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Skin tone discrimination and birth control avoidance among women in Harris County, Texas: a cross-sectional study

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Abstract

Introduction Structural racism plays a major role in reproductive health inequities. Colorism, discrimination based on skin color, may profoundly impact reproductive health access and service delivery. However, quantitative research in this area is limited.

Methods We administered an online survey of women ($n = 1,299$) aged 18–44 from Harris County, Texas to assess the relationship between skin color discrimination and reproductive health service avoidance. The survey included questions on demographics, self-reported skin tone, and dichotomous measures of previous discrimination experiences and avoidance of care because of perceived discrimination. Binary logistic regression was used to examine whether race/ethnicity, skin tone, and previous discrimination experiences were related to avoidance of contraceptive care because of perceived discrimination.

Results Approximately one-third (31.5%) of the sample classified themselves as non-Hispanic Whites (31.5%), 22.4% as Black, 27.4% as Hispanic and born within the US, and 7.6% as Hispanic born outside of the US. Approximately one-third of women classified themselves in the lightest skin tones, whereas almost one in five women classified themselves in the darkest skin tone palates. Darker skin tones had increasingly greater odds of reporting that they avoided seeking birth control out of a concern for discrimination compared to the lightest skin tone. After adjusting for race/ethnicity and sociodemographic variables (model 3), darker skin tones remained significantly associated with avoiding birth control.

Discussion This study demonstrates the role that skin color discrimination plays in negative reproductive health experiences. While this is not surprising given that those with racist ideologies developed the concept of these racial and ethnic categories, the apparent association with darker skin colors and avoidance of seeking birth control provides evidence that structural and individual racism continues to have far-reaching and insidious consequences.

Conclusion Contraception is recognized for reducing maternal mortality, improving child health, increasing female empowerment, and decreasing poverty. However, not all women equally enjoy the benefits of access to contraception. Addressing colorism within reproductive healthcare has become critically important as the nation

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becomes increasingly diverse. Focusing on skin tone-based discrimination and its roots in anti-blackness expands our understanding beyond a Black–White binary traditionally applied when addressing racism in healthcare delivery.

Keywords Colorism, Racism, Contraception, Reproductive healthcare, Discrimination

Introduction

Racial and ethnic disparities in reproductive health access, services, and outcomes are prevalent [1]. These disparities are evidenced by the lower use of contraception among Hispanic and non-Hispanic Black women over the last decades, resulting in higher rates of unintended pregnancies and poorer maternal outcomes [1–3]. Barriers to hormonal contraceptive methods have been well described and include costs, proximity to affordable clinics, lack of over-the-counter access, affordable copays, and patients' lack of awareness or misconceptions [4, 5]. Other factors include healthcare providers' attitudes, misconceptions, and limited training. For adolescent patients, consent and confidentiality are major barriers [4, 5]. Mounting evidence suggests that structural racism may underlie many of these common barriers and extend to the interpersonal and internalized experiences of racism among women seeking care and the type of care provided to them [1, 6, 7].

While scientists have been describing racial and ethnic disparities in reproductive health outcomes, we are slow to acknowledge the underpinnings of these disparities. To understand the underpinnings, we must recognize that racial and ethnic classifications were created in the first place by scientists and others who had racist ideologies. As such, racial and ethnic classifications are complex social constructs with no biological basis and are deeply confounded with the stratification systems that perpetuate structural and individual racism and oppression. By understanding the origins and flaws of these classification systems, researchers can move past simply reporting reproductive health disparities based on race and further address the multiple levels of racism (structural, interpersonal, and internalized) that underlie reproductive health disparities.

One key factor increasingly associated with disparate outcomes in health, housing, and economic mobility is skin color discrimination, also known as colorism [8, 9]. Colorism can be defined as discrimination based on the preference and value of people of lighter skin tones and Eurocentric features (straight hair, narrow facial features, e.g.) over darker skin tones, kinky hair, and more stereotypically Afrocentric facial features [10]. Colorism, an important form of racial discrimination, is garnering increased awareness due to its global prominence and impact on various health outcomes [8, 11–14]. However, the effect colorism has on reproductive healthcare outcomes and contraception access has been overlooked.

