2022

A Technology-Based, Mixed Methods Approach to Examining the Psychosocial Determinants of Maternal Health Disparities

Hannah M. Ming
Virginia Commonwealth University

A TECHNOLOGY-BASED, MIXED METHODS APPROACH TO EXAMINING THE PSYCHOSOCIAL DETERMINANTS OF MATERNAL HEALTH DISPARITIES

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

by

HANNAH M. MING

Master of Public Health, Virginia Commonwealth University, 2018

Bachelor of Science in Health Sciences, James Madison University, 2016

Director: Sunny Jung Kim, PhD, MS, MA

Assistant Professor, Department of Health Behavior and Policy

Virginia Commonwealth University

Richmond, Virginia

November 2022

Acknowledgements

My appreciation must be shown to the many people who granted me the necessary grace, support, and confidence I needed to successfully complete this dissertation.

First and foremost, I owe all I am to my Abba, Father, without whom I would be eternally lost and misguided. This achievement could not have been possible without His overwhelming, never-ending grace and love.

I would like to express my most profound appreciation to my advisor, committee chair, and mentor, Dr. Sunny Jung Kim, for her patience, encouragement, and feedback. Thank you for believing in my ideas and for giving me the extra nudges I needed to complete this project. I cannot thank you enough for always vocalizing your belief in my potential and capability to succeed. You have been so patient, encouraging, and supportive, especially when I was too stuck in the details to see the bigger picture. Your mentorship has been invaluable to my development as a social and behavioral scientist and I couldn't have done this without you!

This endeavor would not have been possible without the guidance and expertise of my other committee members:

Dr. Susan Bodnar-Deren — working with you will always be one of my fondest student experiences. Thank you for encouraging me to think beyond the limits of what has already been done. I am a more creative and well-rounded scholar because of you!

Dr. B. Ethan Coston — thank you for encouraging me to question everything in the pursuit of liberation. Your mentorship has made me a more reflective and intentional scholar, and your kindness has made me a better human. I value every moment that you saw me as more than what I can produce. Thank you!

Dr. Bassam Dahman — I am incredibly thankful for your analytical support and expertise. Thank you for asking the "why" questions. Your feedback has made me a better scholar.

Dr. Dina Garcia — thank you for reminding me to think about the people whose stories are represented in the details. You have genuinely helped me to think about research from a more community-based approach.

I am incredibly grateful for the generous support from the Phi Kappa Phi Honor Society, whose Graduate Student Research Grant partially funded my research.

I would like to extend my sincere thanks to my cohort mates for their support, edits, suggestions, and tireless friendship. Sharyn, thank you for always being the voice of reason and constantly reminding me that suffering is not mandatory. April, thank you for sharing your chocolate stash and persistently checking in with immeasurable encouragement and kindness. I am blessed beyond measure to have shared this experience with you both.

Thanks should also go to my classmate Viktor Clark and the research and education librarian John Cyrus for their assistance with parts of data collection and analysis.

I am also incredibly grateful to the Putting Moms First Project participants for trusting me enough to share their truths. This research would not have been possible without each of you!

Special thanks to Dr. Jeanine Guidry, who has given me limitless mentorship. Jeanine, thank you and Chris for providing a place of safety, Dutch hospitality, and sacred friendship. Thank you for teaching me the art of collaborative scholarship. Your mentorship and support have helped me grow as a researcher, and your friendship lent me the compassion I needed to grow as a person.

Special thanks also to Dr. Kellie Carlyle for her persistent guidance and mentorship. Kellie, thank you for advocating for me from day one! I would not have been in this cohort if you did not encourage me to grab the opportunity. Thank you for sharing your research connection skills and for helping me safely navigate many tough moments! Thank you for your constant support!

I would like to thank my first doctoral advisor, Dr. Maghboeba Mosavel, for her mentorship and support. I am thankful for all that you taught me about mentorship, CBPR, and collaboration.

I owe many thanks to my classmates and research friends, especially Alesha, Kofo, Megan, Kristal, Keith, Deon, and Delton! Each of you taught me something about perseverance, grace, elegance, and inner peace, and I couldn't be more thankful for you all.

To my parents — the most important mother in my life and the father who encouraged me to pursue greatness — I thank you both for raising me as Wonder Woman! Very early on, you instilled a love and appreciation for knowledge that led me to this path. I could hardly explain how much I value your support, guidance, and confidence in my abilities. Thank you for listening to every bit of jargon and little idea. Thank you for helping me be a better teacher, a better scholar, and a kinder person. How blessed I am to be loved by you!

To my brothers — the other three members of the Fantastic Four — thank you for sharing your love, teaching me humility, and cheering the loudest when I do dope things. Above all else, thank you for the eternal friendship that only siblings can share through subtle looks, quirky dances, and the exchange of random movie quotes.

Special mention to my person, Dr. Brianna Easton, who always prayed with me and believed I could do the hardest of hard things; your heart is more precious to me than any gem. Thank you!

To Zach — Thank you for reminding me that tea is not a meal and that life is more meaningful than difficult moments. Thank you for sharing Sunday morning bagels and a place of rest when I needed it. I know your side of this journey could not have been easy, so I thank you deeply!

To the best pup in the world, Rootbeer — thank you for cuddles, keeping me active, and reminding me that my computer could never love me back. You bring me so much joy.

Lastly, I'd like to acknowledge a few Black women whose lives profoundly shape me: my cousin, Marie Young; my aunts Renee and Marlene Young; my mentor, Dr. Saba Masho; and my grandmother, Clementine Ming. While they are gone, their influences breathe life into my work. These Black women taught me the grace, resilience, and perseverance needed to face the mountains. I dedicate this dissertation to each of them and the thousands of Black women who die yearly from premature deaths. Their stories matter; I am merely a vessel to hear them speak!

Table of Contents

List of Figures

List of Tables

Abstract

A TECHNOLOGY-BASED, MIXED METHODS APPROACH TO EXAMINING THE PSYCHOSOCIAL DETER-MINANTS OF MATERNAL HEALTH DISPARITIES

By Hannah M. Ming, MPH, CHES®

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2022.

Director: Sunny Jung Kim, PhD, MS, MA
Assistant Professor, Department of Health Behavior and Policy

Background: Exposure to racism and discrimination in the U.S. increases Black women's risk for experiencing maternal health disparities. Additionally, racism and discrimination affect maternal psychosocial well-being, creating evidence for a biopsychosocial relationship between racism and maternal health outcomes. However, current research does not define the psychosocial Black maternal self well. Given the dynamic relationship between racism, psychosocial well-being, and Black maternal health outcomes, research must comprehensively examine the Black maternal self. The operationalization of a comprehensive construct for Black maternal psychosocial well-being can improve understanding of the relationship between racism, psychosocial well-being, and Black maternal health outcomes.

Purpose: This dissertation presents the Black maternal self-concept as a psychosocial construct comprising Black women's perceptions and beliefs about the Black maternal self. This dissertation's objectives are to 1) define the dimensions and 2) develop a measure of the Black maternal self-concept.

Method: Through a scoping review of adult health and racism research, this dissertation used full-text analysis with 38 articles to develop a conceptual taxonomy of the general self-concept.

Using a transcendental phenomenological approach, interviews were conducted with Black women who recently gave birth in the U.S. (n =10). Thematic analysis of interview data was used to identify themes and subthemes of Black maternal self-concept development. Lastly, the Black Maternal Self-Concept Model (BMSCM) was defined, and a pool of items was generated and tested in an online survey with Black women who recently gave birth (n = 26). The pool of items was modified and disseminated through the Black Maternal Self-Concept Inventory (BMSCI) in an online survey of Black women who recently gave birth (n = 265). Item analyses were used to select the final items in the BMSCI, and factor analyses were performed to assess its dimensionality.

Results: The scoping review identified a hierarchical, multidimensional model of self-concept that includes identity, identity beliefs, and ability beliefs as primary dimensions. Interviews with Black women (n = 10) supported that Black maternal self-concept development involves assessments of Black maternal identity, identity beliefs, and ability beliefs. The BMSCM was operationalized as a hierarchical, multidimensional model comprising eight sub-dimensions across identity, identity beliefs, and ability beliefs. The 33-item BMSCI partially supports the hierarchical, multidimensional structure of the BMSCM. The BMSCI measures Black maternal identity centrality, exploration, private and public regard, advocacy self-efficacy, and role beliefs, where centrality and exploration are predicted hierarchically by Black maternal identity. No identified evidence supported identity beliefs and ability beliefs as hierarchical dimensions in the BMSCI.

Conclusions: This dissertation presents evidence that the Black maternal self-concept is a hierarchical, multidimensional model that we define through the BMSCM. Provided evidence shows that the 33-item BMSCI partially measures the dimensions of the BMSCM. Future

research suggestions and evidence are provided to support further examination of self-conceptualization as a mechanistic pathway by which exposure to racism affects the physical, mental, and psychosocial health and well-being of Black women who give birth.

CHAPTER 1

INTRODUCTION

Background

Out of eleven of the highest-income countries, the U.S. has the highest maternal mortality rate (Gunja et al., 2022). Furthermore, despite numerous calls to action to improve maternal health, U.S. maternal mortality and morbidity rates have steadily increased over the last five years (Callaghan et al., 2012; Hoyert, 2022). The effects of rising maternal morbidity are intergenerational and affect the health and well-being of thousands of women and their families yearly (Brown et al., 2020; Vogel et al., 2014). In the United States, nearly 50,000 women annually experience severe maternal morbidity (i.e., unexpected pregnancy outcomes affecting women's health, such as postpartum hemorrhage, diabetes, and hypertension), and approximately 700 women die every year due to pregnancy or its complications (Callaghan et al., 2012; Centers for Disease Control and Prevention, 2015). Moreover, the economic burden of poor maternal health is high. A recent systematic review demonstrated that the financial costs associated with maternal morbidity markers such as hypertension and poor maternal mental health were significantly higher than those associated with otherwise healthy pregnancies (Id et al., 2020). Without significant adjustments to current prevention and intervention models, maternal morbidity and mortality rates are expected to continue rising, creating worse health outcomes and a more significant economic burden on U.S. populations (Callaghan et al., 2012; Hoyert, 2022).

Maternal Health Disparities

While poor maternal health outcomes affect all of society, maternal mortality and morbidity disparately affect Black women in the U.S. Despite decades of developing innovative

maternal health interventions, Black women are still the most likely racial group in the U.S. to die a pregnancy-related death at a rate three to four times higher than the rate for white women (Howell, 2018; Hoyert, 2022). Specifically, in 2020 Black women experienced 55.3 deaths per 100,000 live births compared to 19.1 deaths and 18.2 deaths per 100,000 live births for white and Hispanic women, respectively (Hoyert, 2022). The 2020 maternal mortality rates for Black and Hispanic women were significantly higher than the 2019 rates, while rates for white women were not significantly different across the same period (Hoyert, 2022). Furthermore, compared to white women, Black women are more likely to experience maternal morbidity markers like preeclampsia and eclampsia, postpartum hemorrhage, and hypertension; these markers increase the risk for severe morbidity and mortality throughout the life course (Creanga et al., 2014; Howell, 2018).

