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Associations Between Perceived Race-based Discrimination and Contraceptive Use among Women Veterans in the ECUUN Study

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Abstract

Objective—To describe perceived race-based discrimination in VA healthcare settings and assess its associations with contraceptive use among a sample of women Veterans.

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Methodology—This study used data from a national telephone survey of women Veterans aged 18–44 receiving healthcare in VA who were at risk of unintended pregnancy. Participants were asked about their perceptions of race-based discrimination while seeking VA healthcare and about their contraceptive use at last heterosexual intercourse. Logistic and multinomial regression analyses were used to examine associations between perceived race-based discrimination with use of prescription contraception.

Results—In our sample of 1,341 women Veterans, 7.9% report perceived race-based discrimination when receiving VA care, with blacks and Hispanics reporting higher levels of perceived discrimination than white women (11.3% and 11.2% vs. 4.4%; p<0.001). In logistic and multinomial regression analyses adjusting for race/ethnicity, age, income, marital status, parity, and insurance, women who perceived race-based discrimination were less likely to use any prescription birth control than women who did not (OR:0.65; 95% CI:0.42–1.00), with the largest difference seen in rates of IUD or implant use (OR:0.40; 95%: CI:0.20–0.79).

Conclusions—In this national sample of women Veterans, over 10% of racial/ethnic minority women perceived race-based discrimination when receiving care in VA settings, and perceived racial/ethnic discrimination was associated with lower likelihood of prescription contraception use, especially IUDs and implants. VA efforts to enhance respectful interactions may not only improve patient healthcare experiences, but also represent an opportunity to improve reproductive health outcomes for women Veterans.

Keywords

Reproductive health equity; disparities; family planning; VA women's health

INTRODUCTION

Given the rise in the number of women Veterans over the past decade and the projected continued growth[1], efforts to ensure high-quality, comprehensive women's healthcare are a high priority for the **Veterans Affairs (VA)** Healthcare System.[2] From 2003 to 2012, the number of women Veterans using VA healthcare services increased by 80%, with over 350,000 women using VA in 2012.[3] Nearly half of all women getting care in VA are of reproductive age and more than a third belong to racial/ethnic minority groups.[3] Specifically, 29% of women who utilize VA healthcare services are black, 6% are Hispanic, and 4% belong to other racial and ethnic minority groups.[3] The demographic profile of women Veterans getting healthcare in VA thus underscores the need to ensure equitable and culturally-sensitive care that meets their unique healthcare needs, including reproductive and family planning healthcare services.

Amidst national efforts to optimize healthcare equity,[4] it has been documented that men and women from racial/ethnic minority groups perceive discrimination in healthcare interactions.[5–9] Perceived discrimination has been consistently linked to reduced utilization of preventive care services, delays in seeking necessary medical treatment, and delays in obtaining pharmacy prescriptions and medical tests.[10–12] Recognizing the deleterious effects of perceived discrimination among vulnerable populations, VA has undertaken substantial efforts toward creating a culture of respect and patient-centeredness.[2] One study examining

perceived discrimination among Veterans who use VA for healthcare found that the rate of perceived race-based discrimination was as low as 5%,[13] suggesting that VA is succeeding in its efforts. Participants in this study, however, were almost entirely men (94%); there is no published information about the prevalence and context of perceived race-based discrimination among the growing population of women patients in VA, who are more racially diverse compared to their male counterparts[3] and may have different healthcare experiences.

