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## How Implicit Bias Contributes to Racial Disparities in Maternal Health

Michaela Saintil

*University of Central Florida*



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How Implicit Bias Contributes To  
Racial Disparities In Maternal Health

by

MICHAELLA SAINTIL  
B.S. University of Central Florida, 2022

A thesis submitted in fulfillment of the requirements for the  
Honors in the Major Program in Sociology in the College of Sciences  
and in the Burnett Honors College  
at the University of Central Florida  
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## ABSTRACT

A rise in racial disparities in maternal health has become an ongoing issue in the United States. This study uses a scoping literature review method to examine the effect of implicit bias on racial disparities in maternal healthcare. Multiple articles in this study provide sufficient evidence to prove that implicit bias is a contributing factor to the alarming rise of racial disparities in maternal health outcomes. The study revealed two distinct categories that elaborate on the health crisis that has been a continuation of practices traced back to slavery. The analysis for this research is grounded in lack of quality care and socioeconomic factors. The thesis demonstrates the underlying issues in maternity care. Black women are the core group represented in this research because of an increase in premature births, maternal mortality, and morbidity rates. Prevention strategies are elaborated in the study to reduce racial inequality.

## Dedication

This thesis is dedicated to all the mothers whose voices have been unheard.

I hear you and I see you.

## Acknowledgements

I would like to give a special thank you to my thesis chair, Dr. Shannon Carter, who has been an amazing mentor and advisor. This journey was not easy, but your guidance was integral to the completion of my thesis. Thank you for not giving up on me and agreeing to be my thesis chair. I would like to also show appreciation to my committee, Dr. Nessette Falu, who has provided me with resources and recommendations that were integral to my research. Lastly, I would like to thank my loved ones who have pushed and encouraged me to start my thesis. This was an unfamiliar experience for me, but I am grateful for everyone that guided me to the completion of my thesis.

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## CHAPTER ONE: INTRODUCTION

Implicit bias among healthcare providers is the result of stereotypes towards different groups of people. Implicit bias also known as unconscious bias is an unconscious attitude and stereotype that can manifest in the criminal justice system, workplace, healthcare system etc. (Ruhl, 2020) It has negatively impacted women of color over the years with increased risks of maternal mortality. Pregnant Black women in the United States experience medical encounters today that are similar to the racist medical practices that occurred since the 1700s. This study focuses on how implicit bias contributes to racial disparities in maternal mortality and morbidity. Racial disparities in medical care highlight the damaging effect that implicit bias has on pregnant women of color. The CDC article, “Maternal Mortality Rates in the United States, 2019” shows that there is a higher rate of maternal mortality with black women than any other group. In 2019, the maternal mortality rate for non-Hispanic Black women were 44.0 deaths per 100,000 live births, 2.5 times the rate for non-Hispanic White women (17.9) and 3.5 times the rate for Hispanic women (12.6) (Hoyert, 2019).

Black women’s high rate of maternal mortality is often seen as the women’s personal failure. To understand how implicit bias has perpetuated through the medical field, it is important to first understand how racism has operated and continues to operate in society. Systemic discrimination is usually supported by implicit bias based on negative stereotypes. There can be multiple reasons why this has occurred. For example, socioeconomic status, race, access to health insurance and more. This study will analyze how implicit bias has prevented many people from different racial/ethnic groups from having opportunities for

maternal health. Decades of ongoing research has concluded that the U.S. healthcare system involves implicit bias and the negative effects towards racial groups (CDC, 2020).

When discussing the results of why the maternal mortality rates for Black women are astonishingly high, common misunderstandings can be brought up. Some individuals tend to believe the higher rates of maternal mortality is not a race issue but an individual issue. According to the article, "Maternal Mortality and Public Health Programs: Evidence from Florida," evidence suggests when Black women's concerns are met regarding their maternal health, spending on pregnancy-related public health programs leads to statistically significant reductions in Black maternal mortality and the black-white maternal mortality gap in Florida. Specifically, a 10% increase in program spending led to a 13.5% decline in the MMR among black mothers and a 20.0% reduction in black-white disparities (Bernet et al, 2020). Over the decades, research has completely debunked the theory that rise of maternal mortality has to be a personal issue and has provided plausible facts which are consistent with the current study being conducted. The purpose of this study is to investigate the relationship between implicit bias and maternal health outcomes. The approach that will be used is a scoping literature review.