To decrease the overall burden of disease, it is necessary to identify the key underlying contributors to maternal morbidity and mortality, especially those factors that disproportionately affect Black women. Many factors affect a woman's risk for maternal morbidity and mortality, including a patient history of perinatal obesity, hypertension, diabetes, and a family history of adverse maternal health outcomes (Brown et al., 2020; Vogel et al., 2014). Black women are also disparately affected by these determinants, which partially accounts for the increased risk of poor maternal health outcomes (Creanga et al., 2014; Howell, 2018). However, there is a dearth of research regarding how psychosocial determinants, specifically racism and discrimination, affect racial disparities in maternal health outcomes.

Racism and Maternal Health Disparities

Race is rarely a decent measure of biological or genetic differences in health outcomes (Lett et al., 2022). In research, race is often a proxy for examining a group’s social, cultural, and

structural experiences, namely, experiences with racism. However, race is not a social determinant of health but is a sociological categorization of people who may have shared cultural and lived experiences (Pérez-Stable & Rodriquez, 2020; U.S. Department of Health and Human Services, 2022; Williams et al., 2019). The better measure for predicting and understanding health disparities is racism. *Racism* is a social phenomenon in which individuals are subjected to prejudice, discrimination, or otherwise poor treatment based on their race or ethnicity. Racism is the structural and fundamental driver of racial and ethnic health disparities (Williams et al., 2019); it is the single most important psychosocial determinant that shapes physical and psychological health outcomes (Williams et al., 1997). Racism functions by socially establishing inferior and superior racial/ethnical groups, whereby the denoted inferior group is subjected to worse or unequal treatment for the benefit of the superior group (Bonilla Silva, 1997; Ford & Airhihenbuwa, 2010; Jones, 2000).

The mechanisms of racism exist across three levels: personally mediated-, internalized-, and institutional-level racism. Personally mediated racism (also called interpersonal racism) is "prejudice and discrimination, where prejudice means differential assumptions about the abilities, motives, and intentions of others according to their race, and discrimination means differential actions toward others according to their race" (Jones, 2000). Internalized racism is when members of a stigmatized race accept and internalize negative messages about their abilities and intrinsic worth (Jones, 2000). Institutionalized racism is unequal access to goods, services, and opportunities within society due to race (Jones, 2000). More recently, equity scholars have expanded institutional racism to include structural racism (also called systemic or cultural racism). Structural racism comprises the policies, histories, ideologies, and cultural

practices that perpetuate unfair and inequitable treatment of populations based on race or ethnicity (powell, 2013); it is an extension of institutional racism.

The mechanistic ways racism impacts physical health outcomes are not fully understood. Structural and institutional racism account for inequities in access to resources, care, and support that could decrease barriers and improve health for populations (Yearby et al., 2022). Outdated and inequitable healthcare policies and practices perpetuate health disparities for populations subjected to marginalization (Bailey et al., 2017; Phelan & Link, 2015; Yearby et al., 2022). Evidence also demonstrates that experiences of racism in everyday life increase the physiological stress response. Stress hormones released as part of the stress response increase inflammation, blood pressure, and general cardiovascular output (Carver & Vargas, 2011; Mariotti, 2015). Chronic exposure to stressors like racism results in a persistently elevated stress response (Clark et al., 1999; Colen et al., 2018; Mariotti, 2015; Williams et al., 1997). A chronic stress response can overload the body, leading to poor health outcomes, including heart attack, stroke, and poor behavioral, emotional, and mental health outcomes (Carver & Vargas, 2011; Clark et al., 1999; Mariotti, 2015). Stress during pregnancy increases the risk of maternal hemorrhaging, preterm birth, hypertension, maternal cardiovascular disease, diabetes, preeclampsia and eclampsia, and, ultimately, death (Riggan et al., 2020; Ross et al., 2019).

Given that it exists across varying levels, racism is also rooted deep within the healthcare structure (i.e., institutionalized or structural racism). There is a vast history of unethical and unjust research and medical practices against Black women in the U.S.; these practices have resulted in medical mistrust within the Black community and the continued perpetuation of racist beliefs about Black patients by medical providers (Hall et al., 2015; LaVeist et al., 2009). In a systematic review of studies measuring racism and implicit bias in healthcare providers, 70% of

studies conducted between 1995 and 2012 found that providers held racist beliefs about and engaged in racist practices toward patients of minority racial groups (Paradies et al., 2014). Additionally, a 2016 study demonstrated that approximately 50% of medical students endorsed false medical beliefs, including views that Black patients feel less pain (Hoffman et al., 2016). Healthcare providers with racist beliefs are more likely to provide suboptimal and poor quality healthcare resulting in misdiagnoses or failure to treat preventable causes of disease and death (Hall et al., 2015; Howell, 2018; Taylor, 2020). This poor quality of care is apparent through evidence that upwards of 50% to 60% of all maternal deaths are preventable with adequate surveillance and medical team responsiveness (Petersen et al., 2019; Zuckerwise & Lipkind, 2017). However, in 2018, the Agency for Healthcare Research and Quality reported that Black patients received worse care than white patients on 40% of quality care measures, including surveillance and responsiveness to patients' needs (Agency for Healthcare Research and Quality, 2019).

Racism and Psychosocial Well-Being

Racism is also detrimental to psychosocial health and well-being. Several studies have demonstrated that Black women experience racism and discrimination in healthcare settings in the form of suboptimal or inadequate care; these exposures result in women experiencing feelings of isolation and sentiments that their health concerns were not taken seriously by healthcare professionals and providers (Slaughter-Acey et al., 2019; Ward et al., 2013). Such experiences with racism and discrimination in maternity care are associated with poor mental health outcomes, including increased risk for anxiety, depression, medical mistrust, and poor psychosocial well-being (Hall et al., 2015; Pugh et al., 2020; Relf et al., 2019). Additionally, the cyclical effect of exposure to racism and discrimination in healthcare reinforces the presence of

medical mistrust, which results in underutilization of healthcare services and treatment, including low treatment adherence and low uptake of preventative screenings among Black patients (Brenick et al., 2017; Relf et al., 2019). Furthermore, while less likely to seek out mental healthcare services when needed, Black patients are less likely to receive adequate and sufficient mental healthcare when sought out (Williams, 2018). Additionally, internalized racism further complicates the effects of structural and personally-mediated racism. Nonwhite groups subjected to devaluation, negative stereotypes, and other racist experiences report poor psychosocial well-being outcomes, such as a higher sense of worthlessness and lower self-esteem, which are essential to developing identity perceptions and health behaviors (Kwate & Meyer, 2011; Williams, 2018).

However, it is unclear how experiences with racism in healthcare affect the psychosocial health outcomes of Black women who give birth. As outlined, exposure to racism can impact feelings of self-worth, self-esteem, and psychological well-being; yet the mechanism of this effect is not fully understood. Theories in social psychology support that a person's psychosocial well-being is impacted by personality traits and characteristics (i.e., personal identity) as well as social identity, which refers to the way individuals perceive themselves within their social groups (Epstein, 1973; Turner et al., 1994; Turner & Onorato, 1999). Social groups are constructed based on shared characteristics of individuals (such as shared race/ethnicity), which influence similar lived experiences (Ellemers & Haslam, 2012). Shared experiences, such as racism, impact individuals' perceived social identity and overall psychosocial well-being (Kwate & Meyer, 2011; Onorato & Turner, 2004). One study found that Black adults with secure social identity and positive perceptions of their social group tend to have higher self-esteem and fewer depressive symptoms (Hughes et al., 2015). However, when they internalized external racist

perceptions and negative stereotypes about the Black social group, Black adults viewed their social group less favorably, their self-esteem was lower, and they had more depressive symptoms (Hughes et al., 2015). Internalized racism additionally impacts skin-color satisfaction in Black adults, further demonstrating the impacts of racism on identity values (Maxwell et al., 2015).

Maternity and Psychosocial Well-Being

Maternity is also a social phenomenon that can result in psychosocial changes for birthing persons (Arnold-Baker, 2019; Bornemark & Smith, 2016; Rubin, 1984). Maternity broadly refers to experiences with pregnancy, childbirth, postpartum, and motherhood. Like other life course experiences, maternity conceptually includes transitioning from one group membership to another. Pregnancy and birth specifically result in new definitions of parity; for example, individuals who give birth for the first time transition from a nulliparous to a primiparous status. Additionally, individuals may experience pregnancy followed by the loss of an infant or child, creating greater complexity in maternal identity development (Kurz, 2020; Wonch Hill et al., 2017). Because of the dynamic and multifaceted experiences of pregnancy, birth, and parenthood, maternity results in novel psychosocial conceptualizations for birthing persons.

Maternity includes the development of maternal identity, which refers to how central pregnancy, childbirth, and motherhood are to how individuals perceive themselves and their attributes. Evidence shows that pregnancy and childbirth also create new role expectations and perceptions about one's abilities to perform those roles. For example, parental self-efficacy refers to how confident an individual feels in their ability to perform the tasks and responsibilities of parenthood (Brunton et al., 2020; Moran et al., 2016). As such, maternity is a social role shift where individuals develop intrinsic perceptions and beliefs about pregnancy, childbirth, and

motherhood (Arnold-Baker, 2019; Rubin, 1984). Furthermore, those intrinsic perceptions are informed by perceived social norms around maternity (Arnold-Baker, 2019; Myers & Grasmick, 1990). The complexity of social role performance, intrinsic perceptions of the maternal self, and the beliefs about one's maternity-specific abilities create a dynamic and multidimensional understanding of maternity. A comprehensive understanding of one's intrinsic perceptions of the maternal self is required to fully understand the implications of maternity on psychosocial wellness.

Self-Conceptualization

Given the psychosocial effects of racism and maternity, there is a critical need to fully understand how these social experiences affect identity values and self-beliefs among Black women who give birth. Theoretical foundations support the conceptual framing that social experiences can affect one's *self-concept* or the overall beliefs about oneself and their attributes (Onorato & Turner, 2004; Turner et al., 1994; Turner & Onorato, 1999). However, there is no theoretical consensus regarding the fluidity or concreteness of the self-concept and its impacts on psychosocial health and well-being (Onorato & Turner, 2004; Turner & Onorato, 1999). Furthermore, there is no clear understanding of self-concept concerning the intersectional identity of Black women who give birth.

The self-categorization theory posits that an individual has both social and personal identity allowing for fluidity in how one views oneself (Onorato & Turner, 2004; Turner & Onorato, 1999). Personal identity is how one characterizes oneself in comparison to others within a shared social group; it is the traits that make one unique (Turner & Onorato, 1999). On the contrary, social identity is how individuals characterize their social group compared to other relevant social groups (Turner & Onorato, 1999). For example, Black women have varying

personal identities that make them distinctive. Conversely, the shared social identity of a group of Black women is further influenced by shared stereotypes and socially expected behaviors that differ from other social groups, like men and white women.