In the field of family planning, there are data indicating that women, particularly women of color, perceive discrimination when seeking family planning services.[6–9, 14] This may be related in part to the long history of discriminatory efforts to control the fertility of minority and poor women in the US, which may heighten perceptions of discrimination and distrust among women seeking contraceptive care.[8, 15–19] There are also data indicating that perceptions of race-based discrimination are associated with reproductive decision making. In one study of 2,500 racially-diverse women in St. Louis aged 14–45 who received a new contraceptive method or switched to a different method as part of the contraceptive CHOICE project, a third of study participants at baseline reported some perceived race-based discrimination in their lifetime.[7] Furthermore those who perceived race-based discrimination reported using methods of contraception prior to enrollment that do not require a provider prescription, such as withdrawal or condoms, at a higher rate than participants who did not report perceived race-based discrimination.[7] Compared to contraceptives that require a prescription (e.g. hormonal methods, intrauterine devices [IUDs], implants, and sterilization), non-prescription methods are less effective in terms of pregnancy prevention, thus putting women at higher risk of unintended pregnancy.[18, 19] In another study among young women, perceptions of everyday discrimination were associated with higher rates of unintended pregnancy, though contraceptive use was not examined as a mediating factor in this study.[20]

Perceived race-based discrimination among women Veterans getting healthcare in VA has not been previously described, and understanding its prevalence and impact can help guide efforts to ensure high-quality, equitable healthcare that meets the unique needs of the growing number of women Veterans. Therefore, we analyzed data from the study, “Examining Contraceptive Use and Unmet Need among Women Veterans” (ECUUN) to describe perceived race-based discrimination and examine associations between perceived race-based discrimination and contraceptive use among a national sample of reproductive-aged women Veterans receiving care in VA.

METHODS

Study design and Sample

The ECUUN study sample consists of 2,302 women Veterans **who were no longer serving in active duty**. Women were randomly selected from an overall sampling frame consisting of women Veterans, aged 18–44 who had had at least one primary care visit within the VA Healthcare System across all US regions in the previous 12 months. Potentially eligible participants were then mailed information packets with response cards and a telephone number they could use to indicate interest in participating or opt out of the study. All

potential participants who did not opt out were subsequently called and invited to participate. Those who expressed interest underwent screening, enrollment and provided verbal consent via telephone. Enrolled and consented participants then took part in a 45–60 minute computer-assisted telephone interview between April 2014 and January 2016. The survey collected information on women's contraceptive and pregnancy histories as well as their experiences with VA healthcare. Participants were compensated $30 for their time.

In total, 8,198 invitations were sent, 2,769 women were enrolled and 2,302 fully completed the survey. Thus, the overall response rate was 28%, and the survey completion rate among those enrolled was 83%. Using VA administrative data, characteristics of participants were compared to non-participants and were similar with respect to age, race/ethnicity, marital status, income, presence of medical and mental illness, and geographic region (standardized differences of 0.07–0.1), suggesting that the ECUUN sample is representative of the larger population of reproductive-aged women getting care through the VA. Among the 2,302 participants who completed interviews, a subset of 1,341 women were identified as being at risk for unintended pregnancy, defined as having been sexually active with a male partner within the past year, having no history of hysterectomy or infertility, and not being pregnant or seeking pregnancy. These 1,341 women comprised the study sample for this analysis.

Study variables

The key independent variable was perceived race-based discrimination when receiving VA healthcare. Perceived race-based discrimination was assessed using the validated 7-item Perceived Discrimination in Healthcare Scale (questions are listed in Table 2). The Perceived Discrimination in Healthcare Scale is an adaption of the widely used William's Everyday Discrimination measure that has been modified to assess perceptions of unfair treatment specifically because of one's race and in particular settings; in this case we modified the scale to specify experiences when obtaining VA healthcare.[21–24] It has been found to have excellent reliability and has been used to quantify perceived discrimination in healthcare settings among diverse populations, including Veterans.[25–28] For each item, responses were scored using a five-point Likert scale (1, never; 2, rarely; 3, sometimes; 4, most of the time; 5, always). Women who responded to all of the items with only "never" or "rarely" were classified as not perceiving race-based discrimination, and women who responded to any of the items with either "sometimes", "most of the time", or "always" were defined as having perceived discrimination. We dichotomized the perceived discrimination variable due to the low number of positive responses on the individual scale items. The cut-point ("never" and "rarely" versus all others) was based on observed relationships to either contraceptive outcome, with women who responded "never" and "rarely" having similar associations with the outcomes that were distinct from those with more frequent experiences of perceived race-based discrimination.

