Prenatal Racial Discrimination Associated With Dissatisfaction With Prenatal Care

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ABSTRACT

Introduction: Maternal and infant racial and ethnic health disparities persist in Wisconsin. The Black infant mortality rate is 3 to 4 times that of White infants.

Objective: In this study, we used data from the Wisconsin Pregnancy Risk Assessment Monitoring System to examine women's experiences with racism and accessing pre- and postnatal care.

Methods: Data from the 2016-2018 Pregnancy Risk Assessment Monitoring System—an ongoing state-administered surveillance system of new mothers—were used. The total number of non-White respondents was n = 2,571. The data are weighted both for nonsampling and for nonresponse. The prevalence of late entry to prenatal care, inadequate prenatal care, and no postpartum visit in the population of non-White women were calculated. Multivariable logistic regression was used to model the association between racial discrimination in the year prior to birth and perinatal care utilization and satisfaction.

Results: Less-than-adequate prenatal care was significantly associated with racial discrimination in bivariate analysis (OR 1.4; 95% CI, 1.02-1.8), but this relationship became marginally significant after adjusting for maternal sociodemographic characteristics (OR 1.3; 95% CI, 0.9-1.7). In contrast, prenatal experience of racial discrimination was associated with about 1.5 times the odds of not receiving a postpartum visit both before and after adjusting for maternal characteristics (OR 1.6; 95% CI, 1.1-2.3).

Conclusions: Completing the postpartum visit has the potential to save mothers' lives; decreasing experiences of racial discrimination in health care settings may be one mechanism for decreasing maternal and infant mortality.

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INTRODUCTION

Since 1981, Wisconsin has endured decades of documented racial and ethnic disparities in birth outcomes for families of color.[1] The 2017 Wisconsin Birth and Infant Mortality Report identifies a widening gap in infant deaths for Black, American Indian, and Asian or Pacific Islander mothers.[2] The rate of deaths for Black infants has persistently been 3 to 4 times that of White infants. Racial disparities in health outcomes have multiple root causes and pathways; structural racism within health care cannot be overlooked as one of these. Racism is a stressor known to contribute to poor health outcomes[3] and negative health care experiences.[4]

Individuals experience racism through their personal experiences, ethnic/racial group experiences, and intergenerational transmission of poverty and risk.[5] Racism also is present in patient-provider interactions and through structural components of health care that include access to payment and services, fragmented care, and a lack of diversity among health providers.[6]

One important influence on birth outcomes is engagement in preconception, prenatal care, and postpartum care.[7,8] The American College of Obstetricians and Gynecologists continues to recommend women begin prenatal care in the first trimester.[9,10] Studies have shown a correlation between experiences of racism and mistrust in health care that may contribute to late entry and incomplete pre- and postnatal care.[11-13] Experiences with racism remove personal agency for women of color through actions such

as withholding or providing misleading health information.[6,14] Women report equating the manner in which information is presented with signs of respect.[6] Qualitative studies indicate that women with low levels of trust in their providers are less likely to adhere to prenatal care recommendations[15] which, in turn, can affect health outcomes. In 2018, the Black Mamas Matter Alliance (BMMA) issued a Black paper that recommended 8 standards for holistic care.[16] Their first recommendation is to listen to Black women. BMMA calls for "the voices of Black women to be heard through individual care visits, in policy decisions, and in the design of all medical interventions targeted for Black women."

In this study, we used data from the Wisconsin Pregnancy Risk Assessment Monitoring System (PRAMS), to examine women's experiences with racism and accessing pre- and postnatal care. Wisconsin is 1 of 13 PRAMS states that asks respondents about racial discrimination during Phase 8 questionnaire implementation (2016 to present). The PRAMS question about discrimination asks, "During the 12 months before your new baby was born, did you feel emotionally upset (for example, angry, sad, or frustrated) as a result of how you were treated based on your race?" (This exposure is hereafter referred to as "prenatal racial discrimination.") Two previous studies have linked this experience of interpersonal discrimination in the pre-conception or pregnancy period to preterm birth,[17,18] but we are not aware of any studies that assess the association between reported discrimination and utilization of perinatal health care, which has the potential to affect a wide range of maternal and child health outcomes. This study attempts to fill that gap.

