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Perceived Discriminatory Factors that Impact Prenatal Care Satisfaction and Attendance Among Adolescent and Young Adult Couples

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Abstract

Objective: To identify possible discriminatory factors that lead to prenatal care dissatisfaction and disengagement from prenatal care among young, expecting couples with a focus on exploring the experiences of Black and Latinx participants.

Methods: A total of 296 young adolescent couples were recruited. Each couple consisted of an expecting female (ExpF) and an expecting male (ExpM). Participants were asked to give responses to a survey, and data was collected at 3 different time points.

Participants: The sample consisted of 296 expecting young couples.

Setting: Participants were recruited from obstetrics and gynecology clinics and ultrasound clinics from 4 university-affiliated hospitals in southern Connecticut.

Outcome Measures: The main outcome measure was prenatal care satisfaction. The secondary outcome was number of prenatal care visits that were attended by each member of the couple dyad. Both of these outcomes were assessed to evaluate whether discriminatory factors that participants experienced in healthcare had an effect on each outcome.

Results: A total of 51 males (17.5%) and 36 females (12.4%) reported a perception of experiencing discrimination in the healthcare system a few times a year or more. Those who believed that race contributed to discrimination in the healthcare system were 2.45 times more likely to have an unpleasant prenatal visit ($P = .018$). Those who believed that age contributed to

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Author Contributions

BD was first author and was a contributor in writing all aspects of the manuscript. TA was a contributor in writing the manuscript and helped identify relevant information for the background of this paper. RC analyzed and interpreted data and was the major contributor to the writing of the analysis section of the manuscript. LR contributed information regarding discrimination and the effect it has on accessing healthcare and contributed to the writing of the manuscript. TK assisted with analyzing the data and contributed to the writing of this manuscript. In addition to the work all authors did as detailed above, all of the authors met the 4 criteria indicated by the International Committee of Medical Journal Editors.

All authors declare that they have nothing to disclose.

discrimination in the healthcare system were 2.74 times more likely to have an unpleasant prenatal visit ($P = .001$). Participants who believed that physical appearance contributed to discrimination in the healthcare system were 2.83 times more likely to have an unpleasant prenatal visit ($P = .01$).

Conclusion: Black and Latinx young expecting couples are not exempt from discriminatory experiences during prenatal care. Recommendations for quality improvement in prenatal healthcare settings include implementation of standard evaluative measures specific to personal treatment and supportiveness of the medical team.

Keywords

Prenatal care; Race/ethnicity; Maternal and infant health

Introduction

Racial and ethnic disparities in infant and maternal mortality remain a key public health issue. Pregnancy-related disparities often emerge prior to delivery and affect birth outcomes. Research has shown that the overall infant mortality rate in the United States is 5.96 infant deaths per 1000 live births and that the mortality rate for non-Latinx Black women is 11.11 infant deaths per 1000 live births.[1] The preterm birth rate for non-Latinx Black women has been reported to be 1.6 times higher than the preterm birth rate for White women.[1] Black infants die before the first year of life at more than twice the rate of White infants.[1] Maternal mortality among non-Latinx Black women, non-Latinx White women and Latinx women are 42.8, 13.0 and 11.4 deaths per 100,000 live births, respectively.[2]

Research has supported findings that Black and Latinx women's experiences with discrimination during prenatal care are associated with adverse birth outcomes, most notably low–birth weight deliveries.[3–6] Varied exposure to sociodemographic characteristics such as socioeconomic status or marital status and different risk factors including racism and discrimination can also be risk factors for poor birth outcomes and poor health outcomes in general.[1] The increased stress response that occurs with any discriminatory or racist experience has been shown to result in women delivering preterm and also delivering infants who are small for their gestational age.[1] The implications of discrimination in patient care results in a lack of confidence in the healthcare system, leading to medical mistrust and patients being less likely to follow health recommendations and more likely to disengage from care.[7–11]

Although many prenatal care studies have focused on adult expecting mothers, there has been a lack of research into discrimination during prenatal care specifically at the adolescent and young adult couple level. Evidence, albeit limited, has shown that young mothers also experience discrimination during prenatal healthcare. In a sample of 5762 women (14 % aged ≤19 years, 11% African American, 27% Latina) who were asked to report maternal attitudes before, during, and immediately after pregnancy, reports of discrimination were found to be highest from women who were not married, had incomes less than $50,000, were 35 years and older, or 19 years and younger.[12] During pregnancy, reports of discrimination based on age and insurance status were most common.[12]