Outcomes included use of any prescription contraceptive method at last heterosexual intercourse as well as specific type of method used. While all prescription methods require interaction with a healthcare provider, different methods require varying levels of interaction. Among prescription methods, hormonal methods require the least provider interaction as they are familiar to most women and they may be initiated and discontinued

by the patient independently.[29] Sterilization, although physically invasive because it requires a surgical procedure, is familiar to most women. Newer methods, such as IUDs and implants, are less well known[29] and may require greater interaction with a provider, not only for counseling and insertion, but also for method discontinuation. Thus, we categorized prescription methods as: hormonal methods (pill, ring, patch, and injection); female and male sterilization; IUDs and implants. Non-prescription methods included barrier methods (condoms, diaphragm, cervical cap), fertility-awareness methods, and withdrawal. Women who reported using more than one method at last sex were classified according to the most effective method used (in the order of: sterilization, IUD/implant, hormonal method, and non-prescription method).

The covariates examined were: patient-level demographics including race/ethnicity, age, marital status, parity, education, income and insurance, and facility-level characteristics including whether or not the site had a women's health clinic, geographic region, and whether the site was a hospital- or community-based outpatient clinic (CBOC). Patient-level covariates and whether or not the site had a women's health clinic were collected in the survey. Other facility-level characteristics (geographic region and whether the site was a hospital-based clinic or CBOC) were determined using administrative data based on the facility at which participants most recently had a primary care visit.

Data analysis

Descriptive statistics were used to describe study population characteristics for the total sample and by having perceived race-based discrimination or not. Rates of perceived race-based discrimination were examined for the overall study population and by race/ethnicity for each of the 7 items in the Perceived Discrimination in Healthcare Scale. Comparisons by perceived race-based discrimination and race/ethnicity groups were performed using Fisher's exact tests for categorical variables and the one-way analysis of variance for continuous variables.

We described the rate of contraception use for each outcome (any prescription method and type of method) by perceived race-based discrimination and tested for differences using Fisher's exact tests. We used logistic regression to examine the association between perceived race-based discrimination and any prescription contraception use versus non-prescription method or no method use (heretofore referred as non-prescription/no method). We used multinomial regression to assess the relationship between perceived race-based discrimination and the type of method used (hormonal, sterilization, and IUD or implant) versus nonprescription/no method. We collapsed non-prescription methods with no method use in our reference group because we were specifically interested in exploring use of prescription methods, which require interaction with healthcare providers. Patient covariates were selected for inclusion in adjusted models based on whether they were associated with perceived race-based discrimination or either contraceptive outcome in bivariate analyses at the $p<0.15$ level, as per standard procedures for model building.[30] Interactions between race/ethnicity and perceived race-based discrimination were assessed and included in final modeling if significant. All analyses were conducted using SAS software (version 9.4) and Stata 14 (College Station, Texas), with statistical significance set at $p<0.05$.

RESULTS

Sample Characteristics

Sample characteristics are summarized for the total sample and by perceived race-based discrimination in Table 1. Among the 1,341 women identified as at risk of unintended pregnancy, the **mean age was 34 (range: 21 – 45);** 52.3% were non-Hispanic white, 27.8% non-Hispanic black, 12.6% Hispanic and 7.2% non-Hispanic "other" (includes multiracial, Asian, Pacific Islander, and Native American women). Those who reported any perceived race-based discrimination were more likely to be from a racial/ethnic minority group, were slightly older, and more likely to be married or cohabiting, compared to those who did not perceive race-based discrimination.