For this study, we focus on women of color since White women's experience of race-based interpersonal discrimination is fundamentally different from that of women of color. We seek to explore whether the experience of interpersonal discrimination has an independent effect on prenatal care utilization, realizing that structural racism is simultaneously shaping women's experiences. We hypothesize that women who report having experienced interpersonal racial discrimination in the year prior to delivery will be less likely to have adequate prenatal care (including first trimester entry to care), less likely to report satisfaction with the prenatal care they received, and less likely to receive a postpartum visit. We use the terms woman, women, and mother throughout this article for brevity but acknowledge that not all pregnant or birthing people identify as female.

METHODS

We used 2016-2018 data from the Wisconsin PRAMS, an ongoing state-administered surveillance system of new mothers. PRAMS uses race-stratified population random sampling of women who give birth each month and surveys them between 2 and 4 months after delivery. Respondents participate with a mail-in self-administered questionnaire or by phone with an interviewer-administered questionnaire. Data collection methods have been described in detail elsewhere.[19] There were 3,667 respondents in Wisconsin in 2016-2018, representing 187,107 survey-weighted women who recently gave birth (about 96% of births in Wisconsin). The data are weighted both for nonsampling and for nonresponse based on over 20 characteristics documented in the birth certificate. The sample frame excludes planned adoptions and surrogate pregnancies.

Measures

We adjusted for variables that have been demonstrated in previous research to be associated with prenatal care utilization. Maternal age, race, education, marital status, and birth payer are taken from the birth certificate, which is linked with the PRAMS survey data. Poverty status and self-reported prenatal racial discrimination are measured by the PRAMS survey. Maternal age is coded as an ordinal variable with 4 levels: <20 years, 20-24 years, 25-29 years, and over 29 years old. Maternal education is treated as an ordinal variable with 5 levels: 0-8 years of education, 9-11 years, 12 years, 13-15 years, and greater than or equal to 16 years. Expected source of birth payment from the birth record is used as a proxy for prenatal care insurance because it has lower missingness than the prenatal insurance variables from the PRAMS survey. Poverty is approximated by self-reported prepregnancy income and household size.

The primary independent variable of interest is self-reported emotional upset due to racial discrimination in the 12 months prior to giving birth, coded as "yes" or "no." Due to the racial hierarchy of white supremacism in the United States, race-based discrimination toward people of color (oppressed groups under white supremacy) is fundamentally different from race-based discrimination reported by White people, who have racial privilege. Therefore, the exposure under study, ie, interpersonal racism, is not equivalent among White women and women of color. For this reason, we include only women of color in our analysis, since White women are not equally "at risk" of the study exposure.

The dependent variables of interest are modeled separately. They include indicators of perinatal care utilization and satisfaction with 4 aspects of their prenatal care. The perinatal care utilization indicators include first trimester/late entry to prenatal care, according to maternal self-report of how many weeks or months she was pregnant when she received her first prenatal care visit; prenatal care adequacy, as measured by the Kotelchuck index;[20] and self-reported postpartum visit ("Since your new baby was born, have you had a postpartum checkup for yourself?").

Satisfaction with prenatal care was measured by the following question on the PRAMS Survey: "How did you feel about the prenatal care you got during your most recent pregnancy? For each item, check No if you were not satisfied or Yes if you were satisfied." Respondents were asked about their satisfaction with the amount of time they had to wait, the amount of time the provider spent with them, the advice they received on how to take care of themselves, and the understanding and respect shown to them as a person.

Analysis

We calculated the prevalence of late entry to prenatal care, inadequate prenatal care, and no postpartum visit in the population of non-White women in Wisconsin. We included all non-White (including Hispanic) PRAMS respondents from 2016 through 2018 with complete data on racial discrimination in our analyses. We then used survey-weighted multivariate logistic regression to model the association between racial discrimination in the year prior to birth and perinatal care utilization and satisfaction. All analyses were conducted using SAS 9.4.