Our paper further examines healthcare discrimination during prenatal care visits among mostly Black and Latinx adolescent and young adult couples who received prenatal care in local clinics in the state of Connecticut in the United States. This study will examine racial discrimination but also discrimination due to other reasons such as insurance and age. This will help in assessing whether young people experience similar or different forms of discrimination than what has been shown among adults. In addition, we will also use couple-level data to examine the prenatal care experiences of young minority expecting males and females and its effect on prenatal care satisfaction and the number of prenatal care visits attended. Previous research has shown that male involvement during the prenatal care period has multiple positive effects, such as increasing maternal uptake of prenatal care and reducing maternal stress.[13] However, if prenatal care is distressing for the expecting mothers and expecting fathers due to discriminatory experiences, the opposite effect may occur. By examining couple-level data further, we will be able to assess whether there are couple effects for discrimination and prenatal care satisfaction. We hypothesize that young couples will report experiences with discrimination and consequently report less pleasant prenatal care experiences and a reduced number of prenatal care visits. Our hypothesis is supported by similar findings among older Black and Latinx pregnant women who have had poor prenatal care experiences.[12]

Materials and Methods

This study was conducted using the Parenting and Relationship Transition and Risk Study (PARTNRS) data. The study used different scales to assess biological and health history, behavioral outcomes, individual psychosocial outcomes, dyadic psychosocial outcomes, family psychosocial outcomes, community and peer psychosocial outcomes, sexual psychosocial outcomes, parenting psychosocial outcomes, and child behavior psychosocial outcomes. In addition, demographic and incarceration history information were also acquired. The sample consisted of 296 expecting young couples, recruited from obstetrics and gynecology clinics and ultrasound clinics from **4** university-affiliated hospitals in southern Connecticut. Between July 2007 and February 2011, young expecting mothers who attended their prenatal healthcare visit were referred by a healthcare provider for this study or were approached by research staff. Study eligibility criteria included the following: a) the participant or partner was pregnant in the second or third trimester at the time of the baseline interview; b) the expecting mothers were aged 14–21 years and the expecting fathers were aged 14 years or older at the time of the interview; c) both participants reported being in a romantic relationship with each other; d) both participants reported being the biological parents of the unborn infant; e) both participants agreed to participate in the study; f) both participants were able to speak English or Spanish. An initial run-in period was used as part of the eligibility criteria whereby participants who were initially deemed ineligible could be re-contacted and re-screened before their estimated due date.

If eligible, research staff explained the study in detail and answered any questions. If either the father or the mother was not present at the visit, the research staff provided the partner who was present with educational materials to share with their partner and was asked permission to contact the partner to explain the study. If the potential participants agreed to

participate in the study, they were scheduled for an appointment to complete their baseline interviews.

Individual participants provided written informed consent before baseline data collection. After consenting, the participants completed a structured interview using the audio computer-assisted self-interview. The couple's interviews were scheduled at the same time, but they completed the interviews separately for each time point. The study procedures were approved by the Yale University Human Investigation Committee and by the Institutional Review Board at the respective study clinics. Data was collected at 3 different time points. Baseline was the first assessment at 24 or more weeks' gestation, T2 was assessment at 6 weeks postpartum, and T3 was assessment at 12 months postpartum. Participant incentives included $25, $35, and $50 for each interview completed.

Measures

Demographic Variables—The demographic variables in this study included age, race/ethnicity, income, education, medical insurance, and number of children.

Discrimination—The main predictor of interest was discrimination. Expecting mothers and expecting fathers responded to the following survey item taken from one of the scales used to assess individual psychosocial outcomes. The item is as follows: "In general, how often has someone in the health system showed you hostility or a lack of respect, refused you service, or paid less attention to you compared with others?" This item is part of the 20-item Perceived Racism and Discrimination Scale adapted from the Daily Life Experiences Scale.[14] The item was administered at baseline. The response scale ranged from 0 to 5 (0 = "never," 1 = "less than once a year," 2 = "a few times a year," 3 = "about once a month," 4 = "a few times a month," and 5 = "once a week or more"). The predictor variable was dichotomized by collapsing responders who chose "never" with responders who chose "less than once a year." Remaining response categories that included "a few times a year," "about once a month," "a few times a month," and "once a week or more" were collapsed together.

