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Exploring Relationships Among Race, Mothers' Perceptions of Discrimination During Perinatal Healthcare Visits, and the Prevalence of Adverse Maternal and Neonatal Health Outcomes

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by

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Abstract

The institutionalized marginalization of the Black, Indigenous, and People of Color (BIPOC) population is not an uncommon theme throughout American history. Although a majority of American society actively refers to racial discrimination in the past tense, recent events such as the Black Lives Matter movement demonstrates that countless biases based solely on skin complexion are still ingrained into the minds of many. Due to the pervasiveness of implicit biases, American healthcare professionals are also subject to believing and acting upon these biases, either consciously or subconsciously, which could directly affect the quality of care that their BIPOC patients receive.

A literature review revealed racial disparities within the maternal health specialty. Many BIPOC mothers experienced dismissive or presumptive attitudes from healthcare professionals, who themselves were unaware of these attitudes toward their patients (Abbyad & Robertson, 2011). BIPOC mothers also perceived that healthcare providers appear to subliminally withhold information that undermines their right to body autonomy (Altman et al., 2019).

This research aims to explore relationships among race, instances of negative experiences in healthcare during the perinatal period, and prevalence of adverse maternal and neonatal health outcomes. A descriptive correlational study is being conducted with approximately 70 mothers who have given birth in the United States within the past 10 years. The survey will measure perceptions of discrimination during the perinatal period and selected adverse perinatal outcomes (preterm birth and/or preeclampsia). ANOVA tests will be conducted to determine if significant correlations exist. Results from this study will contribute to the existing body of research by furthering our understanding on how race influences the health outcomes of the BIPOC population, specifically within the maternal health sector. Expected results include significant

correlations among BIPOC populations, higher instances of negative experiences in healthcare, and increased prevalence of preterm birth and preeclampsia.

Keywords: race, racial disparities, adverse health outcomes, perceptions, discrimination, healthcare, implicit, biases, BIPOC

Table of Contents

Introduction

Throughout the last several decades, systemic racial disparities that affect people of color within the United States have been slowly uncovered. Injustices within the education system, the justice system, as well as within the workforce have been a part of many conversations regarding race and the unfair advantage that the White population holds over the American minority population. For many of the 76.3% of White individuals that live in the United States (United States Census Bureau, 2019), they are unaware of the privileges that they hold for having a fairer skin complexion, as they live their lives without having to fear the systems that would otherwise actively oppress them based solely on the color of their skin.

For the rest of the 23.7% of the American population who are not White, (United States Census Bureau, 2019), many of the events that have occurred throughout American history show the deep-rooted racism and White supremacy attitude that is ingrained into society, including, but not limited to, the enslaving of African Americans; the Trail of Tears; the Chinese Exclusion Act; the Japanese internment camps during World War II; and the racial discrimination against Mexicans after the Mexican-American war. It is evident that the United States has a long, deep-rooted history with racism against minorities and populations that are not White, and as a result of these racist sentiments, have created a system that will always benefit the White population, all while actively discriminating against minority populations.

Recently, we saw the second kick start of the Black Lives Matter movement in June 2020 after news of the unjust and avoidable deaths of Breonna Taylor, George Floyd, Ahmaud Arbery, and Elijah McClain, made its way into mainstream media. All four were Black Americans, and their deaths were caused by police brutality and violence, and the racial discrimination and oppression that Black individuals face within the American policing and justice system. The

existing systemic racial injustices and oppression were brought to light, and the fight for social justice and equality for these minority populations restarted. This also led to the birth of the umbrella term BIPOC, or Black, Indigenous, and People of Color, to describe all minority populations. The term BIPOC highlights the Black and Indigenous populations as they have been at the forefront of targeted discrimination and oppression the longest out of all minority populations, yet they are still experiencing the same, repeated discrimination today. The term BIPOC will be used for the remainder of this thesis.

With everything in mind, one is led to wonder if and how race plays a role within the American healthcare system. The role of any healthcare system is to provide medical care to every individual that is seeking or requiring care. However, the healthcare professionals that are providing care are only human, so personal beliefs will naturally be carried into the workplace, including any potential biases against certain populations. This would only be a problem when a provider acts differently based on these biases, and although it would be much easier to assume that all providers are impartial, it is incredibly difficult to know for sure because many of these biases are inherent. Any differences in care, no matter how minor, can be detrimental to a patient's health outcomes, as it can result in negligence, or a lapse of judgement that results in medical errors. Especially in a specialty that cares for vulnerable populations, such as geriatrics, psychiatric, pediatrics, and obstetrics, even the most minor difference in care can be critical.

The maternal mortality rate within the United States in 2018 was sitting at 17.8 deaths per 100,000 live births, which is the highest compared to 10 other developed countries in the world, (Tikkanen et al., 2020). Among these high maternal mortality rates, mothers who are "Black, American Indian, and Alaska Native (AI/AN) are two to three times more likely to die from pregnancy-related causes than white women," (Center for Disease Control and Prevention,

2019). With this information, one is led to assume that race plays a role in the disparity between the maternal death rates of BIPOC mothers and White mothers. Along that same line, existing research concluded that BIPOC women are taken less seriously than White women in their healthcare visits during pregnancy, (Altman, 2019). Taking all of this into consideration, it is imperative that further research is conducted to investigate the possible correlation between one's race and their overall health outcomes.