Recent qualitative studies document women's experience of racism and colorism during their healthcare encounters and over their reproductive life experiences. Specifically, women of darker skin tones felt subjugated to lesser treatment when accessing reproductive health services, surfacing long-standing experiences of phenotype discrimination that seldom gets documented in public health research [7, 15]. Specifically, women described that racism impacted their ability to obtain timely healthcare services, their frequency of care, and their experiences with the healthcare system. Participants also reported that individual racism, as manifested through interactions with healthcare providers, negatively affected their use of reproductive healthcare services [7].

Another study suggested that colorism may impact access to prenatal care and delays in care. In this study, a quarter (24.8%) of women had delayed prenatal care, and daily experiences of racism were associated with delayed prenatal care. This association was moderated by self-reported maternal skin tone [16]. Elucidating the role of racism and colorism is essential in understanding the underlying causes of disparities in contraception use and the interventions that should be implemented to ameliorate these disparities. To determine the association between skin tone, perceived discrimination, and contraception care avoidance, we analyzed survey data collected from a representative sample of 1,299 women in a major southern US city.

Methods

Sample

The data for this analysis were collected through a cross-sectional survey of $N=1299$ women aged 18 to 44 reached online from February 10 through March 31, 2022. Respondents were recruited through a stratified random address-based sample (ABS) of Harris County, Texas ($n=777$) and online non-probability-based opt-in panels ($n=522$). Eligibility criteria included identifying as a woman or as currently able to become pregnant, between the ages of 18 and 44, and living in Harris County, Texas. Data collection was conducted by SSRS, a non-partisan survey research firm.

ABS recruitment involved two waves. The first wave received an initial survey invitation letter and a follow-up postcard a week later. The second wave was recruited four weeks after the follow-up mailing to wave one. The invitation letters included a study-specific URL, QR code, and a toll-free call-in phone number. The letter also

listed a unique passcode that respondents needed to log into the survey online or provide to the telephone interviewer. The front side of the letter was in English, and the back was in Spanish. The letters had a one-dollar bill and a quarter included as a non-contingent incentive, while a \$10 gift card was offered as contingent on completing the questionnaire. All mailing materials asked that a woman age 18 to 44 living in the household complete the survey. No within household selection method was used. The first wave resulted in 485 completed cases, and 292 respondents came from the second wave of data collection. Most ABS respondents completed the survey online ($n=777$). Only $n=33$ ABS respondents completed the survey by phone. There were no statistically significant differences by age, race/ethnicity or educational attainment between those who completed the survey online and by phone.

Two third-party non-probability-based web panels, Torfac and Prodege, were utilized to reach additional respondents. Both panels recruit panelists through a variety of online platforms and require “double opt in” where respondents must confirm panel enrollment through a confirmation email after signing up on the panel website. Upon enrollment and through survey activity, demographic information such as age, gender and location information are collected from panelists. This information was used to send targeted email invitations and reminders to panelists likely to qualify for this survey. Panelists must have confirmed their age as under 44 and self-report being a woman living in Harris County, Texas.

Survey

Respondents from both the ABS and non-probability sample could complete the survey in English or Spanish. Survey items on discrimination and colorism were adapted from the Everyday Discrimination Scale and the New Immigrant Survey Skin Color Scale [17, 18]. The primary outcome of this analysis is whether women avoided birth control because of perceived discrimination. The outcome variable was coded as yes if participants recorded that they experienced discrimination when going to a doctor or health clinic for birth control because of their race/ethnicity or skin tone. The survey also asked about demographic factors, had them rate their skin tone, and if they experienced discrimination because of their race/ethnicity, skin tone, parenthood, marital status, age, sex, or sexual orientation. Skin tone was only assessed for those who completed the online survey ($n=1299$) and could choose one of 16 pictures of the skin tone that best described themselves. The skin tone variable was then collapsed into five categories from lightest to darkest. Using a four-point Likert scale (very easy, somewhat easy, somewhat difficult, or very difficult), women were asked how difficult it was to find a

doctor who treats them with dignity and respect when seeking birth control and reproductive healthcare. For the analyses, difficulty in finding a doctor was collapsed into very/somewhat easy compared to somewhat/very difficult. The questionnaire was tested by telephone with six respondents. The respondents completed the full survey. The questionnaire was modified based on their responses and points where they had difficulty answering.