Perceived race-based discrimination

Perceived race-based discrimination is summarized by race/ethnicity in Table 2. The overall rate of any perceived race-based discrimination when receiving care in the VA system was **7.9%**. The rate of ever perceiving race-based discrimination was significantly higher in non-Hispanic black, Hispanic, and "other" minority women than in non-Hispanic white women **(11.3%, 11.2% and 14.4% vs. 4.4%; p<0.001)**. The overall rates for the seven different types of race-based discrimination ranged from **2.1% to 3.6% with the exception of 0.9%** for "doctor/nurse acted as if they were afraid of you." The type of discrimination most commonly perceived by non-Hispanic black and Hispanic women was that the "doctor/nurse was not listening to you because of your race or color" (**6.4% and 5.3%)**, while women in the "other" racial category most commonly reported that they were "treated with less courtesy than other people" because of their race or color (**8.3%**).

Perceived discrimination and contraceptive use

Associations between perceived race-based discrimination and contraceptive use are shown in Table 3. Overall, women who reported perceived discrimination were less likely to utilize prescription contraception compared to women who reported no perceived discrimination **(62.3% vs. 73.8%; p=0.01)**. The largest absolute difference in the type of prescription contraception used between women who reported perceived discrimination and those who did not was seen in the use of IUDs and implants, with women who perceived race-based discrimination being less likely to report use of an IUD or implant **(11.3% vs. 22.8%)**. Rates of sterilization and use of hormonal contraception were similar between the groups.

In unadjusted logistic regression analysis (Table 4), compared to women who reported no perceived race-based discrimination when receiving care in VA, those who perceived race-based discrimination were less likely to use any prescription method versus non-prescription/no method **(OR: 0.57; 95% CI: 0.38–0.87)**. In unadjusted multinomial analysis, we also found that women who perceived race-based discrimination were less likely to use a hormonal method **(OR: 0.52; 95% CI: 0.30–0.92)** or an IUD or implant (**OR: 0.35; 95% CI: 0.18–0.67**) versus non-prescription/no method. There were no interactions between race and perceived race-based discrimination in our analyses, and when we conducted stratified analyses of contraceptive use by race, there were similar trends across all four racial/ethnic groups (data not shown).

Table 4 also shows the results from the adjusted logistic regression and multinomial models, which control for race/ethnicity, age, marital status, parity, income and insurance. In these models, the associations between perceived race-based discrimination and use of any prescription method **(OR: 0.65; 95% CI: 0.42–1.00; p=0.048)** and IUD/implant use **(OR: 0.40; 95%: CI: 0.20–0.79; p=0.008) remained statistically significant.**

DISCUSSION

In this national sample of 1,341 women Veterans of reproductive age at risk of unintended pregnancy, **more than one in ten** black women, Hispanic women, and women from "other" minority groups reported perceptions of race-based discrimination when receiving care in VA. We also found that women who reported perceived race-based discrimination were less likely to utilize prescription contraceptive methods, particularly IUDs and implants.

To the best of our knowledge, these are the first data reporting on perceived race-based discrimination in VA among an exclusively female Veteran sample. We found 8% of all women Veterans in our sample and over 10% of women from racial/ethnic minority groups perceived race-based discrimination when receiving care in VA settings. While women from racial/ethnic minority groups were significantly more likely to perceive discrimination than white women in our sample, we found that 4% of white women perceived discrimination when receiving care in VA settings. While it may seem surprising that women from a traditionally majority group reported perceived race-based discrimination, this phenomenon has been found in other studies assessing healthcare experiences[25, 27, 28] and may reflect perceptions of "reverse discrimination" or possibly strained interactions with staff or providers from racial groups other than their own. Our findings highlight the need for further investigation into women Veterans' experiences receiving care in the VA system and further investigation into how intersecting social vulnerabilities (e.g, minority race and gender) may impact healthcare and outcomes. More research regarding the context in which women Veterans perceive race-based discrimination will be crucial in guiding the continued efforts of VA to meet the needs of the racially diverse population of women it serves.