Literature Review

The objective of this literature review is to explore current published research on the topics of race and general health outcomes. The goal of reviewing the current literature is to discover if a correlation exists between race and health outcomes, as well as more specifically, a correlation between race and maternal health outcomes.

The research literature was found through several searches through databases such as Google Scholar and Iceberg, which was accessed through Dominican University of California's library network. A total of six articles were found on topics relating to the racial disparities in the United States healthcare system, as well as more specifically, racial disparities within the maternal health sector. Specific keywords, such as 'racial disparities', 'healthcare', 'adverse birth outcomes', 'pregnancy', and 'birth', were used in several different combinations to generate relevant searches in the databases. All of the articles that were reviewed and cited in this paper revolve around the main theme of racial disparities in healthcare.

The six research articles in this literature review are separated into three categories. The first category being the articles that explore the racial disparities within the United States healthcare system. The second category are articles that explore racial disparities within the maternal health specialty, for prenatal women. The last category are articles that focus on how

adverse birth outcomes disproportionately affect BIPOC populations. See Appendix A at the end of this thesis for a synopsis of each article.

Racial Disparities Within the United States Healthcare System

The United States government is privy to being systematically discriminatory towards BIPOC populations, and that holds true within the healthcare sector as well. The following two articles in this category explores the relationship between the social construct of race and how it affects the quality of healthcare that one would receive. Both of these studies are quantitative, and it paints a clear picture on the presence of the disparities that are present within the healthcare system which not only affects the quality of healthcare, but also possibly one's overall health status.

In "Using "Socially Assigned Race" to Probe White Advantages in Health Status", Jones et al. (2008) explored the correlation between looking and passing as white and having a better health status than those who do not pass as white. Data was collected through phone call questionnaires to 34,773 non-institutionalized persons aged 18 or older. The questions asked the participants what race they self-identified as, what their socially assigned race is, and what they would rate their own health status on a scale of excellent, very good, good, fair, and poor. The researchers found that those who self-identified and were socially assigned as Asian had the highest levels of excellent or very good health. This was then followed by those who were socially assigned as White, then self-identified as black but socially assigned Black; then self-identified as Hispanic and socially assigned Hispanic. The groups that self-reported the lowest levels of excellent or very good health were those who both self-identified and were socially assigned American Indian, and this was followed by those who self-identified with more than one race but were socially assigned as Black.

The resulting conclusions of this study found that the overall health status that was self-reported by the participants seem to be related to one's socially assigned race. The researchers reported, "being socially assigned as White is associated with large and statistically significant advantages in health status... the level of excellent or very good health reported by those who self-identify with a non-White group but are socially assigned as White is statistically indistinguishable from the level reported by those who both self-identify with and are socially assigned as White," (Jones et al., 2008). This is an interesting topic to explore, as skin complexion could be a possible factor in one's own perception of health status, which we can only assume stems from experiences within the healthcare sector.

The research that Kirby, Taliaferro, and Zuvekas (2006) conducted provides an improved understanding of factors that might explain racial and ethnic disparities in healthcare in "Explaining Racial and Ethnic Disparities in Health Care". Data was collected from 3 sources: the 2000 and 2001 Medical Expenditure Panel Survey (individual level), the 2000 Decennial Census (geographical location), and the Health Services Resource Administration (health care provider). This study used these three data sources to link race and health care disparities. Data from a total of 39,482 adults that were at least 18 years of age was used in a regression-based decomposition approach designed by Oaxaca and Blinder. This was used to measure access with 3 variables: having a usual source of care; being dissatisfied that their family can get the care they need; and whether individuals did not have an ambulatory care visit during the year.

This study resulted in many conclusions, but there were two specific conclusions that are directly relevant. The first being that differences between Hispanics and non-Hispanic White subjects are substantially larger than those between white and black subjects, and the second being that Mexican subjects are much more likely to not have insurance compared to white

subjects, but even when that is controlled for, there are still substantial racial and ethnic disparities in access to health care, (Kirby et al., 2006). The conclusions of this study uncover some of the existing incongruities in healthcare access that are related to racial disparities.

These two articles provide a clear framework in how race is a determinant in the quality of healthcare that you receive, and how the healthcare system actively discriminates against BIPOC populations. The research shows that race is much more prominent in the healthcare setting than we could possibly imagine. This translates well into this literature review because it is clearly probable that racial disparities can be found specifically in the maternal health unit.

Racial Disparities Within the Maternal Health Specialty, Pre-birth

In this section of the literature review, two articles that highlight racial disparities found within the maternal health specialty before birth are discussed. Since it is evident that racial disparities are present within the healthcare system as a whole, it is safe to assume that racial disparities are also found within the maternal health specialty as well. These next two articles highlight the differences in care that BIPOC women experience prenatally.

Altman et al. (2019) explored how interactions with providers were perceived and understood by pregnant women when receiving prenatal care in “Information and Power: Women of color’s experiences interacting with health care providers in pregnancy and birth”. In this qualitative cross-sectional study, 22 pregnant women who were at least 18 years old, were between one and six weeks postpartum, and identified as a person of color participated in interviews. These interviews were open-ended and semi-structured, and the women recalled their experiences when receiving care during their pregnancy. This study was based in the San Francisco Bay Area, and all the women had received care in this region.