## CHAPTER TWO: LITERATURE REVIEW

### Definitions/Perspectives of Implicit Bias

Before discussing the impact that implicit bias contributes to the medical field, understanding what implicit bias is must come first. Implicit bias develops at an early stage of life. It is associated with ignorance, and it leads to a negative stereotype of a person on the sole basis of characteristics such as race or gender (Brownstein, 2016). The term ‘bias’ is commonly used to refer to both stereotypes and prejudices. Implicit biases occur between group category attributes, such as being Black, and a negative evaluation (implicit prejudice) or another category attribute, such as being violent (implicit stereotype) (Brownstein, 2016). Not only does implicit bias affect judgement but also non-verbal behavior towards other people. In Chloe FitzGerald and Samia Hurst’s article “Implicit Bias in Healthcare Professionals: A Systematic Review”, the authors found evidence of implicit bias in healthcare professionals. The article goes in depth between the correlation of implicit bias and lower quality care.

Physicians play an instrumental role in a patient’s health. They can ultimately perpetuate healthcare disparities. In a study of patient and physician communication, Cooper et al (2017) found that physicians’ implicit pro-white bias correlated with black patients’ perceptions of poorer communication and lower quality care. The article summarizes the correlation between physicians’ implicit bias with patients’ experiences. This can give an insight into how low-quality care can lead to high rates of mortality.

The effects of implicit bias on medical diagnosis can have a severe impact on patients. In the article “Physicians and Implicit Bias,” Chapman et. al (2013) found that physicians make life altering decisions that divide patients with similar cases by race or

ethnicity. The racial/ethnic group that has been most likely to be misdiagnosed are Black women. This research suggests that medical decision-making made by doctors due to implicit bias may ultimately perpetuate healthcare disparities.

### Racial Disparities in Healthcare

Implicit bias is a compounding factor in why there is a gap of racial disparities in Healthcare. Longstanding disparities in healthcare for people of color especially Black women, have been overlooked for years. Despite continuous advancements in medicine, maternal mortality has increased in the U.S. (Gopal et al, 2019) Due to a multitude of variations in data collection, it is possible to determine that the maternal mortality rate is much higher. Approximately 700 women die in the U.S. Each year because of pregnancy complications. (Peterson et al, 2019) The article "Racial Disparities in Maternal and Infant Health: An Overview" acknowledges that Black and Asian Women have higher rates of pregnancy-related deaths compared to White Women. (Artiga et al, 2020) This finding can prompt efforts from physicians to become more informed and address implicit bias.

Wide disparities in maternal mortality exist between women of different racial groups. The disparities come from the effects of access to healthcare and the quality of it. The article "Racial Disparities in Reproductive Health Outcomes" explores the root of obstetric disparities in healthcare. Racial disparities contribute to high rates of maternal mortality and reflect poorly on physicians.

## Implicit Bias and Maternal Health

Implicit bias has a confounding effect on maternal health. There is a strong correlation between low quality of care in maternal health and implicit bias. (Saluja et. Al, 2021) Medical professionals are trained to treat patients of all racial/ethnic groups with equal treatment. That is not the case for all physicians since racial disparities are still prevalent in healthcare. In the article “How Implicit Bias Contributes to Racial Disparities in Maternal Morbidity and Mortality in the United States,” Saluja et. al (2021) discuss how physicians hold false beliefs about biological differences between Black and White individuals that increase implicit bias. These beliefs include ideas that Black people have stronger bones, thicker skin, and less sensitive nerve endings. These stereotypes can be one of the reasons that Black women have a higher maternal mortality rate than other racial/ethnic groups. The stereotypes can perpetuate a disadvantage and increase in maternal mortality rate because of the false narrative that Black women are less sensitive to pain.