In addition to our findings regarding the rates of perceived discrimination among women Veterans in our representative sample, we found that the perception of race-based discrimination was associated with lower rates of prescription contraceptive use, especially IUD/implant use. The observed 11% difference in rates of IUD/implant use between the groups is clinically meaningful given that only about 10% of women at risk of unintended pregnancy in the general US population use IUDs/implants for contraception.[31] Although our study cannot explain the reason underlying this association, one hypothesized explanation for the lower rates of prescription contraceptive utilization by women who perceive discrimination in healthcare interactions may be the desire for lower levels of engagement with the healthcare system. IUDs and implants, in particular, require interactions with a provider for counseling, insertion and removal and preclude patient control over initiating and discontinuing their chosen contraceptive method.

In addition to perceived race-based discrimination, we found that race/ethnicity was independently associated with our contraceptive outcomes. Significant racial differences in

contraceptive use patterns have been well documented in non-VA settings.[32, 33] Specifically, black and Hispanic women are less likely to use contraception overall and less likely to use prescription methods.[32–37] Reasons for these differences are complicated and multi-factorial, including factors such as differences in contraceptive knowledge and preferences, orientation towards pregnancy and motherhood, partnership dynamics, and interactions with healthcare providers and healthcare systems beyond (or including) experiences with perceived race-based discrimination.[32, 34, 38–41] Desired autonomy over starting and discontinuing use of contraception has also been found to be an extremely important attribute of a contraceptive method by black and Latina women.[34] Further investigation is needed to understand how perceived discrimination and other negative interactions (and conversely, positive interactions) with the healthcare system shape contraceptive decision making for racial/ethnic minority women, as these factors are potentially modifiable and, more importantly, can impede (or enhance) a woman's ability to obtain a contraceptive method that meets her specific needs and preferences.

Our study was not without limitations. First, our measure of perceived discrimination addressed the frequency, but not necessarily the intensity, of experiences with perceived discrimination. Second, our survey assessed perceived race-based discrimination within the VA healthcare system, but we are unable to determine the specific context in which the women in our sample perceived discrimination. Their experiences may be in different clinical contexts (e.g. outpatient clinic, hospital admissions, etc.) or across various levels of personnel (e.g. front desk, nurses, physicians, other patients). Third, we were unable to establish a clear temporal relationship between experiences with perceived discrimination and contraceptive use at the time of last intercourse. Therefore we cannot infer a causal relationship between perceived race-based discrimination and contraceptive use.

In conclusion, we found over 10% of women Veterans from racial/ethnic minority groups in our sample perceived race-based discrimination when receiving care in VA settings. These findings warrant further investigation to better determine the context in which women perceive discrimination in VA settings. We also found perceived race-based discrimination to be associated with reduced use of prescription contraceptive methods, especially IUDs/Implants. Further research is needed to explore the impact of perceived discrimination on women Veterans' healthcare and outcomes to enhance VA's ability to provide high-quality, respectful healthcare provision that meets the needs of the diverse population of women Veterans it serves.

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Table 1

Sample characteristics overall and by perceived race-based discrimination

Characteristic[a]	Overall n=1,341 n (%)	Any Perceived Race-based Discrimination	
		Yes n=106 (7.9%) n (%)	No n=1,235 (92.1%) n (%)
Race/Ethnicity			
NH White	702 (52.3)	**31 (29.3)**	**671 (54.3)**
NH Black	373 (27.8)	**42 (39.6)**	**331 (26.8)**
Hispanic	169 (12.6)	**19 (17.9)**	**150 (12.2)**
NH other/unknown	97 (7.2)	**14 (13.2)**	**83 (6.7)**
Age, years, mean(SD)	33.9 (5.5)	34.8 (5.2)	33.9 (5.6)
Marital Status			
Single/DSW	701 (52.3)	**41 (39.1)**	**660 (53.4)**
Married/cohabiting	639 (47.7)	**64 (61.0)**	**575 (46.6)**
Parous	919 (68.5)	77 (72.6)	842 (68.2)
Education			
Less than college	632 (47.1)	54 (50.9)	578 (46.8)
College or above	709 (52.9)	52 (49.1)	657 (53.2)
Income			
<$40,000	633 (47.7)	49 (47.1)	584 (47.8)
≥$40,000	693 (52.3)	55 (52.9)	638 (52.2)
Insurance			
VA	659 (49.1)	55 (51.9)	604 (48.9)
Non VA	682 (50.9)	51 (48.1)	631 (51.1)
VA site has a women's clinic or center			
Yes	919 (68.5)	74 (69.8)	845 (68.4)
No	284 (21.2)	21 (19.8)	263 (21.3)
I don't know	138 (10.3)	11 (10.4)	127 (10.3)
Region			
Midwest	244 (18.2)	**15 (14.2)**	**229 (18.5)**
Northeast	106 (7.9)	**5 (4.7)**	**101 (8.2)**
South	711 (53.0)	**73 (68.9)**	**638 (51.7)**
West	280 (20.9)	**13 (12.3)**	**267 (21.6)**
Hospital vs. CBOC			
CBOC	608 (45.3)	45 (42.5)	563 (45.6)
Hospital	733 (54.7)	61 (57.6)	672 (54.4)