Given this understanding, individuals may feel more comfortable expressing particular characteristics within some social contexts while feeling less comfortable doing so in others. More specifically, experiences exclusive to race/ethnicity and gender identities impact how individuals behave in their social environments (Hewlin, 2009; Walton et al., 2015). Evidence within the self-categorization theory even demonstrates that social identity can obscure personal identity altogether (Onorato & Turner, 2004). Furthermore, a disconnect between one's social and personal identities creates poor psychosocial well-being, including psychosocial distress, anxiety, and low self-esteem (Haslam et al., 2009). Given this understanding, it is clear that social identity influences one's self-concept.

The theorization of the self-concept as fluid needs to be further explored, especially in the context of minority populations and particular lived experiences (e.g., maternity, racism, and discrimination). If social identity can completely occlude personal identity for minority groups, then it should be assumed that Black women, who have more than one marginalized identity, are subjected to social contexts that further implicate their self-conceptualization. Additionally, the complex experience of maternity is expected to further affect Black women's self-conceptualization. Based on the growing evidence that racism and maternity can affect the beliefs one has about oneself (Arnold-Baker, 2019; Bornemark & Smith, 2016; Hughes et al., 2015; Kwate & Meyer, 2011), there is reason to believe that the Black maternal self-concept is a specific psychosocial construct affected by social experiences and exposures. Hence, this project grounds itself in the understanding that the self-concept is fluid and can change based on social

contexts. This project utilizes the novel, theory-driven model of *self-conceptualization* (Figure 1.1) to assess how distinct social experiences further affect the development of beliefs about oneself in the context of Black maternal health.

The Current Project

The current project incorporates a self-conceptualization model to understand the mechanistic paths by which exposure to racism in maternal healthcare settings affects one's maternal self-concept and subsequent maternal health outcomes. As it is novel in its approach, there is no standard measure for the Black maternal self-concept nor an established understanding of its dimensions. Therefore, there is a clear need to identify self-conceptualization as a putative mechanism by which exposure to racism affects the Black maternal self-concept and, in turn, further influences maternal health outcomes. The presented project addresses this need by focusing on the relationship between exposure to racism in maternal healthcare settings, the Black maternal self-concept, and physical and psychosocial health outcomes in Black women who give birth in the U.S.

Theoretical Foundations

Intersectionality Framework

Intersectionality is a framework for understanding how one's various social identities (e.g., race, gender, social class) interact to create complex experiences with and exposures to discrimination and privilege (Hill Collins, 2019). Intersectionality is rooted in critical feminist thought and focuses on how systems-level discrimination establishes power rather than focusing on power imbalances (Hancock, 2016). The intersectional framework requires that researchers focus on how group marginalization creates power imbalances across levels of the social-ecological model (Hancock, 2016; Hill Collins, 2019). In other words, research under the

intersectionality framework should aim to eliminate power imbalances, regardless of the mechanism by which imbalances exist (e.g., gender discrimination, racism, and other identity-based discrimination).

The proposed project acknowledges that Black women have multiple intersecting identities that result in varying oppressive experiences (e.g., gender-, race-, and class-based discrimination), which further affect self-perceptions. However, the principles of intersectionality are not traditionally used to predict health nor to explore the mechanistic pathways of psychosocial health (Bowleg, 2012; Hancock, 2016). Mixed and qualitative research methods are best suited for exploring the intersectional nature of health disparities; however, there is a paucity of information on how to implement intersectionality in health research (Bowleg, 2012). This project aims to apply intersectionality as a guiding framework for addressing the multiplicative nature of social identities in health disparities research by incorporating a mixed methods approach and conducting data analysis through the lens of multiple intersecting identities.

Standpoint Theory

The Standpoint Theory asserts that 1) lived experiences are knowledge, 2) the most marginalized individuals are more aware of their settings and experiences and are therefore best equipped to share knowledge, and 3) research focused on power relations, like those that exist in healthcare settings, should begin with the most marginalized populations (Harding, 1992). Comparable with intersectionality, the Standpoint Theory advances that questions related to health inequities are best answered by persons experiencing inequitable treatment. Standpoint theory relates closely to feminist epistemology and is the premise for using the mixed methods research approach employed in this project to engage women subject to marginalization. By

engaging multiple data collection and triangulation steps, this project implements scientifically meaningful research rooted in investigating lived experiences as knowledge. While it is necessary to understand the experiences, beliefs, and values of other members of Black women's social networks (e.g., maternity care providers, romantic partners, and family members), this project centers on Black women's lived experiences as a primary unit of analysis. This centering ensures analysis of Black women's perceptions of and exposures to others' actions, values, and beliefs and the impact of these experiences on the Black maternal self-concept. By applying the principles of the Standpoint Theory to data collection and analysis, we can assess, regardless of intent, the impact that others' actions have on Black women's maternal self-concept.

Transcendental Phenomenology

Transcendental phenomenology is a scientific framework for the in-depth analysis and interpretation of social phenomena (Neubauer et al., 2019). Researchers engaging in transcendental phenomenology (TP) can produce in-depth interpretations of experiences by decreasing researcher bias and subjectivity with strategies such as reflexivity and data synthesis (Moustakas, 2011). From an epistemological definition, TP centers on idealism, a subjective position that posits there is no shared reality. It is then necessary for researchers to engage in reflexivity to best decrease subjectivity and researcher bias when analyzing experiences (Moustakas, 2011; Neubauer et al., 2019). There are several strategies for incorporating TP into a methodology; however, this framework's fundamental principles are to be intentional and reflective and to engage in phenomenological reduction and synthesis in analysis (Moustakas, 2011).

The presented project incorporates an exploratory sequential mixed methods design that supports transcendental phenomenology by incorporating in-depth qualitative and quantitative

data analysis. In this project, we aim to understand how Black women's experiences impact the self-conceptualization process. We apply the principles of the presented theories and frameworks by centering Black women's lived experiences as a unit of analysis and respecting their intersectional and multiplicative identities. We engage in an iterative process of transcendental phenomenological practice by beginning with an overarching research question developed based on formative research and an established theoretical and empirical evidence base.

As the core of transcendental phenomenology asserts, it is impossible to prescribe meaning to experience without individual interpretation or understanding of the evidence provided (Moustakas, 2011). Researchers should actively work to obtain objectivity through intentionality and phenomenological interpretation (Moustakas, 2011; Neubauer et al., 2019). To apply intentionality in discerning scientific meaning in the lived experiences of Black women (i.e., this project's primary unit of analysis), we use several data collection methods, sequentially building evidence and appropriately adjusting analytic items before testing external validity. Throughout this project, the research team engages in discussions regarding the meaning and interpretation of results while employing intensive journaling and reflectivity processes to check assumptions and minimize subjectivity during data collection and analysis. The triangulation of results made possible through a mixed-methods design further ensures that the findings situate authentic lived experiences rather than biased researcher interpretation.

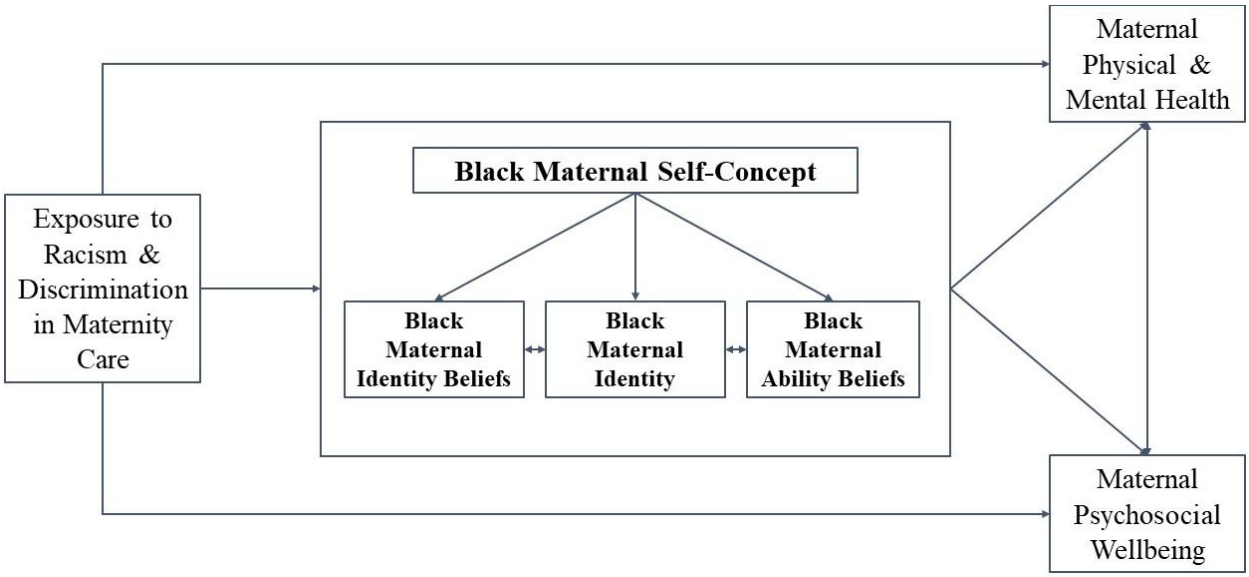
Research Objectives, Aims, and Hypotheses

This project's **objective** is to advance the understanding of the Black maternal self-concept in Black women who give birth and, to explain how the Black maternal self-concept is affected by exposure to racism and discrimination while receiving maternity healthcare. Based on the theoretical principles and frameworks reviewed above, this dissertation proposes self-

conceptualization as the process by which social experiences change the dimensions of the Black maternal self-concept. The present dissertation examines this relationship by reviewing Black women's experiences with racism and discrimination in maternity healthcare. As seen in Figure 1.1, the conceptual model for Black maternal self-conceptualization demonstrates the proposed relationship between exposure to racism in maternity care, the Black maternal self-concept, and maternal physical, mental, and psychosocial health and well-being outcomes. This project aims to 1) define the dimensions of the Black maternal self-concept specific to Black women's exposure to racism when receiving maternity healthcare and 2) develop a measure of Black maternal self-concept for Black women who give birth in the U.S. This project provides evidence to support further examination of self-conceptualization as a mechanistic pathway by which exposure to racism in maternal healthcare settings affects the physical, mental, and psychosocial health and well-being outcomes of Black women who give birth. The central hypothesis that guides this dissertation project is that exposure to racism and discrimination (variable X) negatively influences Black maternal self-concept (mediator), which, in turn, leads to worse maternal health outcomes (variable Y), such as postnatal depression, anxiety, thriving, postpartum hemorrhage, and maternal hypertension.

Figure 1.1

Conceptual Model for Black Maternal Self-Conceptualization



Note. The items in bold represent the Black Maternal Self-Concept Model (BMSCM). The development and testing of this model if the primary focus of this project. The overall conceptual model represents the structural model of the self-conceptualization process.