Data management and analysis

The data was cleaned using a computer validation program to locate errors from incorrectly followed skip patterns, out-of-range values, and errors in data field locations. Quality checks were then performed on the final data. The following cases were flagged and reviewed: cases with more than 40% question non-response, cases with a time length less than one-quarter of the mean length by mode, and cases with more than 60% of the answer grids were similar (straight-lining questions). Three cases were removed after being flagged due to two or more issues.

The ABS data was weighted to account for differences in the probability of selection. Data was then weighted to balance the demographic profile of the sample to target parameters. Weighting of the ABS data was accomplished using SPSSINC RAKE, an SPSS extension module that simultaneously balances the distributions of all variables using the GENLOG procedure. The sample was weighted to match population estimates. The weighting parameters were race/ethnicity (Black, Hispanic, Else) by age (18–24, 25–34, 35–44), race/ethnicity by education (less than college, college+), detailed race/ethnicity (White, Black, Hispanic – US Born, Hispanic – Foreign Born, Other), and detailed education (high school or less, some college, college+). The benchmarks were derived from 2021 Current Population Survey (CPS) data [19]. Weights were trimmed to prevent individual interviews from having too much influence on the results.

Respondents reached through the opt-in panels were younger, with an average age of 30.5 years compared to 33.5 years among ABS respondents. Opt-in panel respondents also tended to have lower levels of educational attainment than those reached through ABS. 31% of opt-in respondents had a four-year college degree or more, compared to 58% of ABS respondents. To reduce selection bias while minimizing design effect within the non-probability sample, SSRS's stepwise calibration methodology was used to determine a set of non-demographic internal benchmarks to weight the hybrid ABS and non-probability sample [20]. This calibration method is designed to ensure that estimates from the hybrid sample remain representative of the target population and has been tested across a wide range of healthcare

Table 1 Characteristics of Study Sample

	Total Sample	
	N = 1299 (unweighted %)	Weighted %
Age		
18–24	247 (19.0)	23.5
25–29	237 (18.2)	19.9
30–39	532 (41.0)	38.3
40–44	283 (21.8)	18.3
Race/Ethnicity		
White, Non-Hispanic	409 (31.5)	27.6
Black, Non-Hispanic	291 (22.4)	21.9
Hispanic, born inside the US	356 (27.4)	25.5
Hispanic, born outside the US	99 (7.6)	14.6
Other, Non-Hispanic	144 (11.1)	10.5
Skin Tone		
Lightest	445 (34.3)	31.9
2	188 (14.5)	14.5
3	217 (14.5)	18.6
4	194 (14.9)	14.6
Darkest	255 (19.6)	20.4
Marital Status		
Single, never married	483 (37.2)	39.9
Single, living with partner	190 (14.6)	16.1
Married	537 (41.3)	37.2
Separated, Widowed, Divorced	89 (6.9)	6.8
Education		
High School or less	269 (20.7)	34.0
Some College	412 (31.7)	32.2
College	618 (47.6)	33.8
Family Income		
Less than \$20,000	193 (14.9)	19.8
\$20,000 to <\$40,000	279 (21.2)	26.4
\$40,000 to <\$75,000	360 (27.7)	27.0
\$75,000 to <\$100,000	174 (13.4)	11.0
\$100,000 or more	293 (22.6)	15.7
Employment		
Employed	895 (68.9)	64.2
Unemployed	122 (9.4)	10.9
A student	108 (8.3)	9.5
On disability and can't work/Retired	17 (1.3)	1.7
A homemaker or stay at home	157 (12.1)	13.7

and public opinion surveys. The combined ABS and non-probability samples were then weighted to the same demographic benchmarks used for the ABS sample as well as the internal benchmarks derived from the step-wise calibration.