Numbers represent sample size and column percent unless otherwise specified.

NH, non-Hispanic; SD, standard deviation; DSW, divorced, separated, widowed; VA, Veterans Affairs; CBOC, community-based outpatient clinic.

Values in bold statistically significant at p-value <0.05. We used Fisher's exact test for categorical variables and ANOVA for continuous variables.

[a]Missing data: marital status (n=1), income (n=15).

Table 2

Perceived race-based discrimination domains by race/ethnicity

Perceived Race-based Discrimination	All n=1,341 n (%)	NH White n=702 (52.3%) n (%)	NH Black n=373 (27.8%) n (%)	Hispanic n=169 (12.6%) n (%)	NH Other n=97 (7.2%) n (%)
When getting health care at the VA, how often have you:					
Been treated with less courtesy **because of your race or color**	**44 (3.3)**	**18 (2.6)**	**10 (2.7)**	**8 (4.7)**	**8 (8.3)**
Been treated with less respect **because of your race or color**	38 (2.8)	15 (2.1)	10 (2.7)	7 (4.1)	6 (6.2)
Received poorer service **because of your race or color**	28 (2.1)	10 (1.4)	9 (2.4)	6 (3.6)	3 (3.1)
Had a doctor/nurse acted as if you were not smart **because of your race or color**	**34 (2.5)**	**7 (1.0)**	**15 (4.1)**	**8 (4.8)**	**4 (4.1)**
Had a doctor/nurse acted as if they were afraid of you **because of your race or color**	**12 (0.9)**	**2 (0.3)**	**8 (2.1)**	**1 (0.6)**	**1 (1.0)**
Had a doctor/nurse acted as if they were better than you **because of your race or color**	**42 (3.1)**	**12 (1.7)**	**20 (5.4)**	**6 (3.6)**	**4 (4.1)**
Felt like a doctor/nurse was not listening to you **because of your race or color**	**48 (3.6)**	**11 (1.6)**	**24 (6.4)**	**9 (5.3)**	**4 (4.1)**
Number and percent of women reporting any of the above	**106 (7.9)**	**31 (4.4)**	**42 (11.3)**	**19 (11.2)**	**14 (14.4)**

Numbers represent sample size and column percent. Missing data between n=1 and n=4.

NH, non-Hispanic.

Women with responses of “never” or “rarely” were classified as not perceiving race-based discrimination. Women with a response of at least “sometimes”, “most of the time” or “always” were classified as having perceived discrimination.

Values in bold statistically significant at p-value <0.05. We used Fisher’s exact test.

Table 3

Contraception use by perceived race-based discrimination

Contraception Use at Last Intercourse	Perceived Race-based Discrimination		
	Yes n=106 (7.9%) n (%)	No n=1,235 (92.1%) n (%)	P-Value
Any prescription method vs non-prescription/no method	66 (62.3)	912 (73.8)	0.01
Type of method			
Non-prescription/no method	40 (37.7)	323 (26.2)	
Hormonal	22 (20.8)	308 (25.0)	0.006
Sterilization (male or female)	32 (30.2)	322 (26.1)	
Implant or IUD	12 (11.3)	282 (22.8)	

Numbers represent sample size and column percent; P-values from Fisher's exact test.