Following the response to the main predictor question, participants were asked: "What are the reasons for these experiences?" Reasons included race, ethnicity, age, gender, income, language, physical appearance, sexual orientation, and other reason. Responders answered "yes" or "no" to each reason or had the option of skipping reasons based on their experience of perceived racism and discrimination in the healthcare setting. For responders who skipped reasons based on their answer provided in the main predictor question, their responses were coded as "no." A cumulative score of all responses was computed for the 9 reasons. Responders who selected their physical appearance as the reason for their experience were then asked to select what about their physical appearance contributed to the experience. Those who did not answer the physical appearance question were coded as "no."

Prenatal Care Satisfaction—The main outcome was prenatal care satisfaction. Participants responded to a survey item: "How pleasant was your prenatal care visit?" This item was taken from the 9-item Prenatal Care Attendance scale created by the research team. Respondents answered this item at baseline to capture participants' prenatal care services in

the 3 months before their baseline assessment. Participants rated their experience on an ordinal scale of 1 (very unpleasant) to 5 (very pleasant).

Our secondary outcome is the number of prenatal care visits attended by each member of the couple dyad. Both expecting mothers and expecting fathers were asked about their prenatal care attendance during the pregnancy and entered the number of visits (1–11 or more and if 11 or more, respondents were prompted to provide the number of visits). This item was also taken from the Prenatal Care Attendance scale.

Statistical Analysis

Sample characteristics (eg, age, years of schooling, etc) were compared by respondents' sex using paired *t* tests, Wilcoxon signed rank tests (income and number of children), McNemar tests (medical insurance), and the Bowker test of symmetry (categorical variables with k > 2). Of those who experienced discrimination in the healthcare system, the Pearson χ^2 test was used to determine the association between gender and the reasons chosen, with exact *P* values computed when needed. Finally, for those who selected their physical appearances as the reason for the discrimination, the Fisher exact test was used to test for an association between gender and the physical appearance traits to which participants attributed their discrimination. To account for correlation of responses within the same dyad, predictive analyses were done using a generalized mixed effect model with a random intercept and compound symmetry variance structure. Proportional odds assumption was tested on the outcome variable prenatal care satisfaction (How pleasant was your prenatal care visit?) using the R package mixor, which considers the correlated structure of responses within the same dyad. A mixed-effect ordinal logistic regression was used to analyze and to predict the outcome prenatal care satisfaction, and a mixed-effect negative binomial regression was used to analyze the number of prenatal care visits attended by the expecting couple. The Actor Partner Interdependence Model (APIM) was assumed, meaning that both actors' response and their partners' responses were tested as predictors for the model.[15] Two complementary multivariable models were tested for each outcome. The first model used the dichotomized value of discrimination in healthcare ("In general, how often has someone in the health system showed you hostility or a lack of respect, refused you service, or paid less attention to you compared with others?"). The second model used the cumulative score of attributes for discrimination, both adjusted by demographic variables. All statistical analyses were performed using SAS 9.4 (SAS Institute, Cary, NC). Results with a *P* value of ≤.05 are considered significant.

Results

Sample Descriptive

Results of the sample descriptive are presented in Table 1. The data was summarized using frequency (percentage), mean (±standard deviation), and median (interquartile range). Expectant females (ExpF) were significantly younger than expectant males (ExpM) ($P < .001$). Expectant females also had a significantly lower income ($P = .006$). However, expectant females were more likely to have medical insurance ($P < .001$). The distribution of responses relating to discrimination was significantly different for expecting males

compared to expecting females ($P = .021$). After dichotomization, 87 participants reported experiences with discrimination in the healthcare system. In all, 17.5% of expecting males (n = 51) and 12.4 % of expecting females (n = 36) reported a perception of experiencing discrimination in the healthcare system a few times a year or more. Both expecting females and males who experienced discrimination in the healthcare system commonly attributed their discrimination to race and age. Expectant females also believed that their gender was an additional reason why they experienced discrimination in the healthcare system. The distribution of responses to prenatal care satisfaction was not significantly different between expecting males and females. In addition, expecting females attended significantly more prenatal care visits than their male partners ($P = .001$).