The data was analyzed using the 'survey' package in R with base weights applied to account for the probability of selection. Binary logistic regression was used to examine whether race/ethnicity and skin tone were related to whether women avoided birth control because of perceived discrimination. Crude odds ratios were calculated for each variable. Adjusted odds ratios were calculated to examine whether demographic and other factors explained the relationship between race/ethnicity and the outcome variable (models 2 and 3) and whether these factors explained the relationship between skin tone and the outcome variable (models 3 and 4).

Results

Table 1 displays the characteristics of the study sample, weighted and unweighted. Based on unweighted data, of the 1,299 women in the analysis, 41% were aged 30 and 39. Almost one-third of the sample classified themselves as non-Hispanic Whites (31.5%), 22.4% as Black, 27.4% as Hispanic and born within the US, and 7.6% as Hispanic born and outside of the US. Approximately one-third of women classified themselves in the lightest skin tones, whereas almost one in five women classified themselves in the darkest skin tone palates. Thirty-seven percent said they were single and never married, 14.6% were single and living with a partner, and 41.3% of women reported being married. Almost half (47.6%) reported being college educated. The majority (68.9%) of the sample reported being employed.

Table 2 displays the sample's self-reported reproductive health experiences unweighted and weighted. Based on weighted data, overall, 14.9% of women aged 18–44 in Harris County said they avoided seeking birth control

Table 2 Reports of Care seeking behavior and experiences

	Total Sample	
	N = 1299 (unweighted %)	Weighted %
Avoided seeking birth control from a doctor or healthcare provider out of concern that they would be discriminated against or treated poorly because of their race or ethnicity	166 (12.8)	14.9
Avoided seeking birth control from a doctor or healthcare provider out of concern that they would be discriminated against or treated poorly because of their skin tone	129 (9.9)	11.1
Experienced discrimination when going to a doctor or health clinic for birth control because race/ethnicity	260 (20.0)	21.1
Experienced discrimination because of skin tone	195 (15.0)	15.3
Somewhat or very difficult to find a doctor who treats you with dignity and respect when seeking birth control and reproductive healthcare	270 (20.8)	21.9
Somewhat or very difficult to find a doctor who shares the same background and experiences as you when seeking birth control and reproductive healthcare?	554 (42.6)	43.1

from a doctor or healthcare provider out of concern that they would be discriminated against or treated poorly because of their race or ethnicity, and 11.1% of women said they avoided seeking birth control out of concern

Table 3 Bivariate association between sociodemographic factors, previous experiences, and care avoidance

Characteristic	Crude OR (95% CI)
Race/Ethnicity	
White, non-Hispanic	Reference
Black, non-Hispanic	13.3 (6.6–26.9)
Hispanic, born in the US	8.6 (4.2–17.5)
Hispanic, born outside of the US	14.6 (6.2–34.6)
Other, non-Hispanic	2.7 (1.0–7.2)
Skin Tone	
Lightest	Reference
2	3.9 (1.9–8.5)
3	3.9 (1.9–7.7)
4	5.9 (3.1–11.2)
Darkest	7.6 (4.3–13.7)
Family Income	
Less than \$20,000	8.3 (3.9–17.6)
\$20,000 to <\$40,000	6.2 (3.1–12.4)
\$40,000 to < \$75,000	3.7 (1.8–7.6)
\$75,000 to <\$100,000	3.2 (1.3–7.8)
\$100,000 or more	Reference
Education	
High School or less	3.3 (2.0–5.5)
Some College	1.9 (1.2–3.3)
College	Reference
Marital Status	
Married	Reference
Single, never married	1.4 (0.9–2.2)
Single, living with partner	1.6 (0.9–3.0)
Separated, Divorced, Widowed	2.1 (1.0–4.3)
Employment	
Employed	Reference
Unemployed	1.3 (0.6–2.5)
A student	1.5 (0.8–2.5)
On disability and can't work/Retired	0.9 (0.2–4.2)
A homemaker or stay at home	1.4 (0.7–2.6)
Age	
18–24	1.3 (0.7–2.4)
25–29	0.9 (0.5–1.8)
30–39	0.6 (0.4–1.2)
40–44	Reference
Experienced discrimination because race/ethnicity	30.2 (17.7–51.6)
Experienced discrimination because skin tone	20.4 (12.5–33.2)
Somewhat or very difficult to find a doctor who treats you with dignity and respect when seeking birth control and reproductive healthcare	3.1 (1.9–4.7)
Somewhat or very difficult to find a doctor who shares the same background and experiences as you when seeking birth control and reproductive healthcare?	1.8 (1.2–2.8)