Non-prescription methods: male condom, periodic abstinence, withdrawal, emergency contraception, female condom, spermicide, diaphragm, cervical cap, today sponge or other.

Hormonal methods: pill, patch, contraceptive ring, 3-month injectable (Depo-Provera™)

IUD, intrauterine device.

Table 4

Unadjusted and adjusted models for associations between perceived race-based discrimination and contraceptive use

Covariates	Any prescription vs. non-prescription/no method[3]	Multinomial regression model[b]		
		Hormonal vs. non-prescription/no method	Sterilization vs. non-prescription/no method	IUD or implants vs. non-prescription/no method
	OR (95%CI)	RRR (95%CI)	RRR (95%CI)	RRR (95%CI)
UNADJUSTED MODELS				
Perceived race-based discrimination	**0.57 (0.38, 0.87)**[d]	**0.52 (0.30, 0.92)**[f]	0.81 (0.50, 1.33)	**0.35 (0.18, 0.67)**[g]
ADJUSTED MODELS[c]				
Perceived race-based discrimination	**0.65 (0.42, 1.00)**[e]	0.63 (0.35, 1.12)	0.92 (0.54, 1.57)	**0.40 (0.20, 0.79)**[h]
Race/Ethnicity				
NH Black vs. NH White	**0.71 (0.53, 0.96)**	0.76 (0.53, 1.11)	**0.63 (0.43, 0.92)**	0.74 (0.51, 1.09)
Hispanic vs. NH White	**0.55 (0.38, 0.80)**	0.65 (0.41, 1.02)	**0.49 (0.30, 0.80)**	**0.48 (0.29, 0.80)**
NH Other vs. NH White	0.65 (0.40, 1.05)	0.57 (0.30, 1.10)	0.56 (0.30, 1.04)	0.87 (0.48, 1.58)
Age	0.99 (0.97, 1.02)	**0.95 (0.92, 0.98)**	**1.10 (1.06, 1.13)**	**0.95 (0.92, 0.98)**
Single/DSW	**0.62 (0.47, 0.82)**	0.80 (0.57, 1.12)	**0.50 (0.35, 0.71)**	**0.59 (0.41, 0.84)**
Parous	**1.63 (1.23, 2.16)**	0.89 (0.64, 1.24)	**3.70 (2.45, 5.60)**	**1.92 (1.34, 2.75)**
Income <$40,000	1.13 (0.85, 1.50)	1.17 (0.83, 1.66)	1.06 (0.75, 1.51)	1.15 (0.81, 1.65)
Non VA insurance	1.23 (0.94, 1.60)	1.29 (0.94, 1.78)	1.14 (0.82, 1.59)	1.27 (0.91, 1.78)

Vs., versus; OR, odds ratio; CI, confidence interval; RRR, relative-risk ratio; NH, non-Hispanic; DSW, divorced, separated, widowed; VA, Veterans Affairs.

N = 1,325 due to missing data. Estimates in bold statistically significant at p-value<0.05.

[a] Logistic regression model with the outcome defined as prescription method vs. non-prescription/no method.

[b] Multinomial regression model with 4 levels of contraceptive use: non-prescription/no method, hormonal, sterilization, IUD or implants. Non-prescription/no method was used as the reference group.

[c] Adjusted for race, age, marital status, parous, income and insurance. Patient covariates were selected for inclusion in adjusted models based on whether they were associated with perceived race-based discrimination or either contraceptive outcome in bivariate analyses at the p<0.15 level.

[d] P-value = 0.008;

[e] P-value = 0.048;

[f] P-value = 0.02;

[g] P-value = 0.002;

[h] P-value = 0.008.