A healthcare provider’s clinical-decision making can be one of the reasons why the maternal mortality rate is so high among minority women. The article “Implicit Bias: What every pediatrician should know about the Effect of Bias on Health and Future Directions” goes in depth on how implicit bias is a prevalence of drastic obstetric outcomes. According to Schnierle et al (2019), “much of the focus in current implicit bias literature is documenting bias in healthcare settings, but further provider-based intervention studies are necessary to demonstrate how clinicians can address implicit biases in efforts to improve patient care.” Being educated about implicit bias can reduce the high rates of maternal mortality in minority women. By making an effort to consciously become more aware of

your actions and reflect on potential biases and replace them with positive stereotypes of racial/ethnic groups.

### Slavery and Modern-day Maternity care

Black Women's prenatal experience, pregnancy and birthing can be a continuation of practices traced back to slavery. In her book *Reproductive Injustice*, Dr. Dána-Ain Davis illustrates the alarming rates of premature births and high maternal mortality rates in Black women. In the novel, Dr. Davis interviews the mothers and their personal experiences coincides with medical practices made by physicians during slavery. According to one of the interviewees in the novel, the mother Ashley details her experience by saying "racism played a role in her care based on the way the doctors treated her as if she lacked the knowledge to understand their diagnosis on her" (Davis, p.51). Ashley's experience was similar to most of the mothers in the book and she highlights being dismissed instead of the physicians listening to her. She had to undergo a premature birth and was diagnosed with preeclampsia. During slavery, medical researchers believed Black people had a higher pain tolerance and Black women were perfect test subjects for pregnancy experiments. Fast forward to the present, similar experiences are happening, and physicians are dismissing concerns from the mothers. Since then, miscalculated errors such as neglecting to note a particular condition in the patient can thoroughly affect a Black women's life.

Black women's care is hidden by race and tense interactions with medical providers. Their symptoms are dismissed, and their pain is excruciating during pregnancy because of this stereotype that their pain tolerance is higher than their counterparts. Changes in medical practices have positioned women differently. Enslaved women's reproduction was customarily viewed as evidence of promiscuity while their White counterparts were depicted

as purity. Physicians viewed Black bodies as convenient sites for knowledge for understanding prematurity. This is where implicit bias comes into the narrative. In the article “The disturbing reason some African American patients may be underrated for pain,” Somashekhar (2016) discusses how recent studies have shown uncomfortable stereotypes about African Americans likely contribute to the problem of underestimating the pain of Black patients compared with other patients. It was also noted that physicians had difficulty empathizing with patients whose experiences differ from theirs. What better evidence of the high maternal mortality rate amongst Black women than their own words and experiences.

## CHAPTER THREE: METHODOLOGY

For this study, a scoping literature review was conducted on how implicit bias contributes to racial disparities in maternal health. The research focuses on research on Black female subjects to identify how implicit bias is a confounding factor on the increased rates of maternal mortality. The sample consisted of approximately 40 research articles on race and maternal health published between year 2015 to the year 2021. The sample was created by conducting article searches on PubMed using the search terms “implicit bias” and “maternal health.” Each article was examined to determine if it met the requirements for inclusion in the study. Inclusion in the sample was determined using a 3-question requirement. The first question is “Does the article focus on maternal health?” The second question is “Does the article focus on implicit bias?” The third question is “Does the article focus on race disparities in maternal health in the United States between Black women and women of other races/ethnicities?” Articles that were approved with a yes to all 3 questions were included in the study.

The study was a scoping literature review to examine how implicit bias contributes to racial disparities in maternal healthcare. Out of 40 articles to review only 5 met the criteria for the study. Each article was analyzed individually to determine the biases held by healthcare providers related to maternity care. Articles were also analyzed to identify how implicit bias impacts maternity care. The objective was to assess the processes through which implicit bias impacts race disparities in maternal healthcare.