We conducted technology-based, explanatory sequential mixed methods to carry out the following aims:

Aim 1: To map the conceptual and operational definitions of general self-concept in adult health and racism research in the U.S.

We conducted a scoping review of existing adult health and racism literature to identify measures of general self-concept. We identified 1) how these measures are used in health and racism research and 2) the defined dimensions of self-concept within the adult health and racism literature. In identifying and defining the current application of self-concept in adult health literature, we mapped the construct and its meaning to better operationalize the current definition and measures of self-concept in adult health and racism research.

Aim 2: To examine the role of lived experiences in Black maternal self-concept development for Black women who have given birth in the U.S.

We used an in-depth, semi-structured interview guide to conduct virtual interviews with Black women between 18 and 35 who gave birth in the U.S. in the last six months. Interviews assessed the impact of lived experiences with maternity and racism and discrimination in maternity care on Black women's beliefs about their maternal selves and their maternal attributes (i.e., Black maternal self-concept). We analyzed text data from interviews using a transcendental phenomenological approach to identify relevant themes related to experiences with racism and discrimination in maternity healthcare and the effect of those experiences on the development of the Black maternal self-concept.

Aim 3: To develop a scale of the Black maternal self-concept for use with Black women who give birth in the U.S.

Aim 3a, Item Generation: We implemented a hybrid approach to develop the Black Maternal Self-Concept Inventory. We modified pre-validated self-concept items identified in the Aim 1 scoping review and new self-concept items based on the key themes that emerged from the Aim 2 interview data. We conducted pilot testing of candidate BMSCI items with Black women who gave birth in the last two years and used feedback from these tests to modify candidate survey items for scale development.

Aim 3b, Scale Development: We tested the Black Maternal Self-Concept Inventory (BMSCI) items developed in Aim 3a within a more extensive survey disseminated through online platforms to Black women who gave birth in the U.S. in the last two years. We performed item and factor analyses to identify the total number of dimensions measured in the BMSCI. We used item analysis to inform item reduction and the

selection of the most effective items. Using items in the finalized BMSCI, we conducted factor analysis to explore the specified dimensionality of the BMSCI. We provide evidence of the inventory's usability in assessing the dimensions proposed in the Black Maternal Self-Concept Model (Figure 1.1).

We present the investigation of these aims in a three-paper format. Each paper is presented as a chapter and includes a relevant understanding of the literature, the methods used, and results and discussion sections. The first paper (Chapter 2: Paper 1) reports results from the scoping review of self-concept in adult health and racism research and includes a self-concept conceptual taxonomy. The second paper (Chapter 3: Paper 2) includes findings from the qualitative analysis of in-depth interviews with Black women who gave birth in the U.S. The third paper (Chapter 4: Paper 3) synthesizes the findings from papers one and two to present the operationalization of the Black Maternal Self-Concept Model (BMSCM). We present the methods and results for the Black Maternal Self-Concept Inventory (BMSCI) development, including survey item generation, item modification, and scale development. Paper three concludes with evidence for the use of the BMSCI to measure the BMSCM dimensions. We conclude these reports by providing implications of the conducted research and recommend future directions in Black maternal self-concept research.

References

Agency for Healthcare Research and Quality. (2019). *2018 national healthcare quality & disparities report*.

Arnold-Baker, C. (2019). The process of becoming: Maternal identity in the transition to motherhood. *Existential Analysis*, *30*(2), 260.

Bailey, Z. D., Krieger, N., Agenor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*, *389*(10077), P1453-1463. https://doi.org/https://doi.org/10.1016/S0140-6736(17)30569-X

Bonilla Silva, E. (1997). Rethinking racism: Toward a structural interpretation. *American Sociological Review*, *62*(3), 465-480.

Bornemark, J., & Smith, N. (2016). *Phenomenology of pregnancy*. Södertörns högskola. https://books.google.com/books?id=To_KjwEACAAJ

Bowleg, L. (2012). The problem with the phrase women and minorities: Intersectionality-an important theoretical framework for public health. *Am J Public Health*, *102*(7), 1267-1273. https://doi.org/10.2105/AJPH.2012.300750

Brenick, A., Romano, K., Kegler, C., & Eaton, L. A. (2017). Understanding the influence of stigma and medical mistrust on engagement in routine healthcare among Black women who have sex with women. *LGBT Health*, *4*(1), 4-10. https://doi.org/10.1089/lgbt.2016.0083

Brown, C. C., Adams, C. E., George, K. E., & Moore, J. E. (2020). Associations between comorbidities and severe maternal morbidity. *Obstet Gynecol*, *136*(5), 892-901. https://doi.org/10.1097/AOG.0000000000004057

Brunton, R., Simpson, N., & Dryer, R. (2020). Pregnancy-related anxiety, perceived parental self-efficacy and the influence of parity and age. *International Journal of Environmental Research and Public Health*, *17*(18), 6709. https://doi.org/10.3390/ijerph17186709

Callaghan, W. M., Creanga, A. A., & Kuklina, E. V. (2012). Severe maternal morbidity among delivery and postpartum hospitalizations in the United States. *Obstet Gynecol*, *120*(5), 1029-1036. https://doi.org/http://10.1097/AOG.0b013e31826d60c5

10.1097/aog.0b013e31826d60c5

Carver, C. S., & Vargas, S. (2011). Stress, coping, and health. In H. S. Friedman (Ed.), *Oxford Handbook of Health Psychology* (pp. 162-188). Oxford University Press.

Centers for Disease Control and Prevention. (2015). *Severe maternal morbidity in the United States*. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, *54*(10), 805-816.

Colen, C. G., Ramey, D. M., Cooksey, E. C., & Williams, D. R. (2018). Racial disparities in health among nonpoor African Americans and Hispanics: The role of acute and chronic discrimination. *Soc Sci Med*, *199*, 167-180. https://doi.org/10.1016/j.socscimed.2017.04.051

Creanga, A. A., Bateman, B. T., Kuklina, E. V., & Callaghan, W. M. (2014). Racial and ethnic disparities in severe maternal morbidity: A multistate analysis, 2008-2010. *Am J Obstet Gynecol*, *210*(5), 435 e431-438. https://doi.org/10.1016/j.ajog.2013.11.039

Ellemers, N., & Haslam, S. A. (2012). Social identity theory. In P. A. M. van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 2, pp. 379-398). Sage.

Epstein, S. (1973). The self-concept revisited. Or a theory of a theory. *The American Psychologist*, *28*(5), 404-416. https://doi.org/10.1037/h0034679

Ford, C. L., & Airhihenbuwa, C. O. (2010). Critical Race Theory, race equity, and public health: Toward antiracism praxis. *Am J Public Health*, *100 Suppl 1*, S30-35. https://doi.org/10.2105/AJPH.2009.171058

Gunja, M. Z., Sheervai, S., Zephyrin, L., & Williams, R. D. I. (2022). *Health and health care for women of reproductive age: How the United States compares with other high-income countries*.

Hall, W. J., Chapman, M. V., Lee, K. M., Merino, Y. M., Thomas, T. W., Payne, B. K., Eng, E., Day, S. H., & Coyne-Beasley, T. (2015). Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: A systematic review. *Am J Public Health*, *105*(12), e60-76. https://doi.org/10.2105/AJPH.2015.302903

Hancock, A. (2016). *Intersectionality: An intellectual history*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199370368.001.0001

Harding, S. (1992). Rethinking standpoint epistemology: What is "strong objectivity?". *The Centennial Review*, *36*(3), 437-470.

Haslam, S. A., Jetten, J., Postmes, T., & Haslam, C. (2009). Social identity, health and well-being: An emerging agenda for applied psychology. *Applied Psychology: An International Review*, *58*(1), 1-23. https://doi.org/ 10.1111/j.1464-0597.2008.00379.x

Hewlin, P. F. (2009). Wearing the cloak: Antecedents and consequences of creating facades of conformity. *J Appl Psychol*, *94*(3), 727-741. https://doi.org/10.1037/a0015228

Hill Collins, P. (2019). *Intersectionality as critical social theory*. Duke University Press.

Hoffman, K. M., Trawalter, S., Axt, J. R., & Oliver, M. N. (2016). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between Blacks and whites. *Proc Natl Acad Sci U S A*, *113*(16), 4296-4301. https://doi.org/10.1073/pnas.1516047113

Howell, E. A. (2018). Reducing disparities in severe maternal morbidity and mortality. *Clin Obstet Gynecol*, *61*(2), 387-399. https://doi.org/10.1097/GRF.0000000000000349

Hoyert, D. (2022). *Maternal mortality rates in the United States, 2020* (NCHS Health E-Stats, Issue.

Hughes, M., Kiecolt, K. J., Keith, V. M., & Demo, D. H. (2015). Racial identity and well-being among African Americans. *Social Psychology Quarterly*, *78*(1), 25-48. https://doi.org/10.1177/0190272514554043

Id, P. S. M., Wuytack, F., Turner, M., Normand, C., Brown, S., Begley, C., & Daly, D. (2020). Economic burden of maternal morbidity – A systematic review of cost-of-illness studies. 1-18.

Jones, C. P. (2000). Levels of racism: A theoretic framework and a gardener's tale. *American Journal of Public Health*, *90*(8), 1212-1215. https://doi.org/10.2105/ajph.90.8.1212

Kurz, M. R. (2020). When death precedes birth: The embodied experiences of women with a history of miscarriage or stillbirth—A phenomenological study using artistic inquiry. *American Journal of Dance Therapy*, *42*(2), 194-222. https://doi.org/10.1007/s10465-020-09340-9

Kwate, N. O. A., & Meyer, I. H. (2011). On sticks and stones and broken bones. *Du Bois Review: Social Science Research on Race*, *8*(1), 191-198. https://doi.org/10.1017/s1742058x11000014

LaVeist, T. A., Isaac, L. A., & Williams, K. P. (2009). Mistrust of health care organizations is associated with underutilization of health services. *Health Serv Res*, *44*(6), 2093-2105. https://doi.org/10.1111/j.1475-6773.2009.01017.x

Lett, E., Asabor, E., Beltrán, S., Cannon, A. M., & Arah, O. A. (2022). Conceptualizing, contextualizing, and operationalizing race in quantitative health sciences research. *The Annals of Family Medicine*, *20*(2), 157-163. https://doi.org/10.1370/afm.2792

Mariotti, A. (2015). The effects of chronic stress on health: New insights into the molecular mechanisms of brain-body communication. *Future Science OA*, *1*(3). https://doi.org/10.4155/fso.15.21

Maxwell, M., Brevard, J., Abrams, J., & Belgrave, F. (2015). What's color got to do with it? Skin color, skin color satisfaction, racial identity, and internalized racism among African American college students. *Journal of Black Psychology*, *41*(5), 438-461. https://doi.org/10.1177/0095798414542299

Moran, T. E., Polanin, J. R., Evenson, A. L., Troutman, B. R., & Franklin, C. L. (2016). Initial validation of the Assessment of Parenting Tool: A task- and domain-level measure of parenting self-efficacy for parents of infants from birth to 24 Months of age. *Infant Ment Health J*, *37*(3), 222-234. https://doi.org/10.1002/imhj.21567

