-White participants, including many with limited English proficiency, and is the first to our knowledge to report this data from a community health center. Timing is also important to consider. Janevic et al. demonstrated increased perceived discrimination during the COVID-19 pandemic, during which our data was collected [4]. Though direct comparisons would be subject to multiple biases, these similar studies have reported 30–40% perceived discrimination in participants, which appears significantly higher than the 21% in this study.

Despite less discrimination than previously reported, there remain several areas of concern. Most importantly, nearly one-third (31%) of Black participants reported discrimination, suggesting there is substantial room for improvement in eliminating racial disparities in healthcare. Black women reported higher perceived discrimination and less perceived control over healthcare choices than other races. The results of the individual questions of the DMS might explain some of these discrepancies. Black participants were more likely to report their providers were not listening to them and were treated with less respect than others. This reflects either overt acts of racism or more likely implicit biases that affect healthcare providers' interpersonal interaction with patients.

It is unclear why Black women in this study experienced higher rates of discrimination compared to other women of color. The study site cares for a large population of immigrants, many of whom have fled conflict, persecution, violence, and/or financial hardship. It is possible this history affects their expectations and perceptions of healthcare in a country that is acting as a refuge, at least for some, when compared to the mostly African-American group. In addition, there are social structures outside of healthcare that affect implicit bias and racism that ultimately diffuse into health institutions, but affect racial and ethnic groups differently. Societal-wide interventions such as improved public education systems, equal pay, and fair housing (to name a few) could have downstream effects on perceived discrimination in healthcare, but is beyond our scope at this study site.

Further cultural competency training might reduce this disparity in the future, but would need to be a longitudinal system-wide endeavor. Additional studies involving interviews and other qualitative methods could be designed to investigate the root cause of this discrimination. It will also be important to analyze specific interventions to reduce implicit bias, improve cultural humility, and minimize racial health disparities. Some of these interventions related to discrimination during pregnancy

and birth outcomes could include utilization or partnering with doulas, modifying existing group-based care, or health center-sponsored wellness initiatives. Overall, our results indicate that the healthcare system needs continued focus on initiatives to eliminate the disparities caused by decades of institutional racism.

Community health centers might be optimal sites to investigate these interventions and establish best practices to reduce health inequities. This study site has provided healthcare to historically marginalized populations for more than 20 years, and has earned longitudinal, generational trust with the population served. Partnering with organizations valued by these populations will be essential to a multi-faceted systems-based approach to breaking down systemic racism, implicit bias, and discrimination. Importantly, CHCs might have a unique ability to discuss these issues and potential solutions directly with the Black community.

This study has several strengths. This study was performed as a true community-based participatory research (CBPR) project, where design and implementation was shared among the CHC and academic partner. It represents one of many similar partnerships that can lead to improved delivery of care and contribution to the scientific community. There will always be limitations to feasibility of rigorous scientific methodology in CHCs, but endeavors to pursue CBPR in birth outcomes may lead to implications of equity; best practices; and, potentially, healthcare policy. These partnerships will be essential to breaking down systemic racism, implicit bias, and discrimination. An additional strength is that, although a small sample size, the non-Black participants represent a diverse immigrant group, which was lacking in prior studies. Finally, we provide new data about perceived discrimination during the COVID-19 pandemic.

There are several study limitations. We propose the results of this descriptive study could serve as a baseline for future interventions designed to further reduce perceived discrimination. However, the study site is unique and might limit external validity for other sites. In particular, most women receiving prenatal care at the study site are women of color with Medicaid or CHIP insurance coverage. Second, there is no data evaluating individual interventions. As mentioned, this CHC has multiple ongoing initiatives to reduce discrimination and improve cultural competency, and we were unable to measure the impact of any individual intervention. This is likely to be a limitation at other CHCs. Finally, relatively few variables were collected for analysis, such as maternal health status, delivery mode, and birth outcomes, which could affect perceived discrimination or recall of discrimination. This limited ability to perform multivariate analyses. Inclusion of extra demographic and clinical variables (immigration/legal status or delivery mode, for example) could lead to additional findings.

It is also important to note that our two groups (Black and non-Black) are likely very different. The non-Black group represents multiple ethnic groups of colors, most of whom have limited English proficiency. Though insurance status, geographic location of residence, and income are similar, there are likely large cultural differences among participant groups. The purpose of utilizing these groups was to ensure we analyzed Black participants separately, with the benefit of adding to the existing data pool of perceived discrimination in immigrant groups.

In conclusion, this study describes rates of perceived discrimination during prenatal care and delivery in a community health center, demonstrating possible effects of systemic implicit bias, trauma-informed care, and anti-racist training and implementation. Despite improvements from prior studies, the effects of structural racism are apparent, and disparities still exist among racial groups of color. Health-care institutions should continue to pursue efforts to achieve health equity.

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Data Availability Upon publication, access to available data may be granted by e-mailing a request to the corresponding author at cwprater@wustl.edu.

Declarations

Ethics Approval This study was approved by the Washington University School of Medicine, IRB # 202005159. The study operated under standard medical research ethical principles. Participants have given consent for participation and publication.

Conflict of Interest The authors declare no competing interests.

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