## CHAPTER FOUR: FINDINGS

The data were analyzed to identify themes in the articles' explanations for race disparities in maternal health. The data revealed two distinct categories that overlapped. Black women were represented in regard to racial disparities in maternal health. Maternal health is a broad term that includes health of women during pregnancy, childbirth, and the postnatal period (Maternal Health, 2022). The first category represented Black women's concerns being dismissed. The theme identified within this category is the lack of quality care Black women received during their pregnancy checkups. This theme is prevalent because it is discussed in all 5 articles. The second category represents socioeconomic factors impacting Black women's experiences in the hospital. The theme for this category identifies the socioeconomic factors that contribute to racial disparities in maternal health outcomes. Articles in this category discussed the disadvantages that low-income mothers receive due to their economic status in society. There are distinct differences between the two categories. For example, the categories lead to different conclusions about the causes of racial disparities in maternal health and recommendations to reduce implicit bias in hospitals. The results are presented by categories to emphasize the differences in how implicit bias contributes to racial disparities in Black women.

### Category 1: Black Women's Concerns Dismissed

Articles in the first category, suggest that healthcare providers rely on stereotypes for diagnosis and treat Black women as uneducated and ignorant. In this portrayal, Black women are perceived by healthcare providers as a grouped of individuals who are incompetent when it comes to their health. Their concerns are dismissed and that results in an increased rate of premature births. "Non-Hispanic Black Women have a 2-fold greater risk for preterm birth

compared with non-Hispanic White Women” (2017, p. 1). This example illustrates the racial disparity in terms of premature birth. Manuck articulates in the article “Racial and Ethnic Differences in Pre-term Birth: A Complex, Multifactorial Problem” that preterm birth is the leading cause of mortality and morbidity among infants (Manuck, 2017). A contributing factor that explains the increased risk of premature births among Black women is psychosocial stress. The stress is portrayed as most likely related to communication with the physician and the mother.

Patient-care quality is important when it comes to treating pregnant women. Mothers should be able to trust their physicians and their diagnosis. Recent evidence indicated that a significant proportion of racial and ethnic disparities in maternal mortality and severe morbidity could be explained by differences in hospital quality (Oribhabor et al, 2020). It is important to know that the quality of medical care, especially delivery and clinical care, can lead to racial disparities. It is with great urgency that everyone receives proper medical interactions and care because it can compromise a woman’s pregnancy, labor, and birth. One article, which examined the influence of racial disparities on maternal mortality and morbidity rates among Black women in the United States illustrated a factor contributing to this statement. According to the article, “40% of participating subjects reported communication difficulties while one quarter reported bias during intrapartum hospital stay” (Oribhabor et al, 2020). It was further elaborated in the article that out of the 40% there was almost three times greater likelihood of Black women experiencing prejudice in their treatment because of race. Articles in this category report a consistent pattern that Black women experience exponentially more mortality and morbidity in maternal health outcomes compared to women of other racial groups.



Obstetric racism describes the phenomenon of racially motivated incidents from the hands of healthcare workers towards pregnant women (Davis, 2018). The articles in this category analyze the association between obstetric racism and patient care. The impact of obstetric racism increases the racial disparities in maternal health outcomes. Julian et al (2020), articulates that obstetric racism is the root cause of inequalities in maternal health outcomes. Articles in this category aim to dismantle the stereotype that Black women exaggerate their symptoms, which shifts the focus from racial identity to racism. This perspective positions that racism is a risk factor for poor patient health experiences. An intervention in the workforce can work towards a goal of racial health equity in maternal health outcomes. For example, an article in this category recommends that “public health practitioners, midwives, health system administrators, policymakers, data analysts, nurses, researchers, educators, and physicians in general and subspecialty practices are tasked with radically reimagining models of care provision, perinatal and reproductive healthcare (PRH) workforce diversification, and health systems development toward equitable social and clinical experience and outcomes” (Julian et al, 2020). This recommendation focuses on changes among healthcare providers and institutions towards reducing racial disparities among Black women in maternal health outcomes.