that they would be discriminated against or treated poorly because of their skin tone. One in five women said they had previously experienced discrimination when going to a doctor or health clinic for birth control because of their race/ethnicity (21.1%), and 15.3% said they experienced discrimination when going to a doctor or health clinic for birth control because of their skin tone. One in five women said they had difficulty finding a doctor who treated them with dignity and respect when seeking birth control and reproductive healthcare (21.9%). 43% reported difficulty finding a doctor with a similar background and experiences when seeking birth control and reproductive healthcare.

Table 3 displays the bivariate associations between sociodemographic factors, previous experiences, and avoiding seeking birth control from a doctor or healthcare provider out of concern for discrimination. When compared to women who classified themselves as White, Black women were more than 13 times more likely to report avoiding seeking birth control because of discrimination concerns. Hispanic women born in the US were 8.6 times more likely, and Hispanic women born outside of the US were 14.6 times more likely to report avoiding seeking birth control from a doctor or other healthcare provider because of concern they would be discriminated against for their race, ethnicity, or skin tone. Compared to women classifying themselves in the lightest skin tone, all darker skin tones had increased odds of avoiding seeking birth control out of a concern for discrimination. Women with the two darkest shades of skin tones were 5.9 and 7.6 times more likely to avoid seeking birth control out of concern for discrimination. Those with lower income and those with less education had greater odds of avoiding seeking birth control out of a concern for discrimination than those with the highest income and education. Women who reported a previous experience of discrimination based on race/ethnicity were more than 30 times more likely, and women who reported prior discrimination based on skin tone were 20 times more likely to avoid seeking birth control out of concern they would be discriminated against.

Table 4 displays the multivariate associations between race/ethnicity, skin tone, and avoiding seeking birth control from a doctor or healthcare provider out of concern for discrimination after adjusting for sociodemographic factors. After adjusting for sociodemographic factors, Black women were 12.4 times more likely to avoid seeking birth control compared to non-Hispanic White women, Hispanic women born in the US were 6.5 times more likely to avoid seeking birth control, and Hispanic women born outside the US were 10.3 times more likely to avoid seeking birth control compared to non-Hispanic White women. Darker skin tones had increasingly greater odds of reporting that they avoided seeking birth control

Table 4 Multivariate association between race/ethnicity, skin tone, and care avoidance after adjusting for sociodemographic factors

	Adjusted OR (95% CI)
Model 1: Race/ethnicity adjusted for family income, education, marital status, employment, and age	
Race/Ethnicity	
White, non-Hispanic	Reference
Black, non-Hispanic	6.5(3.0–13.8)
Hispanic, born in the US	6.5(3.0–13.8)
Hispanic, born outside of the US	10.3(4.3–24.9)
Other, non-Hispanic	2.7(0.9–7.2)
Model 2: Skin tone adjusted for family income, education, marital status, employment, and age	
Skin Tone	
Lightest	Reference
2	3.7 (1.8–7.7)
3	3.3 (1.6–6.7)
4	5.6 (2.9–10.9)
Darkest	7.5 (4.1–13.9)
Model 3: Skin tone adjusted for race/ethnicity, family income, education, marital status, employment, and age	
Skin Tone	
Lightest	Reference
2	1.6 (0.7–3.6)
3	3.0 (1.3–7.2)
4	1.4 (0.6–3.4)
Darkest	3.1 (1.3–8.8)

out of a concern for discrimination compared to the lightest skin tone. After adjusting for race/ethnicity and sociodemographic variables (model 3), darker skin tones remained significantly associated with avoiding birth control.