Moustakas, C. (2011). Phenomenological research: Analyses and examples. In *Phenomenological research methods* (pp. 120-154). SAGE Publications, Inc. https://doi.org/10.4135/9781412995658

Myers, S. T., & Grasmick, H. G. (1990). The social rights and responsibilities of pregnant women: An application of Parsons's sick role model. *The Journal of Applied Behavioral Science, 26*(2), 157-172. https://doi.org/10.1177/0021886390262005

Neubauer, B. E., Witkop, C. T., & Varpio, L. (2019). How phenomenology can help us learn from the experiences of others. *Perspect Med Educ, 8*(2), 90-97. https://doi.org/10.1007/s40037-019-0509-2

Onorato, R. S., & Turner, J. C. (2004). Fluidity in the self-concept: The shift from personal to social identity. *European Journal of Social Psychology, 34*(3), 257-278. https://doi.org/10.1002/ejsp.195

Paradies, Y., Truong, M., & Priest, N. (2014). A systematic review of the extent and measurement of healthcare provider racism. *J Gen Intern Med, 29*(2), 364-387. https://doi.org/10.1007/s11606-013-2583-1

Pérez-Stable, E. J., & Rodriquez, E. J. (2020). Social determinants and differences in mortality by race/ethnicity. *JAMA network open, 3*(2), e1921392. https://doi.org/10.1001/jamanetworkopen.2019.21392

Petersen, E., Davis, N., Goodman, D., Cox, S., Mayes, N., Johnston, E., Syverson, C., Seed, K., Shapiro-Mendoza, C., Callaghan, W., & Barfield, W. (2019). *Vital signs: Pregnancy-related deaths, United States, 2011–2015, and strategies for prevention, 13 States, 2013–2017.* (MMWR Morb Mortal Wkly Rep 2019, Issue.

Phelan, J. C., & Link, B. G. (2015). Is racism a fundamental cause of inequalities in health? *Annual Review of Sociology, 41*(1), 311-330. https://doi.org/10.1146/annurev-soc-073014-112305

powell, j. a. (2013). Deepening our understanding of structural marginalization. *Poverty & Race, 22*(5).

Pugh, M., Jr., Perrin, P. B., Rybarczyk, B., & Tan, J. (2020). Racism, mental health, healthcare provider trust, and medication adherence among Black patients in safety-net primary care. *J Clin Psychol Med Settings*, *28*(1), 181-190. https://doi.org/10.1007/s10880-020-09702-y

Relf, M. V., Pan, W., Edmonds, A., Ramirez, C., Amarasekara, S., & Adimora, A. A. (2019). Discrimination, medical mistrust, stigma, depressive symptoms, antiretroviral medication adherence, engagement in care, and quality of life among women living with HIV in North Carolina: A mediated structural equation model. *J Acquir Immune Defic Syndr, 81*(3), 328-335. https://doi.org/10.1097/QAI.0000000000002033

Riggan, K. A., Gilbert, A., & Allyse, M. A. (2020). Acknowledging and addressing allostatic load in pregnancy care. *J Racial Ethn Health Disparities*, *8*(1), 69-79. https://doi.org/10.1007/s40615-020-00757-z

Ross, K. M., Dunkel Schetter, C., McLemore, M. R., Chambers, B. D., Paynter, R. A., Baer, R., Feuer, S. K., Flowers, E., Karasek, D., Pantell, M., Prather, A. A., Ryckman, K., & Jelliffe-Pawlowski, L. (2019). Socioeconomic status, preeclampsia risk and gestational length in Black and white women. *J Racial Ethn Health Disparities*, *6*(6), 1182-1191. https://doi.org/10.1007/s40615-019-00619-3

Rubin, R. (1984). *Maternal identity and the maternal experience*. Springer Pub. Co.

Slaughter-Acey, J. C., Sneed, D., Parker, L., Keith, V. M., Lee, N. L., & Misra, D. P. (2019). Skin tone matters: Racial microaggressions and delayed prenatal care. *Am J Prev Med, 57*(3), 321-329. https://doi.org/10.1016/j.amepre.2019.04.014

Taylor, J. K. (2020). Structural racism and maternal health among Black women. *Journal of Law, Medicine and Ethics, 48*(3), 506-517. https://doi.org/10.1177/1073110520958875

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, *20*(5), 454-463.

Turner, J. C., & Onorato, R. S. (1999). Social identity, personality, and the self-concept: A self-categorization persepctive. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), *The psychology of the social self* (pp. 11-46). Lawrence Erlbaum.

U.S. Department of Health and Human Services. (2022). *Health equity and health disparities environmental scan*.

Vogel, J. P., Souza, J. P., Mori, R., Morisaki, N., Lumbiganon, P., Laopaiboon, M., Ortiz-Panozo, E., Hernandez, B., Perez-Cuevas, R., Roy, M., Mittal, S., Cecatti, J. G., Tuncalp, O., Gulmezoglu, A. M., Maternal, W. H. O. M. S. o., & Newborn Health Research, N. (2014). Maternal complications and perinatal mortality: Findings of the World Health Organization Multicountry Survey on Maternal and Newborn Health. *BJOG, 121 Suppl 1*, 76-88. https://doi.org/10.1111/1471-0528.12633

Walton, G. M., Murphy, M. C., & Ryan, A. M. (2015). Stereotype threat in organizations: Implications for equity and performance. *Annual Review of Organizational Psychology and Organizational Behavior*, *2*(1), 523-550. https://doi.org/doi.org/10.1146/annurev-orgpsych-032414-111322

Ward, T. C. S., Mazul, M., Ngui, E. M., Bridgewater, F. D., & Harley, A. E. (2013). "You learn to go last": Perceptions of prenatal care experiences among African-American women with limited incomes. *Maternal and Child Health Journal*, *17*(10), 1753-1759. https://doi.org/10.1007/s10995-012-1194-5

Williams, D. R. (2018). Stress and the mental health of populations of color: Advancing our understanding of race-related stressors. *J Health Soc Behav*, *59*(4), 466-485. https://doi.org/10.1177/0022146518814251

Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: Evidence and needed research. *Annu Rev Public Health*, *40*, 105-125. https://doi.org/10.1146/annurev-publhealth-040218-043750

Williams, D. R., Yu, Y., & Jackson, J. S. (1997). Racial differences in physical and mental health: Socio-economic status, stress, and discrimination. *Journal of Health Psychology*, *2*(3), 335-351.

Wonch Hill, P., Cacciatore, J., Shreffler, K. M., & Pritchard, K. M. (2017). The loss of self: The effect of miscarriage, stillbirth, and child death on maternal self-esteem. *Death Stud*, *41*(4), 226-235. https://doi.org/10.1080/07481187.2016.1261204

Yearby, R., Clark, B., & Figueroa, J. F. (2022). Structural racism in historical and modern U.S. health care policy. *Health Affairs*, *41*(2), 187-194. https://doi.org/10.1377/hlthaff.2021.01466

Zuckerwise, L. C., & Lipkind, H. S. (2017). Maternal early warning systems—Towards reducing preventable maternal mortality and severe maternal morbidity through improved clinical surveillance and responsiveness. *Seminars in Perinatology*, *41*(3), 161-165. https://doi.org/10.1053/j.semperi.2017.03.005

CHAPTER 2

PAPER 1

MAPPING THE USE OF SELF-CONCEPT IN ADULT HEALTH AND RACISM RESEARCH: A SCOPING REVIEW AND CONCEPTUAL TAXONOMY

Abstract

Background: Theoretical foundations in social psychology suggest that experiences with social and personal identity influence psychosocial health and well-being; as such, social experiences like exposure to racism impact factors of self-concept as well as health and well-being outcomes. However, while evidence demonstrates an association between exposure to racism and poor health and well-being, a lack of research comprehensively examines the self-concept and its relationship with racism and adult health. There is an exigency for developing and understanding a comprehensive self-concept structure to examine further the relationship between the self-concept, racism, and health in U.S. adults. **Method**: Using multiple databases, we conducted a scoping review of the existing adult health research literature to identify the dimensions of self-concept assessed in racism and health research. We collated and synthesized data from articles published between 2015 and 2021 (n = 38) and developed a conceptual taxonomy to support the conceptualization and operationalization of self-concept in adult health and racism research. **Results**: Across the included studies, we identified fifteen sub-dimensions of self-concept, which we categorized into the three primary dimensions of identity, identity beliefs, and ability beliefs. Self-concept most often moderated or mediated the relationship between racism and health outcomes in U.S. adults; this relationship was further dependent on population and topic-specific covariates suggesting a fluid and situationally-dependent self-concept structure. **Conclusion**: This review provides evidence for the function of self-concept as a comprehensive and multidimensional assessment of psychosocial health and well-being among adult populations experiencing racism.

Background

Health is a multifaceted, biopsychosocial model comprised of interactions across physiological functions and psychosocial experiences (Borrell-Carrió et al., 2004; Engel, 1977). Given its complexity, many variable and dynamic constructs can be used to measure health and well-being. However, the factors that make up psychosocial health and well-being are difficult to assess and measure objectively, as they are not readily observable. Immense effort goes into creating sound theoretical foundations that guide the development of psychosocial health and well-being measures. However, theoretical foundations in social and developmental psychology do not always translate to our understanding of health and its psychosocial determinants. Specifically, the self-concept is a construct based on theoretical foundations in social and developmental psychology. Furthermore, just as health is multifaceted, the self-concept consists of multiple dimensions that impact overall health and well-being.

Self-concept is a marker of psychosocial well-being best defined as the beliefs one has about oneself and one's attributes (Onorato & Turner, 2004; Turner et al., 1994; Turner & Onorato, 1999). As its definition is broad, the self-concept includes several dimensions, each rooted in an understanding of one's beliefs, values, and perceptions (Markus & Kunda, 1986; Marsh & Shavelson, 1985; Onorato & Turner, 2004). Despite the many self-concept models presented in social and developmental psychology (Campbell et al., 2003; Marsh & Shavelson, 1985; Rogers, 1961; Shavelson et al., 1976), health research lacks comprehensive assessments of the self-concept. Instead, health research often includes individual self-concept dimensions found in health and health behavior theories, such as self-esteem, self-efficacy, and other identity beliefs (Bandura, 2004; Montano & Kasprzyk, 2015; Prochaska et al., 2015). Therefore, there is a gap in health research regarding analyses of the self-concept as a comprehensive measure of

psychosocial well-being. Such constricted assessments of psychosocial well-being in health research introduce limitations to understanding the full biopsychosocial health model.