#### Category 2: Impact of Socioeconomic factors

In this category, the impact of socioeconomic factors are portrayed as a cause of racial disparities in maternal health outcomes. Socioeconomic factors play an important but complex role in racial disparities. The articles in this category explore the range of socioeconomic factors, including income, wealth, and education at the individual and

household levels. Socioeconomic effects on health, including maternal health outcomes contribute to the effects of stressful experiences related more directly to racial discrimination. Many studies including the article “The Color of Health,” illustrate that socioeconomic disadvantages can increase the risk of preterm birth and ultimately lead to poorer infant and developmental outcomes (Beck et al). An underlying theme is that mothers and new-born infants remain vulnerable to poor economic factors that worsen their health. The articles in this study investigate the drastic increase of racial gap between Black mothers and all other women and explore alternative interventions to decrease the rate. One of the articles in this category elaborates on a re-envisioned mission, one that elevates the importance of community well-being is likely to require the expertise that comes from purposeful community integration (Beck et al). The goal is for health-care systems to consider their role in healthcare disparities and racial inequalities in maternal health outcomes. Even though health-care systems and physicians are knowledgeable in managing medical complexity, they may not always have the expertise to manage social complexity.

Articles in this category suggest analyzing social determinants of pregnancy-related mortality and morbidities, including hospital characteristics. In particular, hospitals that serve majority Black patients versus White or Hispanic patients. By focusing on geographic location of hospitals in low-income household areas, this article illustrates that women who delivered in majority Black-serving or Hispanic-serving hospitals (> 50% or hospitals with highest quartile of proportions of minorities) had higher severe maternal morbidity rates than those in non-majority or low Black-serving or Hispanic-serving hospitals (Wang et al, 2020). Articles in this category have provided robust findings for socioeconomic factors that contribute to racial and ethnic disparities in maternal outcomes with Black women. Various

factors can account for the alarming difference on why the disparities between Black women and all other women are so high. The articles in this category share an ultimate goal to elaborate and provide evidence on the impact socioeconomic status has on maternal health outcomes. For example, an article in this category states, “Low neighborhood SES (low median household income or percentage of people living under the poverty line by zip code) has been found to be associated with higher risk or odds of severe maternal morbidity” (Wang et al, 2020, p. 8). This article attributes social class as a factor that contributes to maternal health outcomes. Like other articles in this category, studies observed differences in socioeconomic status and the effect it has on racial/ethnic groups. This construction is achieved by advocating for Black women and pointing out the disparities in maternal health outcomes while also mentioning prevention strategies that can decrease the likelihood of outcomes.

The articles in this category elaborate on two distinct prevention strategies that can reduce the effect that socioeconomic factors have on racial disparities. One of the strategies focuses on implementing policies that target health inequities through differential care based on socioeconomic status. Specifically targeting structural determinants that are rooted in a socioeconomic context (Wang et al, 2020). Healthcare providers are encouraged to advocate for social change to promote comprehensive policy change. Another prevention strategy that is mentioned in an article in this category is the healthy neighborhood, healthy families initiative. The initiative involves a hospital making direct housing interventions within a desolate neighborhood (Beck et al, 2020). Healthy neighborhood, healthy families focus on enhancing stability for hospital patients that live in poorly developed neighborhoods. Investments in clinical-community partnerships are likely to reduce racial disparities in

maternal health outcomes.

## CHAPTER FIVE: CONCLUSIONS

In this research, a scoping literature review was conducted to investigate how implicit bias contributes to racial disparities in maternal health. The data analysis produced two categories: (1) Black women's concerns being dismissed and (2) impact of socioeconomic factors playing a role in racial disparities. Articles in the first category discuss Black women and their lack of quality care in healthcare systems. In most of the maternal health research, several factors that are related to obstetric and structural racism are analyzed. Black women are the target racial group that has the worst maternal health outcomes. The articles portray racism as the cause of racial disparities in maternal health outcomes. Articles in the second category go in depth on the reasoning why low socioeconomic status is a factor in racial disparities. The articles give sufficient evidence on which socioeconomic factor is affected. All the articles in the study mention prevention to decrease the racial gap in disparities in maternal health outcomes. The articles also examine the phenomenon of oppression in healthcare systems. Articles analyzed in this study illustrate a common ground pertaining to Black women's experience with regards to pregnancy and birth. This research provides sufficient evidence to support the role implicit bias plays a role in maternal health outcomes.