Table 1. Demographic Characteristics of the Sample by Reported Racial Discrimination (Weighted Percentages)

		Reported Racial Discrimination N = 2,077		Did Not Report Racial Discrimination N = 494		Total	
	n	%	(95% CI)	%	(95% CI)	%	(95% CI)
Race							
Non-Hispanic Black	1664	50.6	(45.7 - 55.5)	36.7	(35.6 - 37.8)	39.2	(38.7 - 39.7)
Hispanic	487	28.9	(23.7 - 34)	34.4	(32 - 36.7)	33.4	(31.3 - 35.4)
Non-Hispanic other	420	20.5	(15.6 - 25.3)	28.9	(26.5 - 31.1)	27.4	(25.3 - 29.3)
Maternal age							
< 20 years	221	6.8	(4.1 - 9.3)	8.0	(6.5 - 9.4)	7.8	(6.5 - 9)
20-24 years	644	28.1	(23.1 - 32.9)	23.4	(21.1 - 25.6)	24.2	(22.1 - 26.2)
25-29	731	27.5	(22.5 - 32.3)	29.1	(26.7 - 31.4)	28.8	(26.7 - 30.9)
> 29 years	975	37.7	(32.6 - 42.7)	39.4	(36.9 - 41.9)	39.1	(36.9 - 41.3)
Marital status							
Married	883	32.7	(27.7 - 37.5)	40.3	(37.9 - 42.7)	39.0	(36.8 - 41)
Not married	1688	67.3	(62.4 - 72.2)	59.7	(57.2 - 62)	61.0	(58.9 - 63.1)
Maternal education							
0 - 8 years	111	4.4	(2 - 6.7)	6.6	(5.3 - 7.9)	6.2	(5 - 7.3)
9 - 11 years	354	12.5	(9 - 15.9)	13.6	(11.8 - 15.3)	13.4	(11.8 - 14.9)
12 years	893	35.8	(30.5 - 41)	35.4	(32.8 - 37.8)	35.4	(33.2 - 37.6)
13 - 15 years	765	29.1	(24.2 - 34)	24.6	(22.3 - 26.7)	25.4	(23.3 - 27.3)
≥ 16 years	433	18.2	(14.2 - 22)	19.9	(17.8 - 21.8)	19.6	(17.7 - 21.3)
Birth payer							
Public[a]	1758	70.5	(65.7 - 75.3)	65.3	(62.8 - 67.7)	66.2	(64 - 68.4)
Private	772	29.5	(24.6 - 34.2)	34.7	(32.2 - 37.1)	33.8	(31.5 - 35.9)
Poverty status							
Poor (< 100% FPL)	1093	25.3	(20.5 - 29.9)	30.5	(28 - 33)	29.6	(27.4 - 31.7)
Near-poor (100% - 199% FPL)	607	49.4	(43.7 - 54.9)	40.2	(37.6 - 42.7)	41.8	(39.4 - 44.1)
Not poor (≥ 200% FPL)	610	25.3	(20.5 - 30.1)	29.3	(26.7 - 31.8)	28.6	(26.3 - 30.8)

Abbreviation: FPL, federal poverty level.
[a] Includes Medicaid and Indian Health Service.

RESULTS

A total of 2,571 non-White women responded to Wisconsin PRAMS in 2016-2018 and answered the question about prenatal racial discrimination. Non-Hispanic Black women were the largest group of respondents (n = 1,664) due to intentional oversampling by the Wisconsin PRAMS program during that period. After survey weights for nonsampling and nonresponse were applied, they accounted for 39.2% of the weighted sample, with Hispanic women comprising 33.4% of the weighted sample, and the remainder being non-Hispanic women of other race or of multiple races. More than half of the weighted sample were between the ages of 20 and 29 when they gave birth; two-thirds of the weighted sample's births was covered by a public payer (Medicaid, BadgerCare, or Indian Health Service); and more than 70% of the weighted sample had household incomes less than 200% of the Federal Poverty Level (FPL) federal poverty guidelines. Non-Hispanic black women were more likely than other non-White women to report experiencing racial discrimination in the 12 months before giving birth. Other sociodemographic characteristics with a heightened prevalence of prenatal racial discrimination compared with their peers were being between 20 and 24 years of age, being unmarried, and having a Medicaid-paid birth. (See Table 1 for a full summary of the sample by reported discrimination.)