One of the main points made in this research was that medical professionals seem to keep BIPOC women out of the loop during instances where information definitely should be shared. One participant reported that “during a postpartum hemorrhage... she received no information about what was happening to her and was treated as if she was not a person who was part of the situation and deserving of information”. Another participant shared that she was “being ignored when she wanted to know what happened during her traumatic birth experience. During an obstetric emergency in which her uterus ruptured during labor, she was rushed to a cesarean birth, and the baby was transferred to the neonatal intensive care unit at another hospital. She described pleading for information that was never disclosed,” (Altman et al., 2019). Discovering this lack of information shared with these mothers is shocking, especially when their own health as well as the health of their baby is at stake.

Another important point made is the disrespect that BIPOC mothers feel when interacting with medical professionals. One mother recounted that she felt forced into agreeing to a series of labs and tests by her doctor, even if she did not feel comfortable with some of them. She shared that, “I met with one doctor, and she actually tried forcing me to get all these tests that I wasn’t into and… some of them I just wasn’t into… I’m like… why are you… harassing me and bullying me to try to make me get that- these types of things that I don’t want,” (Altman et al., 2019). Another woman expressed how the doctor passive aggressively criticized her judgement and the decision she was making. She recalled that she, “told [the doctor] that I wanted to do a little bit more research and that I wasn’t going to get him vaccinated at that moment. And he was like, ‘well, I thought that you cared about your children. But if that’s not the case, then feel free to go,’” (Altman et al. 2019). These experiences that these two participants shared is shocking,

and no healthcare professional should make women feel pressured about the decisions they make for themselves and their child.

In “African American Women’s Preparation for Childbirth from the Perspective of African American Health-Care Providers”, researchers Abbyad and Robertson (2011) set out to identify the ways in which African American women prepare for childbirth. However, in addition, they also got insight on the experiences that African American women go through during pregnancy and birth. Since Abbyad is a women’s health nurse practitioner, she noticed that Black women have different prenatal experiences than White women do, so she wanted to explore what the differences are. Abbyad and Robertson took a qualitative approach with this study, and held a focus group with 12 African American mothers who also worked in the healthcare industry, and specifically in maternal health. A total of eight questions were asked.

One woman shared an incredibly eye-opening experience in how the healthcare workers she worked with were unresponsive to their needs. She shared, “I went to see my doctor… before I got ready to have a baby, which I thought was one baby… their dad was a twin. And I said, ‘Well, am I having twins?’ [The doctor] was like ‘No, you’re not. I’ve had three patients who were pregnant with having twins and you’re not one of them.’... I didn’t know I was having twins until I delivered [my first] baby,” (Abbyad & Robertson, 2011). Another participant shared, “I think a lot of it is kind of based on what they told you on your education level. If they feel like you’re not intelligent, if you’re not going to ask questions, they’re not going to tell you a whole lot,” (Abbyad & Robertson, 2011). One would expect that healthcare professionals would treat each of their patients the same, if not very similarly, but it is clear that there are still some subconscious biases present in the industry today.

The two articles that were just discussed offer some valuable insight on how BIPOC women are treated differently prenatally than their White counterparts within the maternal health field. These experiences are incredibly appalling to read about, so one can only imagine how it feels to be on the directed end of the disrespect and disregard. This goes to show that the quality of healthcare that pregnant BIPOC women experience is inconsistent with our expectations of how pregnant women should be treated. This then raises the question of how birth outcomes are affected by racial disparities.

Adverse Birth Outcomes Disproportionately Affect BIPOC Populations

This final section of the literature review focuses on how BIPOC populations are more likely to experience adverse birth outcomes than the White population. As the last section suggests, racial disparities are found in the maternal health specialty, so it is quite logical to suspect that those disparities can possibly impact birth outcomes in the pregnancies of BIPOC women.

Grobman et al. published the study on "Racial Disparities in Adverse Pregnancy Outcomes and Psychosocial Stress" after assessing the relationship between self-reported psychosocial stress and preterm birth, hypertensive disease of pregnancy, and small for gestational age birth, in order to explore the correlation with racial and ethnic disparities in adverse birth outcomes. This prospective observational study included 10,038 women who had a viable singleton gestation, with no previous pregnancy that lasted more than 20 weeks of gestation, and were between 6-14 weeks of gestation.

The primary important finding from this study was the vast difference in the frequency of adverse birth outcomes in BIPOC women when compared to their White counterparts. The results showed how "all adverse pregnancy outcomes were the most common among non-

Hispanic Black women, and who were significantly more likely to experience these outcomes compared to non-Hispanic White women," (Grobman et al., 2018). The second conclusion is just as important, where Grobman et al. discovered that, "all groups [non-Hispanic Black, Hispanic, Asian, and other] were more likely to have a small-for-gestational-age birth than non-Hispanic White women," (Grobman et al., 2018). It is safe to conclude that the listed adverse birth outcomes affect the BIPOC population much more than the non-Hispanic White population.