Furthermore, well-defined social determinants of health, like racism, impact the many dimensions of self-concept. Experiences with discrimination and racism are pervasive and have multiplicative effects on health and well-being (Bowleg, 2012; Carter et al., 2019; Hancock, 2016; Paradies et al., 2015). Numerous studies document the negative impact of perceived racial discrimination on the dimensions of self-concept, including self-esteem, self-efficacy, and racial/ethnic identity (Carter et al., 2019; Christie-Mizell et al., 2010; Pieterse et al., 2012; Stokes, 2020). Individuals who experience racism also have an increased risk of experiencing poor physical and psychological health and well-being outcomes, including anxiety, depression, distress, and poor general health (Paradies et al., 2015; Pieterse et al., 2012). Given the intricate relationship between racism and health, it is necessary to understand how racism influences the self-concept and overall health and well-being. It is first necessary to accurately define and measure self-concept and racism as constructs related to adult health. This review aims to conceptualize self-concept as a construct in health and racism research for adults in the U.S.

Defining and Measuring Self-Concept

Self-concept is the beliefs one has about oneself and their attributes, where attributes are qualities, abilities, traits, and characteristics. The theoretical development of self-concept spans an extensive history and includes a range of arguments regarding self-concept's stability, dimensions, and assessments (Rosenberg, 1989). Starting as early as the 1950s, Carl Rogers pioneered theories in self-actualization, ultimately focusing on how individuals engage in behaviors to align their perceived self with their ideal self (Rogers, 1961). Rogers asserted that self-concept comprises the perceived self and relates to those beliefs one has about oneself and

one's attributes (Rogers, 1961). Conversely, the ideal self consists of the goals and ambitions one has for oneself in life (Rogers, 1961). Rogers affirmed that one's perceptions of and experiences with their social environment impact one's ability to integrate their perceived and ideal selves. The inability to integrate these two selves, in turn, creates pathology or poor psychosocial well-being (Ford, 1991; Rogers, 1961).

Furthermore, behaviorists can predict future behavior by analyzing individuals' perceptions of their social environments and assessing the incongruence between their perceived and ideal selves (Rogers, 1961). The foundations of self-actualization have informed the development of behavior theories like the Self-Determination Theory and related constructs of inclusion, belonging, and autonomy (Ryan & Deci, 2000). These foundations outline a robust theoretical argument for the fluidity of the self-concept and its dimensions in determining health and health behavior (Markus & Kunda, 1986). Researchers can better classify self-concept as an umbrella term comprised of the many psychosocial constructs that constitute how individuals perceive themselves and their attributes.

Scholars have put forth many theory-driven structural models for assessing self-concept. Notably, Shavelson and colleagues established a hierarchical structure of general self-concept which included two overarching branches: academic self-concept and non-academic self-concept (Marsh & Shavelson, 1985; Shavelson et al., 1976). Within the understanding of non-academic self-concept, there are three subcategories of social, emotional, and physical self-concept. Given the hierarchical structure of the Shavelson et al. model (Marsh & Shavelson, 1985; Shavelson et al., 1976), each subcategory of self-concept has dimensions that contribute to the situation- and task-specific beliefs about oneself and one's attributes. For example, Shavelson et al. (1976) illustrate that peers and significant others impact the development of social self-concept, while

physical appearance and ability impact physical self-concept. The model further posits that the general self-concept is relatively stable, focusing on the overall beliefs one has about oneself and one's attributes; however, further down the hierarchical structure, self-concept becomes increasingly more fluid and situationally dependent (Marsh & Shavelson, 1985). Furthermore, self-concept becomes increasingly multifaceted with age as individuals encounter more intricate experiences, which can affect each level of the self-concept structure.

Other areas of focus have asserted self-concept clarity as a cognitive mechanism for evaluating how well an individual understands their beliefs about themselves and their attributes (Campbell, 1990; Campbell et al., 2003). This approach increases the understanding that self-concept is both evaluative and descriptive. One's understanding and perceptions of behaviors, social roles, and relationships within their social group greatly influence self-evaluations, making the development and clarification of self-concept a primarily cognitive exercise (Campbell, 1990; Campbell et al., 2003). Social experiences then influence the cognitive appraisals that occur when developing self-concept clarity. Ultimately, the models of self-concept and self-concept clarity provide substantial evidence for several dynamic and fluid components that are situationally- or task-dependent. However, assessments of self-concept are often limited to children and academic achievement (Marsh & Shavelson, 1985; Shavelson et al., 1976), leaving a dearth of evidence applying similar hierarchical models to adult health and psychosocial well-being.

In adult health research, similar social psychology foundations influence many health behavior theories and models. Similar to the Shavelson et al. hierarchical model (Shavelson et al., 1976), individuals evaluate behaviors based on several dimensions, including ability or perceived self-efficacy, subjective norms, and attitudes toward health behavior (Fishbein, 2008;

Montano & Kasprzyk, 2015; Sugg Skinner et al., 2015). These cognitive appraisals of health behaviors determine the likelihood that one will engage in behavior change. Theoretical foundations in behavior change — including the Transtheoretical Model or Stages of Change (Prochaska et al., 2015), the Theory of Reasoned Action/ Planned Behavior (Fishbein, 2008; Montano & Kasprzyk, 2015), and the Social Cognitive Theory (Bandura, 2004; Bandura et al., 1989) — demonstrate the utility of self-concept dimensions in determining health behaviors and health decision making. For example, self-efficacy and perceived control are known for their utility in predicting health behaviors, beliefs, and outcomes (Ajzen, 2002; Bandura, 2004; Fishbein, 2008; Prochaska et al., 2015; Sugg Skinner et al., 2015). Similarly, health evidence shows that individuals with lower self-esteem are at increased risk for depression, anxiety, and poor psychosocial well-being (Christie-Mizell et al., 2010; Greenberg et al., 1992; Sowislo & Orth, 2013), as well as cardiovascular disease, inflammatory biomarkers, and mortality (O'Donnell et al., 2008; Stamatakis et al., 2004; Stokes, 2020).

However, there is no consensus on how self-concept functions when exploring the interactions between the self-concept and health. In health research, individual self-concept dimensions serve as proxy measures for more comprehensive measures of overall psychosocial well-being. However, while several studies examine the relationship between psychosocial well-being and health (Sowislo & Orth, 2013) or psychosocial well-being and discrimination (Carter et al., 2019; Paradies et al., 2015), minimal research is available on the broader relationship between health, racism, and self-concept as an overarching construct. Research examining the role of self-concept in health outcomes should include a more thorough evaluation of self-concept to understand and address health and health behaviors.

Defining and Measuring Racism

There is abundant evidence demonstrating the effects of exposure to racism and discrimination on physical and psychosocial health and well-being. *Racism* is an organized social system and mechanism used to "disempower and differentially allocate valued societal resources and opportunities to racial groups defined as inferior" (Williams et al., 2019). Racism exists across multiple levels of society, including interpersonal, intrapersonal, and systemic levels (Bailey et al., 2017; Jones, 2000; Williams, 2018; Yearby et al., 2022). At each level, racism produces marginalization and distances non-majority racial groups to benefit the majority group (Clark et al., 1999; Williams et al., 2019; Yearby et al., 2022).

It is understood that racism functions as part of a biopsychosocial model (Clark et al., 1999). Perceived racism operates as a stressor that, when chronically present, elicits a persistently elevated stress response. A chronically active stress response increases the risk for detrimental health effects, such as cardiovascular disease and chronic inflammation (Paradies et al., 2015; Stokes, 2020; Williams et al., 1997), psychological distress (Christie-Mizell et al., 2010), and anxiety and depression (Carter et al., 2019; Paradies et al., 2015; Williams, 2018). These health outcomes are also associated with increased mortality risk (Gu et al., 2008; Vogt et al., 1994; Walker et al., 2015). Evidence also demonstrates that exposure to chronic stress affects cognitive function, emotional regulation, and general psychosocial well-being (Marin et al., 2011; Ragen et al., 2016).

The biopsychosocial model of racism advances that the stress response stimulated by perceived racism has a mediating role in health. That is, measuring stress and coping as moderators of health is not enough to address the multiplicative effects of racism on health outcomes (Clark et al., 1999). Racism is the social determinant of health that must be measured

when attempting to understand racial health disparities. As an inequity, racism is the single most crucial psychosocial determinant shaping physical and psychological health outcomes (Williams et al., 1997). However, the way that health researchers measure racism is equally important to determining the effects of racism on health. Perceived racism is the most effective measure for understanding the biopsychosocial model of racism in health (Clark et al., 1999; Williams, 2018; Williams et al., 1997). While racism exists across several levels in society, the inequities and injustices at systemic and institutional levels are measured differently and pertain to other factors, including access to quality healthcare (Agency for Healthcare Research and Quality, 2019). Including other measures of social determinants such as income, employment status, and access to quality healthcare while excluding measures of perceived racism only fractionally assesses the impact these determinants have on health outcomes. Racism must be included in health models to understand the effects of social determinants on health more thoroughly.

Measures of perceived racism vary significantly and usually depend on other sociodemographic factors. For example, the Everyday Discrimination Scale is specific to everyday experiences with discrimination and includes measures for both the frequency and perceived cause of discrimination (Williams et al., 1997). Conversely, the Experiences with Discrimination scale is specific to experiences with racial and ethnic discrimination and includes items for assessing the perceived severity or stressfulness of the experience (Krieger et al., 2005). Many other measures of racism and discrimination were adapted to be situationally and population-specific, such as experiences with healthcare discrimination (Peek et al., 2012) and experiences with gendered racism (Woods et al., 2009). The measurement of racism in health research also considerably influences the general understanding of racism's effects on health and well-being.

Furthermore, as described, psychosocial health and well-being are similarly challenging to measure, which contributes to the already minimal understanding of the effects of racism on self-concept and overall health. However, given the implications of racism as a stressor and its effects on physical and psychosocial health and well-being, it is necessary to understand the assessment of racism and self-concept as an overarching measure of psychosocial well-being within health and medical research.

The Current Study

This review examines the use of self-concept in health and racism research among U.S. adult populations. We conducted a systematic scoping review based on the defined objectives of a scoping review process (Colquhoun et al., 2014; Pham et al., 2014; Tricco et al., 2016). The specific aims of this review were to:

1. Operationalize how self-concept is defined and measured concerning exposure to racism for U.S. adults;
2. Determine the dimensions of self-concept identified in adult health research;
3. Operationalize how racism is defined and measured concerning health and self-concept for U.S. adults; and
4. Define the health outcomes measured and reported in self-concept research for adults who experience racism.

We conclude by presenting a conceptual taxonomy for self-concept and provide recommendations for its analysis and utility in adult health and racism research.

Method

The methodological framework proposed by Arksey and O'Malley (2005) and further developed by the Joanna Briggs Institute (Peters et al., 2020) informed the methodology for this

scoping review. We followed the five key stages for organizing a scoping review process: (1) identifying the research question; (2) identifying relevant studies; (3) study selection; (4) charting the data; and (5) collating, summarizing, and reporting the results.

Research Question

We posed a central research question to guide this review: how is self-concept defined and measured concerning exposure to racism for U.S. adults? Additionally, this review addresses the following sub-questions:

1. What are the dimensions of self-concept identified in adult health research?
2. Which health outcomes are measured and reported in self-concept research for adults who experience racism?