Prenatal Care Satisfaction

Univariate Analysis—Results of the univariate analyses for prenatal care satisfaction are presented in Table 2. Respondents who indicated experiencing discrimination in healthcare at least a few times a year were 3.17 times more likely to have an unpleasant prenatal care visit ($P < .001$) compared to those who experienced discrimination at most once a year. Respondents who believed that their race contributed to discrimination in the healthcare system were 2.45 times more likely to have an unpleasant prenatal care visit ($P = .018$) compared to those who said “no” to race being a contributing factor. Respondents who believed that their age contributed to discrimination in the healthcare system were 2.74 times more likely to have an unpleasant prenatal care visit ($P = .001$) compared to those who said “no” to age being a contributing factor. Respondents who believed that their physical appearance contributed to discrimination in the healthcare system were 2.83 times more likely to have an unpleasant prenatal care visit ($P = .01$) compared to those who said “no” to physical appearance being a contributing factor.

In addition, after creating a cumulative score for total number of reasons contributing to discrimination in the healthcare system, it was seen that for each unit increase in the number of reasons, participants experienced discrimination, there was a significant 31% increase in the odds ($P = .004$) of having a less pleasant prenatal care experience (95% confidence interval [CI], 13%−52%).

Multivariable Analysis—Results of the multivariable model for the main outcome prenatal care satisfaction are presented in Table 3. No demographic variables were associated with prenatal care experience being deemed pleasant versus unpleasant. However, respondents who experienced discrimination at least a few times a year were 3.1 times more likely to have an unpleasant prenatal care experience (95% CI, 1.60–5.08) compared to those who experienced discrimination at most once a year or never. No significant partner effects were found. In model 2, after adjustment for demographic characteristics, for each unit increase in number of reasons for experiencing discrimination in healthcare, there was a significant 30% increase in the odds of having an unpleasant prenatal care visit (95% CI, 12%−51%).

Prenatal Care Visit Attendance

Univariate Analysis—Results of the univariate analyses for prenatal care visit attendance are presented in Table 2. Univariate actor analysis indicated that on average, expecting females attended significantly more prenatal care visits than their male partners ($P < .001$). A unit increase in age significantly decreased the number of prenatal care visits attended by the couples ($P = .002$). On average, white participants attended significantly more prenatal care visits than ethnic minority participants ($P = .008$ African American, $P = .005$ Hispanic) and participants labeled as "other" race/ethnicity ($P = .02$). Participants who already had children attended significantly fewer prenatal care visits ($P = .005$). On average, participants without medical insurance attended fewer prenatal care visits ($P = .02$). Finally, participants who believed that their language barrier contributed to discrimination in healthcare attended fewer prenatal care visits ($P = .04$). No other predictor variables were significant.

Multivariable Analysis—After adjustment, gender and number of children remained significant in the first model, with expecting males attending fewer prenatal care visits than expecting females ($\hat{\beta}$, $SE = 0.06$, $P < .001$), and couples with other children attending fewer prenatal care visits ($\hat{\beta}$, $SE = 0.05$, $P = .02$). After adjustment, gender and number of children remained significant in the second model, with expecting males attending fewer prenatal care visits than expecting females ($\hat{\beta}$, $SE = 0.06$, $P < .001$), and couples with other children attending fewer prenatal care visits ($\hat{\beta}$, $SE = 0.05$, $P = .02$) as seen in Table 4. Discrimination experiences were not found to significantly relate to the number of prenatal care visits attended.

Discussion

This study examined a sample of mostly Black and Latinx adolescent and young adult couples' and their experiences with discrimination in recent healthcare visits. As hypothesized, young expecting females and expecting males who have experienced discrimination within the healthcare system reported less pleasant prenatal care experiences; however, this did not influence the number of prenatal care visits attended. It was also seen that expecting females attended more prenatal visits than expecting males. In this sample, discriminatory experiences were attributed to factors such as participant race, age, and physical appearance. As the number of reasons for experiencing discrimination increase for couples, so do the odds of having an unpleasant prenatal care experience. The double, triple, or quadruple jeopardy phenomenon shows how discrimination based on multiple reasons (eg, sexism, racism, socioeconomic status) have strong adverse effects and lead to increased distress in the populations affected.[16] It is possible that previous experiences with discrimination in the healthcare system had a cumulative effect and increased the expecting couples' awareness and sensitivity to these experiences, leading to increased reporting of unpleasant visits.[17] We conclude, however, that couple-level discrimination alone does not deter adolescent and young adult expecting females from attending prenatal visits. Our data does not offer an explanation as to why young expecting females continue in prenatal care when there is risk of discrimination. It is worth examining other factors such as being older and already having a child and the role that these factors play in the number of prenatal visits attended, in addition to experiences with discrimination.