Braveman and colleagues aimed to use two socioeconomic status (SES) indicators-education and income, to study the racial and ethnic disparities in low birthweight, delayed prenatal care, unintended pregnancy, and breastfeeding intentions in their research article "Measuring socioeconomic status/position in studies of racial/ethnic disparities: maternal and infant health." Using the data they collected through structured face-to-face interviews, and by matching birth certificate data to data from the Access to Maternity Care study, Braveman et al. were able to examine the correlations among measures of education and income at individual or household levels. This study included 10,165 women from 19 California hospitals who were able to speak and understand English or Spanish.

This study concluded that at least one measure of each SES indicator was significantly associated with each health indicator. It was found that, "lower levels of education and income were positively associated with low birth weight, delayed prenatal care, unintended pregnancy, and lack of intentions to breastfeed," (Braveman, Cubbin, Marchi, Egerter, & Chavez, 2001). Another interesting conclusion made was that, "delayed prenatal care was strongly associated with SES, but more for income than education," (Braveman et al. 2001). Further analysis of this study proves that even though education and income are not the most telling indicators of socioeconomic status, a correlation was still found between low SES and adverse birth outcomes.

This third section of the literature review investigated the relationship between racial and ethnic disparities and unfavorable birth outcomes. We are provided with a glimpse in how certain adverse health outcomes for a newborn are relative to racial and ethnic factors that are beyond biological, but rather include societal and environmental implications as well. With this information, we are able to further conclude that many adverse birth outcomes can be linked to the differential treatment of the BIPOC populations in our society compared to the White population, and there is a fairly clear racial advantage amongst the White population.

Discussion of the Literature

These six articles altogether lead us to the conclusion that racial disparities exist in both the healthcare system as a whole, but also within the maternal health unit as well. Overall, the strengths of all the studies include that there was a wide range of ethnic and racial diversity within each study mentioned, as well as recognizing that race is a social construct, and that further research is needed in order to draw more specific conclusions. All of the research articles identified how studies pertaining to race and ethnicity are very limited within the scope of healthcare. Limitations of these studies include that they are mostly limited to one geographical location, so the results may not be applicable to the entirety of the United States; most are also retrospective studies, so there could be some recall biases and inaccuracies; and smaller sample sizes for each racial/ethnic population compared to the non-Hispanic white population. All of the research articles, but specifically the evidence presented by Abbyad and Robertson, along with Altman et al. and Grobman et al., serves as a baseline in knowing that there is a connection between racial disparities and maternal and birth outcomes. Based on the information that was gathered, there is evidence that it is worthy to further investigate the relationship between race

and birth outcomes. We have yet to find an association with BIPOC women's experiences with pregnancy and birth and how that may affect the health outcomes of their newborns.

Research Study

Research Question

It is clear that race and racial disparities are still a contributing factor into many different facets within American society today. However, it is still unclear just how expansive the role race plays within any BIPOC individual's life because these biases are oftentimes inherent, so there is not just one definitive way to measure these racial outcomes. This also makes it difficult to study the role race plays within the healthcare setting. This research study is an attempt to explore the relationships that may be present among race, BIPOC mothers' experiences with pregnancy and childbirth, and adverse maternal and neonatal health outcomes. This study will specifically explore the correlations among race, mothers' perceptions of discrimination during perinatal healthcare visits, and two adverse obstetric complications: preeclampsia and preterm birth.

Definitions

Preeclampsia is a pregnancy complication and disorder that is characterized by maternal high blood pressure and protein found in the mother's urine. The high blood pressure can result in seizures, or eclampsia, and it can be fatal for both the mother and the baby. Preterm birth is defined as giving birth prior to 37 weeks gestation. Babies who are born prematurely are not fully developed, and will need intensive care to aid their transition into extrauterine life. The perinatal period is the time frame spanning from pregnancy, through delivery, and the immediate postpartum period.

Theoretical Framework

Dr. Robert R. Carkhuff has been a practicing clinical psychologist who is most well-known in the nursing world for his helping and human relationships theory. From Amherst, Massachusetts, Dr. Carkhuff has published over 44 books and 5,000 articles and counting. His publications and methods have contributed greatly to many professions and individuals no matter their background. Dr. Carkhuff has researched in-depth about the relationships between clients and the psychologists, which then lead to his creation of a process that is most well-known as the Carkhuff method, (Biography of Robert R. Carkhuff, n.d.).

A theoretical framework that best presents the science behind maternal health patients and their experiences with their healthcare was developed by Dr. Carkhuff. He has presented several stages of the helper/helpee relationship that would be the most efficient and effective in developing a good relationship with your clients. The stages include attending, responding, personalizing, confrontation abilities, immediacy and local knowledge, agreeing on a pathway to obtain that which is needed by the helpee, responding skills, and initiating skills. These stages help build the trust needed in a relationship that one will have with their client so the best possible outcome will follow. Dr. Carkhuff's contributions to nursing theory includes the necessary skills one needs in order to be a successful "helper", and in this case, the nurse. These skills are accurate empathy, genuine respect, concreteness, self-disclosure, confrontation, and immediacy, (Biography of Robert R. Carkhuff, n.d.). With this theoretical framework, we are able to pinpoint the areas in which the healthcare professionals are lacking in their relationships and communication with clients which can then affect the clients' health outcomes. Discrimination can be considered as a lack of genuine respect, which is one of the skills needed in order to foster a successful relationship with patients and clients.