For this review, *self-concept* is defined as the beliefs one has about oneself and their attributes, while *racism* is defined as perceived unfair or unjust treatment based on race or ethnicity.

Data Sources and Search Strategy

We conducted searches of the following databases in February and March of 2022: PubMed/MEDLINE, EMBASE, PsycINFO, Cochrane, and ERIC. We conducted initial searches in February of 2022 and consulted a university librarian to improve the search structure before conducting the last search in March of 2022. We used the following key terms in our search of the electronic databases: ("self-concept or self-concept clarity or self-theory or self-esteem") and ("race or racial" and "bias or discrimination or prejudice or stereotyping" or "racism"). We report the electronic database search strategy in Appendix A.

Citation Management and Duplicate Screening

We uploaded all identified record citations to EndNote citation management software (The EndNote Team, 2013) and manually reviewed and removed duplicates. We then uploaded

the citations to Rayyan (Ouzzani et al., 2016) and further identified, manually reviewed, and removed any additional duplicates. Rayyan was subsequently used to conduct title and abstract screening for relevance and inclusion.

Eligibility Criteria

We used an iterative, two-phase process to select records for inclusion in the review based on relevance. Records identified from the search were eligible for inclusion if they met the following criteria: (1) published, peer-reviewed journal article; (2) published between January 2000 and December 2021; (3) published in the English language; (4) study conducted in the U.S.; (5) study population of adult participants 18 years of age and older; (6) primary outcome was a physical or mental health marker (e.g., hypertension, smoking status, anxiety, depression, psychological distress); and (7) study conducted quantitative or mixed methods. We excluded records if they reported conference abstracts, book reviews or chapters, editorial articles, dissertations and thesis, and commentaries. We also excluded records if the study participants were children or adolescents under 18. Regarding the criteria for study population age, the research team used discretion when screening records where the lowest age of inclusion was 17, yet the average age of participants was greater than 18; this provided a more comprehensive understanding of eligible adult health studies. We also excluded any records that included strictly qualitative studies or studies that did not include health-related outcomes, such as studies where the primary outcome was only emotional or psychological well-being (e.g., life satisfaction, positive or negative affect, or self-esteem). Additionally, we excluded records that focused on objective or subjective racism rather than perceived racism or racial discrimination; this also pertained to any record that reviewed implicit bias or internalized racism without measuring perceived racism.

Title and Abstract Screening and Study Selection

The title and abstract of each record were manually screened for inclusion by two independent reviewers to identify records that met the inclusion criteria. The first author (HMM) and a graduate student trained in systematic review methods first pretested the screening protocol by reviewing a randomly selected subsample of records (25%; n = 505). After the initial review, the two reviewers had 89.7% agreement with a Kappa of 0.386, or a fair amount of agreement. The two reviewers then discussed discrepancies to reach agreement where possible; the reviewers consulted a third independent reviewer on records where agreement could not be reached. The first author (HMM) engaged in journaling processes for qualitative analysis throughout reviewer discussions to monitor and track clarifications to inclusion criteria. The first author (HMM) then reviewed the remaining 75% of the records, consulting a second independent reviewer for cases where a decision could not be made alone. Records for which an abstract was unavailable were screened as full-text records before charting and characterizing the data. The first author then manually reviewed the reference lists for all relevant records to identify any additional records for inclusion. Additional records were added to the relevant sample for further charting and characterization.

Charting and Characterizing the Data

Before charting, the research team met to discuss the sample and decided to update the inclusion criteria to restrict records to publications between January 1, 2015, and December 31, 2021; this was done to improve the relevancy of the included studies. The full texts for relevant articles were then retrieved and downloaded to EndNote. We charted the data and critically apprised each source to extract evidence supporting the research questions. This review used a charting matrix to outline the framework for extracting data from the included sources. Before

charting, the research team reviewed the charting matrix and made modifications for clarity and synthesis. The matrix included bibliographical information (i.e., author, title, journal, and year of publication) for each article as well as categories for measures of self-concept and racism, identified dimensions of self-concept, applied definitions of self-concept and racism, type of study conducted (i.e., intervention, survey, mixed-methods), characteristics of the study sample (e.g., race/ethnicity, mean age), and types of health outcomes assessed. Additionally, psychometric properties and full descriptions of the items and measures used for assessing self-concept were assessed and charted.

The first author (HMM) and a graduate student trained in systematic literature reviews used the charting matrix to independently code a randomly selected subsample of 25% (n = 12) of the included articles. Throughout the charting process, the two reviewers discussed discrepancies in charting, and a third team member served as the final arbitrator where consensus could not be reached. Once the authors reached a consensus in charting the subsample, one reviewer (HMM) solely reviewed the remaining articles and charted the data according to the matrix. The reviewer regularly met with research team members throughout the charting process to obtain additional feedback on data characterization. The team engaged in a discussion to address all charting concerns, and a senior researcher (committee chair) served as a mediator. We extracted data from each eligible article and excluded additional articles found not to meet inclusion criteria during full-text analysis.

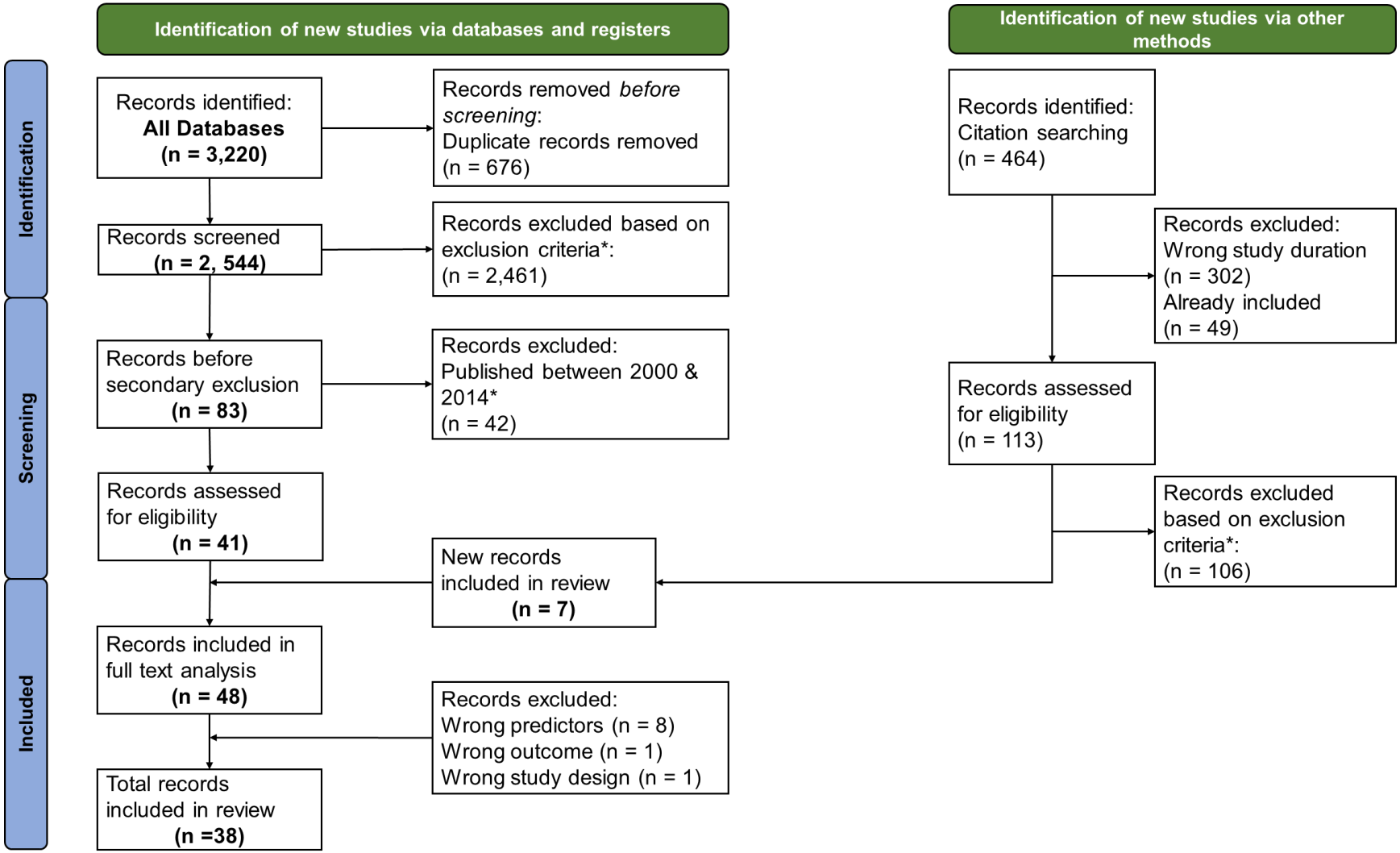
Results

The last search of the databases returned 3,220 records, of which 2,544 records were eligible for inclusion (Figure 2.1). After abstract and title screening, we identified 41 journal articles eligible for inclusion in full-text analysis and identified seven additional articles through

manual screening of the included reference lists. We conducted a full-text analysis of 48 articles, of which ten were deemed ineligible from lack of included study measures for self-concept or racism (n = 8), lack of a health outcome (n = 1), and implementation of the wrong study design (n = 1). Figure 2.1 depicts the complete decision process for the inclusion and exclusion of identified records. This review synthesized data from a total of 38 included articles (n = 38).

Figure 2.1

Flow Diagram for Record Inclusion



*For a full description of exclusion criteria, refer to the 'Method' section.

As mentioned above, we included articles of studies with participants 17 and older where the average age was greater than 18 (n = 2); these studies are documented in Table 2.1 (Bamishigbin et al., 2017; Cokley et al., 2017). One study centered on fathers as the population of interest with an average participant age of 27.80 (*SD* = 6.95) (Bamishigbin et al., 2017); the other study centered on college students as the population of interest with an average participant age of 21 (*SD* = 2.7) (Cokley et al., 2017). Both studies had an average participant age greater than 18 providing reasonable evidence that the findings in these studies were generalizable to adults and not adolescents.

The included studies measured five categories of primary health outcomes: mental health and well-being, psychosocial health and well-being, stress, physical health and well-being, and health behaviors (Table 2.1). Mental health was the most commonly measured outcome, with 82% (n = 31) of the included studies measuring depression, anxiety, paranoia, psychological distress, hopelessness, fatigue, trauma symptomatology, eating disorder symptomatology, or general mental health problems. Based on the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.) classification (American Psychiatric Association, 2013), we categorized eating disorder symptomatology as a mental health outcome rather than an outcome of health behavior. Approximately 10% (n = 4) of the included studies measured physical health outcomes, including general physical health and symptomatology (Blodorn et al., 2016; Foynes et al., 2015; Volpe et al., 2019; Wheeler et al., 2021).