Compared to White expecting males, Black, Latinx, and participants who identified as "other" were less likely to attend prenatal care visits. It is plausible that young expecting males, particularly those from racial minority backgrounds, who experience chronic societal stressors and discrimination, choose to avoid situations that bring about unprovoked hostility and mistreatment.[4,18–20] In this case, if Black and Latinx expecting fathers perceive discrimination during a prenatal visit, they may be less likely to attend future visits. Discrimination based on age for older expecting fathers partnered with younger expecting mothers may discourage joint prenatal care visits. In addition, job responsibilities, already having a child, and inability to find childcare are also reasons why expecting males may decide to forego prenatal visits. Thus, they may elect to find alternative ways to provide support to the mother of their child. Further research into young racial minority expecting males' experiences with prenatal care is needed.

Respondents with children, those without health insurance, and those who experienced language barriers attended fewer prenatal care visits. As mentioned, older age was negatively associated with the number of prenatal visits attended by couples. Adolescent couples may be more prone to attend prenatal care visits than young adult couples because they are younger, and it may be their first pregnancy. Also, there is likely more parental involvement in the healthcare of adolescents to encourage prenatal care.[21] Other factors such as provider access and health insurance also play a role in accessing prenatal care.[12]

Study Strengths and Limitations

We acknowledge several strengths in our study. First, most prenatal care studies have targeted adult populations, and even fewer have focused on discrimination during prenatal care.[12] Second, participants who reported perceived discrimination were also able to specify reasons for discrimination, which allowed us to compare and to contrast prenatal care experiences with those of adult populations. A third major strength of this study includes the assessment of adolescent and young adult couples. The benefit of looking at couples includes not only understanding expecting females' experiences but also assessing expecting males' experiences during the prenatal care period. A study limitation is possible participant bias based on prior experiences in healthcare. Prior negative experiences might have affected how participants interacted with healthcare members during prenatal visits. Also, participants were unable to provide greater detail about their experiences. We could not draw conclusions regarding whether health concerns were dismissed during prenatal visits and whether that played a role in adverse maternity and infant health outcomes. Future studies should include qualitative methods in which participants can speak about their experiences in greater detail.

Conclusion

Unfortunately, Black and Latinx adolescent and young adult expecting couples are not exempt from discriminatory experiences during prenatal care. Implications for quality improvement in prenatal healthcare settings should include standard evaluative measures specific to personal treatment and supportiveness of the medical team. Prenatal care evaluation should be completed during visits by the expecting females and expecting males,

as well as a follow-up assessment after each visit. Collecting “just-in-time” feedback about patients’ experiences could prove beneficial to the patient and medical team. These include addressing perceived discrimination and mistreatment to reduce stress on the expecting mothers and the couple, thereby preventing prenatal care disengagement. This would also allow for the gathering of information to improve interactions with patients, particularly young patients. These just-in-time evaluative measures should be viewed as process measures for improving patient care and health outcomes. However, the medical team bears the greater responsibility of knowing how to effectively respond to reported forms of discrimination. Including training on bias for all healthcare workers in the form of workshops and online modules is critical. Addressing any patient complaints of discrimination is also of importance. Healthcare professionals should be informed about any reports of discrimination by patients and should strategize on how the interaction could have gone differently. Obtaining frequent feedback allows for problems to be identified earlier and is a step in the right direction toward improving maternal and infant health outcomes for all pregnant patients, but especially Black and Latinx individuals, who have been shown to suffer from increased rates of adverse health outcomes.