Overall, almost a fifth (19.2%) of non-White women began prenatal care after their first trimester, and almost a quarter (24.5%) had less-than-adequate prenatal care (inadequate or intermediate.) However, most non-White women (87.6%) did receive a postpartum visit. Most non-White women also reported being satisfied with their prenatal care. Respondents most frequently reported dissatisfaction with the amount of time they had to wait to be seen for clinic visits and the amount of time that providers spent with them, followed by dissatisfaction with the advice received. Less than 5% (4.7%) were dissatisfied with the respect they were shown as a person (see Table 2).

Table 3 presents both unadjusted and adjusted results of logistic regression models for perinatal care utilization (prenatal and postpartum care). Reported racial discrimination was not associated with late entry to prenatal care in either unadjusted or adjusted regression. Less-than-adequate prenatal care was significantly associated with racial discrimination in bivariate analysis (OR 1.4; 95% CI, 1.02-1.8), but this relationship became marginally significant after adjusting for maternal sociodemographic characteristics (OR 1.3; 95% CI, 0.9-1.7). In contrast, prenatal experience of racial discrimination was associated with about 1.5 times the odds of not receiving a postpartum visit both before and after adjusting for maternal characteristics (OR 1.6; 95% CI, 1.1-2.3).

Table 4 presents adjusted odds ratios (AOR) for the dissatisfaction with prenatal care. Prenatal racial discrimination was consistently positively associated with dissatisfaction with all measured

Table 2. Prevalence of Perinatal Care Utilization Patterns and Satisfaction Among Non-White Women

	Unweighted n = 2571	Weighted Prevalence %	(95% CI)
Perinatal Care Utilization			
Prenatal care			
First trimester entry	2024	80.3	(78.3 - 82.1)
Late entry	455	18.8	(16.9 - 20.6)
Prenatal care adequacy (Kotelchuck[20])			
Inadequate	375	15.7	(13.9 - 17.4)
Intermediate	200	8.3	(6.9 - 9.6)
Adequate	895	37.9	(35.6 - 40.2)
Adequate plus	943	38.1	(35.7 - 40.3)
Postpartum visit			
Yes	2188	87.6	(86 - 89.1)
No	305	12.4	(10.8 - 13.9)
Satisfaction with Prenatal Care			
Satisfied with advice given by providers			
Yes	2286	91.4	(90 - 92.7)
No	211	8.6	(7.2 - 9.9)
Satisfied with treatment by staff			
Yes	2380	95.1	(94 - 96.1)
No	128	4.9	(3.8 - 5.9)
Satisfied with wait time to be seen			
Yes	2182	88.0	(86.4 - 89.5)
No	308	12.0	(10.4 - 13.5)
Satisfied with amount of time spent with providers			
Yes	2249	90.1	(88.7 - 91.5)
No	247	9.9	(8.4 - 11.2)

aspects of prenatal care, including respect shown to respondents (AOR 2.6; 95% CI, 1.5-4.3), advice received from prenatal care providers (AOR 2.6; 95% CI, 1.7-3.8), amount of time spent with prenatal care providers (AOR 1.7; 95% CI, 1.1-2.4), and the amount of time they had to wait for care (AOR 2.5; 95% CI, 1.7-3.6).

DISCUSSION

In a representative sample of non-White people who gave birth in Wisconsin over a 3-year period, we found no relationship between reported racial discrimination in the 12 months prior to delivery and late entry to prenatal care, and only a marginal relationship between discrimination and prenatal care adequacy. However, nonreceipt of a postpartum visit and dissatisfaction with all measured aspects of prenatal care were positively associated with reported racial discrimination, after adjusting for maternal sociodemographic characteristics.

Interestingly, our finding of no association between interpersonal discrimination and late entry to prenatal care does not align with previous studies that have documented a positive correlation.[12,21] We may not have found an association because other factors, such as socioeconomic status, play a larger role in shaping prenatal care entry.[22] Only living in a poor (OR 2.8; 95% CI, 1.6-4.6) or near-poor household (OR 2.0; 95% CI, 1.2-3.1) or being less than 20 years old (OR 2.1; 95% CI, 1.2-3.5) were significantly associated with late prenatal care entry, after adjusting for maternal sociodemographic characteristics.