Discussion

This study demonstrates the role that racial and ethnic categories and skin color play in negative reproductive health experiences. While this is not surprising given that the concept of these racial and ethnic categories was developed by those with racist ideologies, the clear association with darker skin colors and avoidance of seeking birth control provides further evidence that structural and individual racism continues to have far-reaching and insidious consequences.

Contraception is known as one of the greatest public health achievements of the 20th century and is recognized for improving the world's health, reducing maternal mortality, improving child health, increasing female empowerment, and decreasing poverty [21]. However, not all women equally enjoy the benefits of access to contraception [21]. Documented disparities in contraception access and reproductive healthcare are multifactorial and complex and include availability and access to healthcare, transportation, health insurance, employment, and

education [22]. These factors are confounded by centuries of structural racism and discrimination. For the past twenty years, studies have documented historical abuse and discrimination in healthcare settings stemming from bias and prejudice against minorities, greater clinical uncertainty when interacting with minority patients, and beliefs or stereotypes held by the provider about the behavior or health of minorities [23]. In 2020, the Kaiser Family Foundation reported that one in five Black and Hispanic adults said they were personally treated unfairly because of their race or ethnicity while getting healthcare in the past year [24].

Researchers must move past simply describing racial and ethnic differences in reproductive health and attributing these differences solely to social determinants such as poverty, education, and employment. Instead, colorism must be addressed as a global product of structural racism that impacts interpersonal and internalized experiences of discrimination that will require further study on solutions to address reproductive health inequities. Further, colorism in the American context is unique in that it is inextricably tied to the lasting vestiges of chattel slavery, Jim Crow segregation, and the subsequent policies that kept groups of people segregated and subjugated based on phenotype and ancestry [10]. We must be able to admit the role that racism rooted in anti-blackness has on reproductive health outcomes and how colorism functions as an agent of this phenomena [24].

Limitations

The study is conducted exclusively in a large urban southern city, potentially limiting the generalizability of the findings to rural or suburban areas, or even to other urban areas with different socio-economic or cultural contexts. The administration of the online survey might have excluded individuals without internet access or digital literacy.

Additionally, this study includes temporal limitations as polling captures opinions at a specific point in time, which may not reflect changes in public opinion over time. Events occurring after the data collection period can significantly alter public perceptions and attitudes.

By acknowledging these limitations, the study provides a transparent account of potential sources of bias and constraints on the findings, thereby offering a more nuanced interpretation of the results. Future research could aim to address these limitations by incorporating broader geographic samples, longitudinal designs, and methodological triangulation to enhance the robustness and generalizability of the findings.

Conclusions

This study provides colorism as a more specific focus in tackling racism in healthcare delivery now that calls for transforming the quality of care related to trust building and anti-racist practice are present [25]. Researchers need to test and disseminate strategies to ameliorate harm and ensure well-being for all. Lastly, addressing colorism within reproductive healthcare has become critically important as the nation becomes increasingly diverse. Focusing on skin tone-based discrimination and its roots in anti-blackness expands our understanding beyond a Black–White binary that is traditionally applied when addressing racism in healthcare delivery. Instead, these findings extend further awareness of the discriminatory practices among all people that contribute to a hierarchy based on skin color. We must intentionally develop, test, and disseminate strategies to ameliorate harm and ensure well-being for all.

Abbreviations

ABS address-based sample
CPS Current Population Survey

Acknowledgements

Not applicable.

Author contributions

KB contributed to the design of the survey and was a major contributor to the writing of the manuscript. STE contributed to the design of the survey, interpreted the statistical output, and contributed to the writing of the manuscript. ES contributed to the survey administration and to the writing of the manuscript. JS and EBP contributed to the data collection and analysis, as well as critical feedback and revisions of the manuscript.

Funding

The Houston Experiences in Reproductive Health Survey was made possible by grant supported through the Episcopal Health Foundation.

Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

This study was approved by the UTHealth Houston Committee for the Protection of Human Subjects, reference number HSC-SPH-21-0978. Informed consent was obtained from all participants.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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Received: 15 December 2023 / Accepted: 12 August 2024

Published online: 02 September 2024

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