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Table 1

Characteristics of the Study Sample

Characteristic	ExpM (n = 296)	ExpF (n = 296)	*P* Value
Race			
Black	144 (48.6)	117 (39.5)	.001
Latinx	108 (36.5)	117 (39.5)	
White	31 (10.5)	50 (16.9)	
Other	13 (4.4)	12 (4.1)	
Age, y	21.33 ± 4.06	18.71 ± 1.63	<.001
Education, y	11.84 ± 1.89	11.75 ± 1.82	.46
Household income	12500 (2500–22,500)	7500 (2500–22,500)	.006
Number of children*	0 (0–0)	0 (0–0)	.13
Medical insurance	181 (61.6)	280 (95.2)	< .001
Perceived racism and discrimination in health care			.021
Never	208 (71.7)	214 (73.8)	
Less than once a year	31 (10.7)	40 (13.8)	
A few times a year	20 (6.9)	19 (6.6)	
About once a month	12 (4.1)	12 (4.1)	
A few times a month	18 (6.2)	1 (0.3)	
Once a week or more	1 (0.3)	4 (1.4)	
Reasons for experience† (vs no)			
Race	18 (42.9)	14 (32.6)	.33
Ethnicity	10 (23.8)	6 (14.0)	.25
Gender	9 (21.4)	17 (39.5)	.07
Age	19 (45.2)	20 (46.5)	.91
Income level	12 (28.6)	8 (18.6)	.28
Language	5 (11.9)	6 (14.0)	.78
Physical appearance	16 (38.1)	13 (30.2)	.44
Other reasons	10 (23.8)	16 (37.2)	.18
Sexual orientation	3 (7.1)	4 (9.3)	.99
What about your appearance do you think is the cause?† vs no)			
Your weight	1 (6.7)	6 (50.0)	.024
The way you dress	13 (86.7)	7 (58.3)	.19
The color of your skin	9 (60.0)	4 (33.3)	.25
Your hair	3 (20.0)	3 (25.0)	.99
Your pregnancy	0 (0.0)	10 (83.3)	-
Your tattoos or piercings	4 (26.7)	3 (25.0)	.99
Other	3 (20.0)	2 (16.7)	.99
Outcome of interest			
How pleasant was your prenatal care visit?			.46
Very unpleasant	6 (26)	4(1.7)	

Characteristic	ExpM (n = 296)	ExpF (n = 296)	*P* Value
Unpleasant	15 (6.4)	10 (4.3)	
Neutral	28 (11.9)	36(15.3)	
Pleasant	61 (26.0)	56 (23.8)	
Very pleasant	125 (53.2)	129 (54.9)	
Number of PNC visits	5(3–8)	7(5–11)	< .001

ExpF, expecting female; ExpM, expecting male; PNC, prenatal care.

Data were summarized using frequency (percentage), mean (± standard deviation), and median (interquartile range). Comparison between values for males and females was done using a paired *t* test, Wilcoxon signed rank test, McNemar test for paired proportion, and Bowker test of symmetry. Comparisons are done using Pearson χ^2 test and Fisher exact test.

*See Statistical Analysis section.

†Unequal number of expectant mothers and expectant fathers experienced discrimination in the healthcare system or reported their physical appearance as the reason for such discrimination.

Table 2

Univariate Association of Actor Responses With Outcome Variables

	How Pleasant Was Your Prenatal Care Visit?		How Many Prenatal Care Visits Did You Attend?	
	OR (95% CI)	*P* Value	$\hat{\beta}$ (SE)	*P* Value
Male vs Female	1.07 (0.77–1.50)	.69	−0.39 (0.04)	< .001
Age (1 year increase)	1.00 (0.95–1.05)	.92	−0.03 (0.01)	.002
Race (vs White)				
African American	0.77 (0.46–1.29)	.32	−0.24 (0.09)	.008
Hispanic	0.62 (0.36–1.05)	.07	−0.25 (0.09)	.005
Other	0.93 (0.35–2.45)	.88	−0.38 (0.16)	.02
Years of schooling (1-y increase)	1.00 (0.91–1.10)	.98	0.02 (0.02)	.20
Number of children	0.89 (0.65–1.21)	.45	−0.15 (0.05)	.005
Income ($5000 increase)	1.00 (0.95–1.04)	.39	0.003 (0.01)	.67
No medical insurance	1.07 (0.70–1.63)	.76	−0.17 (0.07)	.02
Perceived racism and discrimination in health care				
A few times a year or more	3.17 (1.97–5.10)	< .001	−0.09 (0.08)	.23
Reasons for experience				
Race	2.45 (1.68–5.27)	.018	−0.21 (0.13)	.10
Ethnicity	2.64 (0.98–7.11)	.06	−0.23 (0.17)	.16
Gender	2.18 (0.93–5.14)	.06	−0.06 (0.14)	.67
Age	2.74(1.51–4.97)	.001	0.03 (0.10)	.73
Income level	1.93 (0.87–4.26)	.11	−0.15 (0.13)	.26
Language	1.66 (0.44–6.25)	.45	−0.56 (0.22)	.04
Physical appearance	2.83 (1.29–2.19)	.01	−0.19 (0.13)	.15
Other reasons	3.46 (1.59–7.55)	.002	−0.003 (0.13)	.98
Sexual orientation	1.59 (0.34–7.37)	.55	−0.06 (0.28)	.83
Number of attributions for discrimination	1.31 (1.13–1.52)	.004	−0.03 (0.03)	.22