We found only a marginally significant association between racial discrimination and prenatal care adequacy, although identifying as Black and other non-Hispanic race was significantly positively associated with receipt of inadequate prenatal care (using the Kotelchuck index), compared with Hispanic women. Having public insurance for prenatal care (Medicaid or Indian Health Service) appears to be associated with decreased odds of receiving inadequate prenatal care visits. This observed correlation could be related to the higher prevalence of chronic conditions among Medicaid recipients[23] requiring more frequent medical visits, or perhaps due to increased efforts on the part of Medicaid-enrolled patients or providers to increase attendance at prenatal care visits.

Our finding of increased odds of not receiving a postpartum visit associated with prenatal discrimination is consistent with our hypothesis that experiences of discrimination would decrease engagement at any point during the pre- or postnatal care periods. There are several possible explanations of why we do not see prenatal discrimination manifesting as decreased engagement in care until the postpartum period.

One possible explanation is that the self-reported discrimination in the 12 months prior to pregnancy is frequently occurring within the context of prenatal care itself. In fact, discrimination in perinatal care has been documented as a common experience for non-White women in the US.[24] If this is the case in our sample, we would not expect self-reported discrimination to have any effect on entry to prenatal care, and it may not have as strong an effect on prenatal care adequacy, depending on when in the pregnancy the discrimination occurs. That is to say, if the discrimination is experienced most acutely toward the end of the pregnancy, a pregnant person may already have received enough visits to fall into the "adequate" prenatal care category before reducing their engagement in care in response to discriminatory experiences. This explanation is supported by our finding that reported racial discrimination was consistently associated with dissatisfaction with prenatal care. In fact, the strongest correlation between reported discrimination and prenatal care dissatisfaction was in regard to how the patient was treated as a person.

Another possible explanation for the observed pattern, which is not mutually exclusive with the first, is that postpartum care is more sensitive to maternal experiences of discrimination or trust in health care than is prenatal care. Postpartum care is occurring after the hospital birth experience, which can generate additional exposure to racism. Other studies have documented that higher proportions of postpartum women take their infants for well-baby checkups than get postpartum visits for themselves,[25] suggesting that mothers may be prioritizing their child's health care over their own. Therefore, it does not require a huge leap to entertain the

possibility that women may be more likely to utilize prenatal care for the good of their unborn child than they would be to utilize care for themselves after their child is born. Thus, a mother may continue going to prenatal care appointments, despite her own discomfort, but may forego care for herself to avoid interacting with a health care system she does not trust.

A third explanation relates to health care coverage. A third of all births in Wisconsin are covered by Medicaid and comprise the majority of births to women of color.[2] Medicaid eligibility during pregnancy includes all women up to 306% of the FPL.[26] Women who live in households with income between 100% and 306% of the FPL lose their Medicaid coverage between 60 and 90 days postpartum, causing a churn in health care coverage. While the postpartum visit is included in the Medicaid-bundled birth coverage, it is possible that women would not be aware of the coverage for this visit. Experiences of discrimination may affect women's relationships with their providers and discourage women from inquiring about their entitlement to a postpartum visit.

If Wisconsin women are indeed experiencing racial discrimination in health care settings, this could have wide-ranging effects on the well-being of non-White Wisconsin families. For example, 13.3% of women who reported racial discrimination were dissatisfied with the advice they received from their prenatal care provider (compared to 5% of other women.) Therefore, they may be less likely to follow medical advice, as previous research has linked trust and intention to adhere to provider recommendations.[15] The apparent impact of discrimination on receipt of a postpartum care visit is especially concerning. In Wisconsin, as well as nationally, women of color are more likely to die from pregnancy-related causes than their White peers.[27] Many of these deaths are preventable, and some of the key risk factors for maternal morbidity, such as indicators of hypertensive or cardiovascular disease, can

Table 3. Unadjusted and Adjusted Logistic Regression of Perinatal Care Utilization