Eliminating the racial gap in maternal health outcomes is earnest but will not be accomplished quickly. Prevention strategies identified in the articles have demonstrated progress in decreasing racial disparities. Healthy neighborhood, healthy families is a driven initiative, but it is most likely to be successful with keeping mission and margin-oriented goals. Another prevention strategy is to implement policies that target health inequities in contrasting care in socioeconomic status. It is important to keep in mind that not all

healthcare providers are socially aware of obstetric racism. It would be difficult to implement a policy when no one recognizes the initial problem at hand. The analysis demonstrated a clear understanding of a system of oppression in regard to the healthcare system. The articles analyzed accounted for socioeconomic inequalities but did not include information about public vs. private hospitals. It is important to know if this health crisis is happening in private hospitals as well.

A limitation that was discovered while working on the data analysis is that majority of the 40 articles that came up on PubMed search engine discussed race but rarely obstetric racism. The articles mentioned implicit bias but not obstetric racism. It is important to know the distinction between the two terms. Understanding the logistics of implicit bias can aid in understanding how institutional racism affects the health care system. Black feminist social scientists, such as Davis (Davis, 2018) and Falu (Falu, 2019) argue for an examination of obstetric racism as a way to illustrate implicit bias. Another limitation is the lack of articles mentioning educated Black women with high socioeconomic status also receiving racist outcomes in maternity care. The articles in this research elaborate on Black women with low SES status being affected by obstetric racism but lack of evidence on women with high socioeconomic status. Black women as a whole may share common treatment based on the intersection of race and gender, but who also have conflicting experiences based on status characteristics such as education and employment (Carter et al, 2021). An additional limitation is the lack of diversity in maternal health outcomes, including the type of determinants studied and exploration of potential factors that underlie the observed research. This is a critical issue and more needs to be done to expand the research and policy change to reduce rising poor maternal health outcomes among Black women.

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APPENDIX A  
TABLE OF ARTICLES

| Year | Author   | Title  | Citation   |
|------|--|--|--|
| 2017 | Tracy A Manuck   | Racial and ethnic differences in preterm birth: A complex, multifactorial problem  | Manuck TA. Racial and ethnic differences in preterm birth: A complex, multifactorial problem. <i>Semin Perinatol.</i> 2017;41(8):511-518. doi: 10.1053/j.semperi.2017.08.010   |
| 2020 | Eileen Wang, Kimberly B Glazer, Elizabeth A Howell, Teresa M Janevic                                       | Social Determinants of Pregnancy-Related Mortality and Morbidity in the United States: A Systematic Review                                     | Wang E, Glazer KB, Howell EA, Janevic TM. Social Determinants of Pregnancy-Related Mortality and Morbidity in the United States: A Systematic Review. <i>Obstet Gynecol.</i> 2020;135(4):896-915. doi:10.1097/AOG.0000000000003762   |
| 2019 | Andrew F Beck, Erika M Edwards, Jeffrey D Horbar, Elizabeth A Howell, Marie C McCormick, DeWayne M Pursley | The color of health: how racism, segregation, and inequality affect the health and well-being of preterm infants and their families            | Beck AF, Edwards EM, Horbar JD, Howell EA, McCormick MC, Pursley DM. The color of health: how racism, segregation, and inequality affect the health and well-being of preterm infants and their families. <i>Pediatr Res.</i> 2020;87(2):227-234. doi:10.1038/s41390-019-0513-6            |
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| 2020 | Zoë Julian,<br>Diana Robles,<br>Sara Whetstone,<br>Jamila B Perritt,<br>Andrea V<br>Jackson, Rachel<br>R Hardeman,<br>Karen A Scott | Community-<br>informed models<br>of perinatal and<br>reproductive<br>health services<br>provision: A<br>justice-centered<br>paradigm toward<br>equity among<br>Black birthing<br>communities | Julian Z, Robles D, Whetstone S, et al. Community-<br>informed models of perinatal and reproductive health<br>services provision: A justice-centered paradigm toward<br>equity among Black birthing communities. <i>Semin<br/>Perinatol.</i> 2020;44(5):151267. doi:<br>10.1016/j.semperi.2020.151267 |
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