The result of the univariate analysis for responses to the question “How pleasant was your prenatal care visit?” is presented using odds ratio (OR) with 95% confidence interval and associated *P* value for ease of interpretation. The result of the univariate association of variables of interest with number of prenatal care visits is presented using a β estimate of the regression with standard error and associated *P* values. *P* values ≤ .05 are significant.

Multivariable analysis adjusted for factors that affected the differences seen. Analysis examines why white participants attended more prenatal visits, after taking into account other factors. Hispanics attended less than white participants, but this was not the case for other ethnic groups.

Table 3

Multivariable Analyses of Responses to the Question “How Pleasant Was Your Prenatal Care Visit?”

	Model 1		Model 2	
	OR (95% CI)	*P* Value*	OR (95% CI)	*P* Value*
Male vs female	1.11 (0.74–1.67)	.62	1.15 (0.77–1.73)	.49
Age (1-y increase)	0.98 (0.91–1.04)	.48	0.97 (0.91–1.04)	.43
Race (vs white)				
African American	0.77 (0.45–1.32)	.34	0.78 (0.46–1.34)	.37
Hispanic	0.66 (0.38–1.14)	.14	0.63 (0.37–1.10)	.10
Other	0.75 (0.27–2.05)	.57	0.74 (0.27–2.03)	.56
Year of schooling (1-y increase)	1.00 (0.90–1.11)	.99	1.00 (0.91–1.11)	.95
Number of children	0.97 (0.69–1.36)	.87	0.97 (0.69–1.35)	.84
Income ($5000 increase)	1.00 (0.95–1.05)	.96	1.00 (0.95–1.05)	.92
Medical insurance vs no	0.88 (0.55–1.42)	.60	0.90 (0.56–1.44)	.66
Perceived racism and discrimination in health care				
A few times a year or more	3.10 (1.90–5.06)	< .001		
Reasons for experience				
Number of attributes for experience			1.30 (1.12–1.51)	.001

CI, confidence interval; OR, odds ratio.

Results of the univariate analysis for responses to the question “How pleasant was your prenatal care visit?” are presented using OR with 95% CI and associated *P* value for ease of interpretation.

**P* values ≤ .05 are significant.

Table 4

Multivariable Model for Number of Prenatal Care Visits

	Model 1		Model 2	
	$\hat{\beta}$ (SE)	*P* Value	$\hat{\beta}$ (SE)	*P* Value
Male vs female	−0.42 (0.06)	<.001	−0.42 (0.06)	< .001
Age (1-y increase)	−0.002 (0.0l)	.83	−0.002 (0.01)	.83
Race (vs white)				
African American	−0.10 (0.09)	.27	−0.10 (0.09)	.27
Hispanic	−0.18 (0.09)	.05	−0.17 (0.09)	.06
Other	−0.26 (0.16)	.09	−0.26 (0.16)	.10
Year of schooling (1-y increase)	0.02 (0.02)	.17	0.02 (0.02)	.18
Number of children	−0.12 (0.05)	.02	−0.12 (0.05)	.02
Income ($5000 increase)	0.01 (0.01)	.37	0.01 (0.01)	.38
No medical insurance	−0.11 (0.07)	.12	−0.11 (0.07)	.13
Perceived racism and discrimination in health care				
A few times a year or more	−0.09 (0.08)	.22		
Reasons for experience				
Number of attributes			−0.03 (0.02)	.16

Results of the univariate association of variables of interest with number of prenatal care visits is presented using a β estimate of the regression with standard error and associated *P* values. *P* values ≤ .05 are significant.

β = how much mean is changing.

Model 1 = yes or no.

Model 2 = number of responses for which participants answered yes.