Methods

This was a cross-sectional, descriptive correlational study that explored for any possible relationship between race, mothers' perceptions of discrimination during perinatal healthcare visits, and the prevalence of preeclampsia and preterm birth. The target population were mothers who have given birth in the United States within the last 10 years. Participants were solicited through the sharing of the study via the researcher's social media platforms, including Facebook, Instagram, Twitter, and LinkedIn. The researcher's social media following were mostly young adults between the ages of 18-25, many of whom have not yet given birth, so the social media post included a request for the followers to share the research study link with anyone who would be interested and eligible to participate. Participants were recruited through convenience and snowball sampling.

Instrument

This research study was a 12-item questionnaire, and it is comprised of four sections. The first section was the letter of introduction that explained the rights of the participants, and how participation is completely voluntary. The second section asked for demographic information, including what race the participant identifies as; what year they most recently gave birth; and what state they most recently gave birth in.

The third section was the Everyday Discrimination Scale, created by Dr. David R. Williams, that was adapted for healthcare. This scale was selected in order to measure the amount of perceived discrimination that was experienced by the participant. There were a total of seven questions that followed the overarching prompt: "In your day-to-day life, how often do any of the following things happen to you?". The first three questions assessed for overall perceptions of discrimination:

1. You are treated with less courtesy than other people are.
2. You are treated with less respect than other people are.
3. You receive poorer service than others.

The next four questions assessed for perceptions of discrimination within the healthcare setting:

1. A doctor or nurse acts if he or she thinks you are not smart.
2. A doctor or nurse acts if he or she is afraid of you.
3. A doctor or nurse acts if he or she is better than you.
4. You feel like a doctor or nurse is not listening to what you are saying.

The answer responses available were on a scale of never, a few times a year, a few times a month, a few times a week, and almost every day.

The last section included two questions regarding the adverse health outcomes. The questions in this section asked whether the mother was diagnosed with preeclampsia during pregnancy, and whether their child was born preterm. The available answer choices were either yes or no.

Ethical Considerations

Those who chose to participate in this research study were informed of how their personal information will be kept anonymous and confidential before they started the survey, and that by continuing, the participant consented to the study. The results shared from this study are not traceable back to the participants, and only the researcher and Dr. Kathleen Beebe had access to and has seen the data. None of the questions were required to be answered before continuing on to account for the participants who did not feel comfortable with answering the questions, and participants were informed that they were free to withdraw participation at any time. Participants

were also directed to their primary healthcare providers for counseling services options should they experience any emotional discomfort.

Procedure

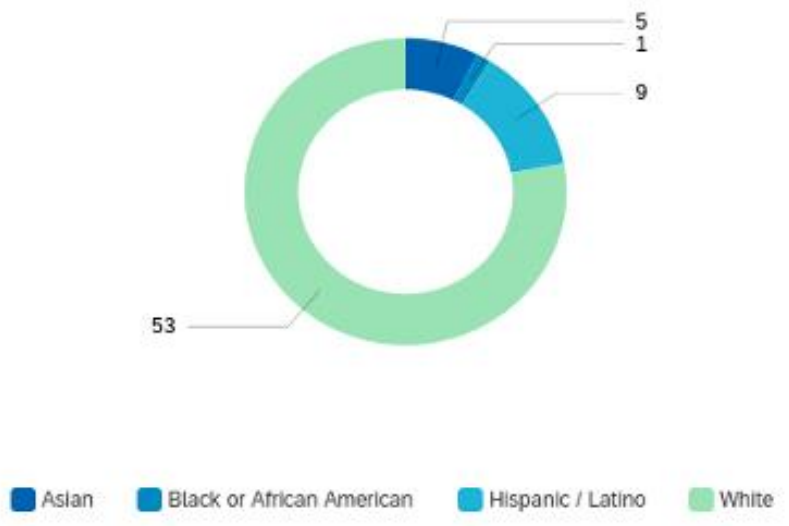
Once approval was received from Dominican University of California's Institutional Review Board (IRB Application #10962), the survey was created through Qualtrics, a research software system. Qualtrics was selected because of the ability for the participants' identity and responses to remain completely confidential. The study was then shared on February 8, 2021 via the researcher's social media platforms. The study closed on March 21, 2021, and data analyses were conducted on Qualtrics to interpret the data. This research study and the results were disseminated at the National Conference of Undergraduate Research on April 12, 2021, as well as at Dominican University of California's Creative and Scholarly Works Conference on April 21, 2021.