	Late Entry to Prenatal Care n=2199		Less-Than-Adequate Prenatal Care[a] n=2123		Did Not Receive Postpartum Visit n=2237	
	AOR	(95% CI)	AOR	(95% CI)	AOR	(95% CI)
Reported racial discrimination (Ref=no)						
Yes	1.0	(0.6-1.4)	1.3	(0.9-1.7)	1.6[b]	(1.1-2.3)
Race (Ref=Hispanic)						
Non-Hispanic Black	0.9	(0.6-1.2)	1.8[b]	(1.2-2.5)	1.1	(0.7-1.6)
Non-Hispanic other	1.4	(0.9-2.1)	1.9[b]	(1.2-2.9)	1.2	(0.6-2)
Maternal age (Ref >29)						
<20 years	2.1[b]	(1.2-3.5)	1.4	(0.8-2.3)	1.0	(0.5-1.9)
20-24 years	1.2	(0.8-1.7)	1.1	(0.7-1.5)	1.4	(0.8-2)
25-29	1.1	(0.8-1.6)	1.0	(0.7-1.3)	0.8	(0.5-1.2)
Marital Status (Ref=married)						
Not married	1.1	(0.7-1.5)	1.3	(0.9-1.8)	0.9	(0.6-1.4)
Maternal education (Ref ≥16 years)						
0-8 years	1.1	(0.4-2.3)	1.0	(0.4-2.1)	2.4	(0.8-6.4)
9-11 years	1.1	(0.6-1.9)	1.1	(0.6-1.7)	2.8[b]	(1.3-6)
12 years	1.3	(0.7-2.1)	0.8	(0.5-1.3)	2.0	(0.9-4.2)
13-15 years	1.1	(0.5-2.1)	1.4	(0.8-2.5)	2.9	(1.2-6.6)
Prenatal care health insurance (Ref=Private)						
Public[c]	0.9	(0.5-1.2)	0.7	(0.4-0.9)	0.7	(0.4-1.2)
Poverty status (Ref ≥200% FPL)						
Poor (<100% FPL)	2.8[b]	(1.6-4.6)	1.7[b]	(1-2.6)	2.0[b]	(1.1-3.4)
Near-poor (100%-199% FPL)	2.0[b]	(1.2-3.1)	1.1	(0.6-1.6)	1.5	(0.8-2.6)

Abbreviations: AOR, adjusted odds ratio; Ref, reference; FPL, federal poverty level.
[a]Kotelchuck index.[20]
[b]Denotes odds ratio statistically significant from 0 with $P < 0.05$.
[c]Includes Medicaid and Indian Health Service.

Table 4. Adjusted Logistic Regression of Satisfaction with Prenatal Care Among Non-White Women

	Dissatisfied w/ Respect Shown to Them as a Person n=2202		Dissatisfied w/ Advice Received n=2194		Dissatisfied w/ Amount of Time Spent w/ Provider n=2192		Dissatisfied w/ Amount of Time Had to Wait n=2190	
	AOR	(95% CI)	AOR	(95% CI)	AOR	(95% CI)	AOR	(95% CI)
Reported Racial discrimination (Ref=no)								
Yes	2.6[a]	(1.5-4.3)	2.6[a]	(1.7-3.8)	1.7[a]	(1.1-2.4)	2.5[a]	(1.7-3.6)
Race (Ref=Hispanic)								
Non-Hispanic Black	1.1	(0.5-2.2)	0.7	(0.4-1.2)	1.3	(0.7-1.9)	1.7[a]	(1-2.9)
Non-Hispanic other	1.0	(0.3-2.3)	0.7	(0.4-1.3)	1.4	(0.8-2.4)	2.2[a]	(1.2-3.9)
Maternal age (Ref >29)								
<20 years	1.1	(0.3-2.9)	0.9	(0.3-2)	2.1	(0.9-4.4)	1.9	(0.9-3.7)
20-24 years	1.1	(0.5-2.1)	0.8	(0.4-1.4)	1.3	(0.7-2.1)	1.2	(0.7-2)
25-29	1.7	(0.8-3)	1.0	(0.6-1.6)	1.2	(0.7-1.8)	1.2	(0.7-1.8)
Marital Status (Ref=married)								
Not married	1.0	(0.5-1.9)	1.0	(0.5-1.6)	0.9	(0.5-1.5)	0.9	(0.5-1.4)
Maternal education (Ref ≥16 years)								
0-8 years	1.0	(0.1-5.2)	0.2	(0-1.5)	1.2	(0.4-3.6)	2.4[a]	(1-5.7)
9-11 years	2.4	(0.9-6)	1.8	(0.9-3.6)	1.5	(0.7-2.9)	1.5	(0.8-2.8)
12 years	1.7	(0.7-3.7)	1.6	(0.8-2.8)	1.6	(0.8-2.9)	1.1	(0.6-2)
13-15 years	1.6	(0.4-6)	1.7	(0.7-3.9)	0.7	(0.2-1.8)	0.9	(0.3-1.9)
Prenatal care health insurance								
Public[b]	1.0	(0.4- 2.2)	1.2	(0.7-2)	1.4	(0.8-2.2)	0.9	(0.5-1.5)
Poverty status								
Poor (<100% FPL)	0.8	(0.3-1.8)	0.8	(0.4-1.5)	1.2	(0.6-2.2)	1.0	(0.5-1.7)
Near-poor (100%-199% FPL)	0.6	(0.2-1.3)	1.0	(0.5-1.8)	1.4	(0.7-2.6)	0.6	(0.3-1.1)