Findings

Demographics

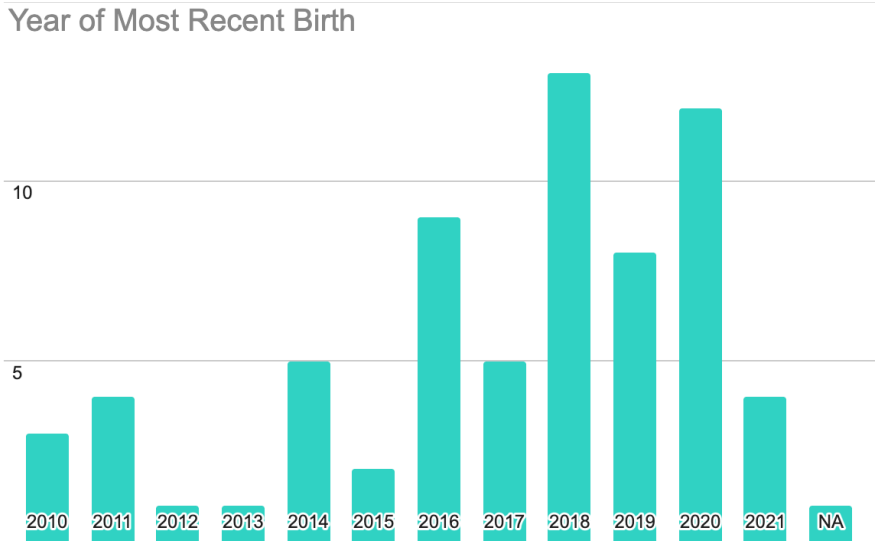
There were a total of 68 participants, and the racial breakdown is as follows: 9 Hispanic/Latino, 5 Asian, 1 Black or African American, 53 White, and 1 did not answer, (Figure 1). For the year that the participants most recently gave birth in, each year from 2010-2021 had at least one response. The top three years were 2018 with 13 responses, 2020 with 12 responses, and 2016 with 9 responses. There was one participant that did not answer, (Figure 2). For the state in which the mothers most recently gave birth in, responses were received from 11 different states, with the most responses from Colorado with 46, and California followed with 10 responses. There were 3 participants that did not answer, (Figure 3).

Figure 1



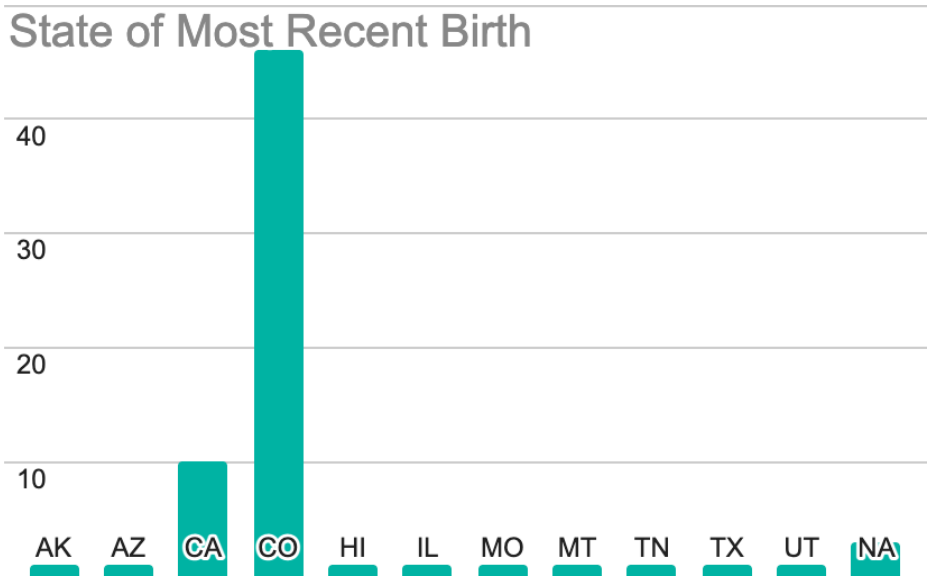
Racial breakdown of all 68 participants

Figure 2



Distribution of the years that the participants most recently gave birth in.

Figure 3



Distribution of the states that the participants most recently gave birth in.

Analyses

A Chi-Square test was performed to find a correlation between race and incidence of preterm birth, and race and the incidence of preeclampsia, (Tables 1 and 2). The results from both of these tests showed no statistically significant findings. Another Chi-Square test was conducted to find a correlation between the responses to how often "a doctor or nurse acts if he or she thinks you are not smart" and the incidence of preterm birth, (Table 3). A statistically significant correlation was found.

An ANOVA test was performed to find a correlation between race and the Total Discrimination Score, and a statistically significant correlation was found, (Table 4). The Total Discrimination Score was calculated by assigning a numerical value to each of the answer options for the Everyday Discrimiantion Scale, then totaling the scores for each of the participant. The higher the score, the more discrimination that the participant perceived on experiencing. The lowest score possible is zero, and the highest score possible is 35.

Table 1

P-Value	0.671
Effect Size (Cramér's V)	0.151
Sample Size	68

Chi Square	1.55
Degrees of Freedom	3

Chi-Squared test conducted to find correlations between race and the incidence of preterm birth. The P-value is greater than 0.05, so there are no statistically significant findings.

Table 2

P-Value	0.217
Effect Size (Cramér's V)	0.256
Sample Size	68

Chi Square	4.45
Degrees of Freedom	3

Chi-Squared test conducted to find correlations between race and the incidence preterm birth. The P-value is greater than 0.05, so there are no statistically significant findings.

Table 3

Chi-Squared Test

	Basic	Advanced
Statistical Significance (P-Value)	Very clearly significant	0.0109
Effect Size (Cramér's V)	Medium	0.405
Sample Size		68

Chi-Squared Results

Chi Square	11.2
Degrees of Freedom	3

Chi-square test conducted to find correlations between "a doctor or nurse acts if he or she thinks you are not smart" and the incidence of preterm birth. The P-value is less than 0.05, which means the findings are statistically significant.

Table 4

P-Value	0.013
Effect Size (Cohen's f)	0.373

ANOVA test was conducted to correlate race and Total Discrimination Score. The P-value is less than 0.05, so the findings are statistically significant.

Discussion

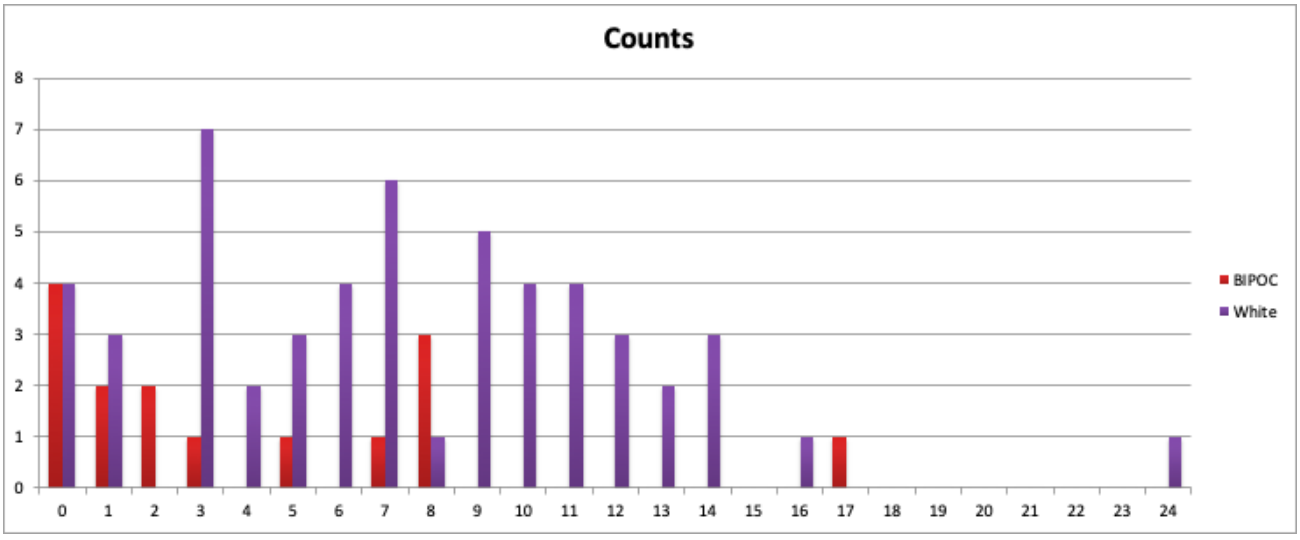
Conclusions

The data concluded that there were no significant findings on BIPOC mothers perceiving to experience more discrimination than White mothers. No statistically significant findings were also found on BIPOC mothers having a higher incidence rate of preeclampsia and/or preterm birth. However, just because this research study was unable to find a significant correlation between race and adverse health outcomes and race and perceptions of discrimination during perinatal healthcare visits, that it does not mean racial disparities in healthcare within the maternal health sector do not exist. It merely means that under these specific circumstances for this research study, a correlation was not found, but under different circumstances in another research study performed in the future, a significant correlation can very possibly be found.

Interestingly, White mothers reported more frequent instances of everyday discrimination compared to the BIPOC mothers, (Graph 1). This was a surprising and unexpected finding, as it was expected that the BIPOC mothers would report more perceived discrimination on a daily basis. We live in a very Eurocentric society, and so one would expect those with more Eurocentric features, such as fair skin and light-colored eyes, to experience the least amount of discrimination- if any. Especially in the history of the United States, where BIPOC populations have been at the brunt end of discrimination caused by White populations, it is uncommon to hear of the White population being actively discriminated against. This is by no means minimizing the experiences of the participants and their perceptions of everyday discrimination, but rather it raises an interesting, unexpected point. As a result, it would be worth looking into why White mothers perceive such high instances of discrimination, and there could possibly be a correlation to the prevalence of adverse birth outcomes in the White population.