Abbreviations: AOR, adjusted odds ratio; Ref, reference; FPL, federal poverty level.
[a]Denotes odds ratio statistically significant from 0 with $P<0.05$.
[b]Includes Medicaid and Indian Health Service.

be addressed at a postpartum visit. The postpartum visit is a critical opportunity to reengage women in primary preventive care and preconception care.[28] These visits are opportunities to address chronic health conditions known to exacerbate maternal and infant health risks.[8] Increased attendance at a postpartum visit has the potential to improve the trajectory of mothers' lives; decreasing experiences of racial discrimination in health care settings may be one mechanism for decreasing maternal morbidity.

Strengths and Limitations

This study adds to previous literature on distrust of the health care system by women of color by illustrating an association between self-reported interpersonal racial discrimination in the year before delivery and satisfaction with prenatal care, as well as postpartum care utilization. The strengths of the study include a large population-representative sample of women of color who recently gave birth in Wisconsin. By focusing on the variability of reported discrimination among women of color, we were able to elucidate the salience that interpersonal discrimination has, independent of structural racism. We were also able to adjust for important maternal characteristics, including poverty level.

However, there are several limitations that point to opportunities for future research. First, the measure of interpersonal discrimination was a self-report of such experiences during the full 12 months before delivery. Therefore, we were unable to establish the exact timing of the experience of discrimination. Additionally, the binary measure of discrimination likely masks the possible presence and effects of repeated incidents of racial discrimination during that period. The measure is also unable to assess the setting in which the discrimination occurred, which would likely moderate its effect on health care satisfaction and utilization. The imprecision of the measure also limits our ability to definitively establish the temporal relationship between the experience of discrimination and prenatal care, although this is not an issue for the postpartum visit outcome. Furthermore, we are unable to rule out residual confounding if experiences of racial discrimination are correlated with unmeasured factors that also affect care satisfaction and utilization. We recommend that future research assess racial discrimination in health care settings, and we recommend a qualitative investigation of women's experiences of interpersonal racism and how this affects their perceptions of and interactions with their health care providers. Intervention research also could explore how providers can effectively forge trusting relationships with diverse patients.

CONCLUSION

For women of color, a lifetime of exposure to structural racism has affected their health outcomes. Our study highlights the impact that experiences of acute interpersonal racism can have on Wisconsin women of color before, during, and after pregnancy. Perinatal care is an opportunity to improve the health of women and their babies' health trajectories. Postpartum care is an additional opportunity to address the long-term health effects for women and reconnect them to preventive care; therefore, it is critical to address issues like prenatal discrimination that may discourage women from attending their postpartum visit. There are several steps that providers and systems can take to improve health care experiences for women of color that include diversifying the workforce, incorporating implicit bias training for all providers and staff, and adopting a reproductive justice framework.[29] Additionally, the BMMA recommendations emphasize the need for health care to honor the practices of midwifery and doulas that are traditional to Black women.[16]

Improving the maternal and infant outcomes for Black, Indigenous, and women of color in Wisconsin will require that health care acknowledge racial history that contributed to women's health practices. Providers must be educated on the history, social determinants of health, health disparities, health inequity, and community engagement and then take active steps to avoid perpetuating the systems of oppression that have created the persistent inequities for women and babies.

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