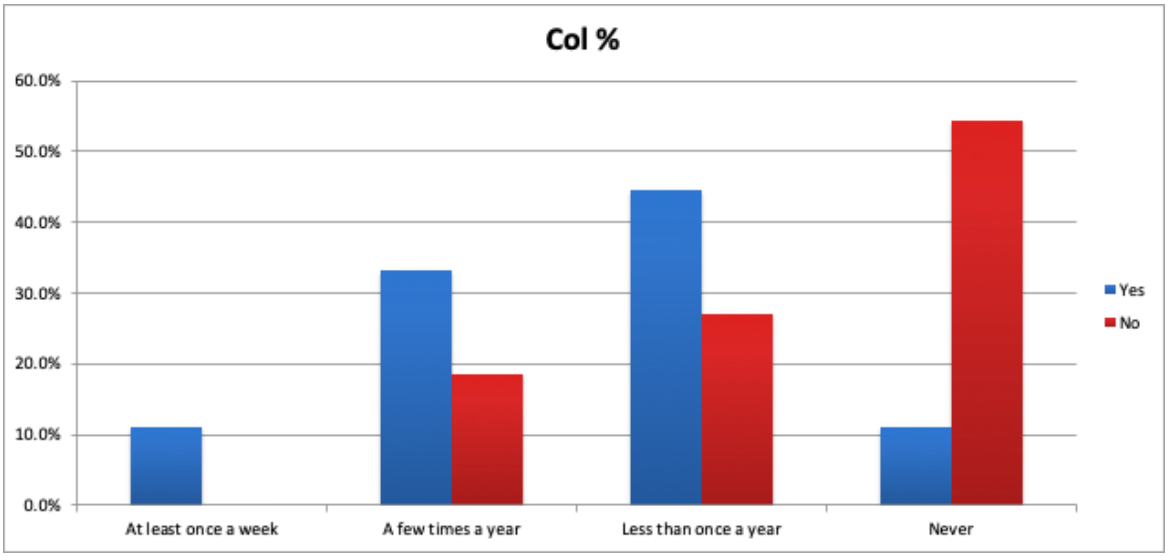
There was a statistically significant finding on the participant's perception of their healthcare providers viewing them as not smart, and the incidence of preterm birth (Graph 2). This was also an unexpected finding, but now looking at how those two variables can be connected, it makes sense and it raises an important point. If mothers feel like they are being judged by their healthcare providers for not being smart, they could possibly feel less inclined and are less likely to ask questions to avoid feeling judged any further. This could also potentially cause mothers to feel less inclined to seek medical care for any concerns that they may have to avoid judgement. As a result, it could play a role in a higher incidence of preterm birth in mothers who believe that their healthcare providers think that they are not smart. There could be a number of reasons why this finding is statistically significant, and it would be wise to further investigate on how healthcare providers act and communicate with their patients can directly impact their health outcomes, even if the communication is nonverbal.

Graph 1



Distribution of the Total Discrimination Score. The purple bars represent responses from the White participants, and the red bars represent responses from all BIPOC participants grouped together (Asian, Black/African American, and Hispanic/Latino).

Graph 2



How often "a doctor or nurse acts if he or she thinks you are not smart" and whether the participant gave birth preterm (<37 weeks gestation).

Strengths

A strength of this study is the large sample size. 20-30 responses were expected at most, and there were a total of 68 participants. Of those 68 participants, there was a large sample size of White participants, which is a very strong sample for one racial demographic. There were also responses from a number of states, and even though there were mostly responses from Colorado and California, this shows the extensive reach and the potential that social media platforms have. Sharing through social media platforms can generate responses from individuals who would otherwise not participate as a result of physical distancing limitations.

Limitations

A limitation of this study includes the BIPOC sample population. There was quite a small sample of BIPOC participants compared to White participants- especially Black or African American, where there was only one participant. As a result, the correlations regarding race were not statistically significant, especially for the main relationships that were being explored with

the BIPOC population. Another limitation is that it is unknown on what exactly caused the reports of perceived discrimination, as it could be a variety of factors such as gender, religious affiliation, or physical appearances, for example. This could have had an impact on the results of the research as it may not be necessarily discrimination based on race. Lastly, for the responses on the amount of perceived discrimination from a healthcare provider that was reported, it is unknown on what the race of the participants' healthcare provider was. If the participant's healthcare provider was not the same race as the participant, it may have impacted their perception of discrimination that was experienced as compared to having a healthcare provider who was the same race as them.

Further Research

Based on the results of this study, further research should definitely be conducted. Future research studies should be performed with a more racially diverse and representative sample of the American population. This is especially important for BIPOC populations in areas that are not as racially diverse, as there may be higher and more frequent reports of discrimination in those communities. It would be interesting to see if there are any correlations amongst race, socioeconomic status, and adverse obstetric outcomes, as race and socioeconomic status are social determinants of health. In future research, using a different instrument rather than the Everyday Discrimination Scale may also provide different results and conclusions. Hopefully once further research is performed, we are able to use the data in order to improve the overall quality of patient care in the American healthcare system, and possibly the healthcare system itself as well.

Implications for Nursing Practice

The topic of race and racial disparities in healthcare is especially important today. With the increased incidence of racially charged hate crimes and the racial injustices that are reported in the media, it is quite clear that racial biases and prejudices are still present today. Especially in healthcare, where many of the patients and clients are in an incredibly vulnerable state, we cannot let implicit racial biases be a cause of possible negligence that can impact a patient's health outcomes. Our goal as healthcare professionals is to *improve* health outcomes, not to worsen them. If future studies are conducted and they provide evidence of a correlation between BIPOC populations and adverse health outcomes, it will pave a path for some necessary self-reflection amongst all healthcare providers, specifically on the implicit biases that they may carry with them into the workplace. As a result of this self-reflection and accountability, we may be able to see an eventual increase in the quality of care that healthcare providers provide for their BIPOC patients, thereby improving health outcomes in BIPOC populations. Hopefully, the findings from this research study and future studies regarding racial disparities in healthcare can be used to positively influence a new generation of healthcare professionals that provide excellent and equal care to *all* patients regardless of the color of their skin, their background, and who they identify as.

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