Three (n = 3) articles assessed psychosocial health and well-being, including general psychosocial functioning and perceived purpose in life (Miller & Orsillo, 2020; Wheeler et al., 2021; Yoon et al., 2019). Three health behaviors were measured in the included articles: smoking abstinence (n = 1) (Alexander et al., 2019), sleep duration and difficulty (n = 1)

(Ogbenna et al., 2021), and substance use (n = 1) (Clifton et al., 2021). We categorized stress separately from other physical and psychosocial health outcomes because it included biologic markers (n = 2) (Parra & Hastings, 2020; Peterson et al., 2020) and self-report symptomatology (n = 2) (Allen et al., 2017; Graham et al., 2016). Across the 38 studies, 17 included additional psychosocial well-being measures as either an outcome or predictor variable. Additional psychosocial well-being measures included social support, life satisfaction, anger, and coping assessments (see Appendix B for additional data extracted from each article).

Table 2.1

Typography of Included Articles

Source		Subjects and Design			Variables		Key Findings	
Author(s) (year)	**Sample Size**	**Age(s) of Participants**	**Race/ Ethnicity of Participants**	**Study Design**	**Self-Concept Dimensions**	**Main Health Outcome(s)**	**Role of Self-Concept in Study**	**Role of Racism in Study**
Ai et al. (2015)	1,127	18 to 92 (*M* = 39.94, *SD* = 3.97)	Latino	Structured interviews	Perceived closeness to one's ethnic group	Mental health disorders	Racial and ethnic identity did not significantly predict mental health.	Perceived discrimination significantly predicted diagnosis with suicidal ideation.
Alexander et al. (2019)	146	*M* = 51.7, *SD* = 7.1	White, African American, Hispanic American, Indian/ Alaska Native, More than one race	Longitudinal Intervention Self-report and biochemical measures	Perceived self-efficacy for smoking cessation	Smoking abstinence	Lower perceived self-efficacy predicted a higher probability of smoking after quitting.	Perceived discrimination indirectly increased the probability of smoking through diminished self-efficacy for smoking cessation.
Allen et al. (2017)	628	18 to 76 (*M* = 28.7)	Polynesian	Cross-sectional Online survey	Self-esteem	Depression, Anxiety, Stress	Self-esteem had an indirect effect on the link between racial discrimination and satisfaction with life.	Racial discrimination was positively correlated with depression, anxiety, stress, and trait anger, and was inversely correlated with self-esteem and satisfaction with life.
Arnold et al. (2016)	170	18 to 65	Asian American, African American, Hispanic American, Indian Pacific Islander, Mixed	Cross-sectional Online survey	Self-esteem	Depression	The relationship between perceived discrimination and self-esteem depends on one's level of cultural socialization, which also depends on adoption status.	The relationship between perceived discrimination and depression depends on one's level of ethnic socialization and cultural socialization, both of which also depend on adoption status.
Atkins (2015)	208	18 to 45 (*M*=30.55, *SD*=7.08)	Black	Cross-sectional Pencil-paper survey	Self-esteem	Depression	Self-esteem did not have a direct effect on depression.	Perceived racism had an indirect effect on depression through self-esteem and anger and through the relationship between self-esteem and anger.

Bamishigbin et al. (2017)	306	17 to 58 (*M* = 27.80; *SD* = 6.95)	Black	Longitudinal & Cross-sectional Structured interviews	Self-esteem	Depressive symptoms	Self-esteem was not a significant predictor of depressive symptoms at 12 postpartum.	Reporting more frequent experiences of racism was significantly associated with greater depressive symptoms at 12 months postpartum.
Bernard et al. (2017)	157	<u>Cohort 1</u> 18 to 21 (*M* = 19.12, *SD* = 0.45) <u>Cohort 2</u> 18 to 19 (*M* = 18.07, *SD* = 0.25)	African American	Longitudinal Cohort study Online survey	Impostor phenomenon	Mental health functioning (Depression, Anxiety, Interpersonal sensitivity)	Impostor phenomenon did not predict greater depression, anxiety, or interpersonal sensitivity. Impostor phenomenon was associated with increased depressive symptoms for women that reported high frequencies of discrimination.	Those reporting racial discrimination were less likely to report symptoms of interpersonal sensitivity. Women who reported lower levels of bother by racial discrimination reported the highest rates of interpersonal sensitivity at higher levels of impostor phenomenon.
Blodorn et al. (2016)	Study 1: 731 Study 2: 475	<u>Study 1</u> *M* = 19.22, *SD* = 3.44 <u>Study 2</u> *M* = 32.30, *SD* = 11.05	White, Hispanic, Black	Cross-sectional Online survey	Self-blame Self-esteem	<u>Study 1</u> Anxiety/ depressive symptoms, Physical symptoms <u>Study 2</u> Anxiety/ depressive symptoms, Physical Health	Perceived discrimination and self-blame significantly predicted lower self-esteem and greater anxiety/ depressive symptoms, and greater physical symptoms (Study 1). Self-blame significantly predicted lower self-esteem, greater anxiety/ depressive symptoms, and worse physical health (Study 2).	Perceived discrimination indirectly predicted decreased self-esteem, increased anxiety/ depressive symptoms, and increased physical symptoms/ physical health through increased self-blame. Perceived discrimination directly predicted decreased self-esteem, increased anxiety/ depressive symptoms, and increased physical symptoms.
Brittian et al. (2015)	2,315	18 to 30 (*M* = 20.02, *SD* = 2.13)	Black, Latino	Cross-sectional Online survey	Ethnic identity (Exploration, Resolution, Affirmation)	Depressive symptoms	Ethnic identity exploration was not significantly associated with depressive symptoms. Ethnic identity resolution was indirectly associated with depressive symptoms through affirmation for both Black and Latino students.	Perceived ethnic group discrimination was positively related to exploration and was indirectly associated with depressive symptoms through ethnic identity affirmation among Latino students.

Cano et al. (2016)	1,084	18 to 25 (*M* = 19.73, *SD* = 1.70)	Hispanic	Cross-sectional Online survey	Self-esteem	Anxiety symptoms Depression symptoms	Higher self-esteem was directly associated with lower levels of anxiety and depressive symptoms.	Higher ethnic discrimination was directly associated with higher levels of anxiety and depressive symptoms and lower levels of self-esteem. Ethnic discrimination had an indirect effect on anxiety symptoms and depressive symptoms via self-esteem for both men and women.
Cheng et al. (2016)	207	18 to 63 (*M* = 26.57, *SD* = 9.24)	Hispanic	Cross-sectional Online survey	Ethnic identity (Affirmation, Belonging, Commitment, Search)	Depressive symptoms	The interactions among ethnic identity commitment, gender, and acculturative stress; ethnic identity search, gender, and acculturative stress; and ethnic identity search, gender, and perceived discrimination each had a significant association with depressive symptoms.	Perceived discrimination was significantly associated with depressive symptoms.
Cheng et al. (2017)	516	18 to 46 (*M* = 21.83, *SD* = 4.04)	Asian American	Cross sectional Online survey	Body surveillance/ Self-objectification Media internalization Body shame	Eating disorder symptomatology	Body surveillance/ self-objectification and body shame were directly associated with eating disorder symptomatology. Media internalization approached a significant direct association with eating disorder symptomatology.	Racial/ ethnic teasing and perceived discrimination directly predicted media internalization. Perpetual foreigner racism directly predicted body surveillance/ self-objectification. No measures of racism directly measured eating disorder symptomatology.
Clifton et al. (2021)	147	18 to 30 (*M* = 23.16, *SD* = 3.66)	Black	Cross-sectional & Correlational Self-report survey & computerized test	Implicit racial identity Explicit racial identity (Racial centrality)	Substance use Psychological distress	Explicit racial centrality was positively associated with psychological distress but was not associated with substance use. Implicit racial centrality was not associated with either psychological distress or substance use.	At high levels of implicit racial identity, racial discrimination was significantly associated with increased substance use and low levels of implicit racial centrality. When controlling for explicit racial centrality, racial discrimination had an indirect effect on substance use through implicit racial centrality.

Cokley et al. (2017)	322	17 to 49 (*M* = 21, *SD* = 2.7)	African American, Latino/a American, Asian American	Cross-sectional Online survey	Impostor phenomenon	Mental health (Anxiety, Depression)	The strength of the mediation effect of impostor feelings on the relationship between perceived discrimination and anxiety and the relationship between perceived discrimination and depression varied by race/ ethnicity.	Perceived discrimination was a significant positive predictor of impostor feelings and anxiety for African American students and a significant positive predictor of impostor feelings, anxiety, and depression in Latino/a American students.
Foynes et al. (2015)	491	*M* age at T1 = 19.32 (*SD* = 2.00) *M* age at T5 = 29.5 (*SD* = 2.07)	Non-Hispanic white, African American, Asian/ Pacific Islander, Native American, Hispanic white, Other	Longitudinal Self-report questionnaires	Self-esteem	Overall physical health functioning	Self-esteem was an outcome measure	Higher levels of race based discrimination predicted lower physical health functioning and lower levels of self-esteem.
Gayman et al. (2018)	248	18 to 86 (*M* = 58.11, *SD* = 16.26)	African American	Cross-sectional Structured interviews	Self-esteem	Depressive symptoms	Self-esteem significantly mediated the relationship between neighborhood income and depressive symptoms.	Increased depressive symptoms associated with higher levels of chronic stressors and daily discrimination were relatively lower among African American men who report more family support.
Graham et al. (2016)	173	18 to 62 (*M* = 25.47, *SD* = 8.57)	African American, Afro-Caribbean	Cross-sectional Online survey	Internalized racism	Mental health (Anxious arousal, Stress symptoms)	Internalized racism significant predicted anxious arousal and stress symptoms. Racist experiences had an indirect effect on anxious arousal symptoms and on stress symptoms through internalized racism.	Frequency of racist experiences was significantly and positively correlated with stress and anxious arousal. Internalized racism fully mediated the effect of racist experiences on anxious arousal and stress symptoms.
Hughes et al. (2015)	3,570	18 to 93 (*M* = 42.33, *SE* = .52)	African American	Cross-sectional Face-to-face computer-assisted interviews	Self-esteem Mastery Racial identity (Closeness to African Americans, Evaluation of African	Depressive symptomatology	A more positive group evaluation was significantly correlated with higher self-esteem and mastery and lower depressive symptoms. Social relationship variables and everyday racial discrimination reduced the effect of closeness on self-esteem and mastery and decreased the effect of group	Every day racial discrimination was not significantly associated with closeness to African Americans or group evaluation.

					Americans as a group)		evaluation on self-esteem and depressive symptoms. Higher closeness was associated with significantly lower mastery and increased depressive symptoms for respondents with low group evaluation and decreased depressive symptoms for respondents with high group evaluation.	
James (2016)	3,570	18 to 93 (*M* = 42.33, *SD* = 18.17)	African American	Cross-sectional Face-to-face interviews	Ethnic identity Self-esteem Internalized racism	Past-year major depressive disorder	At both low and high levels of internalized racism, participants with high self-esteem were at lower odds for past-year major depressive disorder. At high levels of self-esteem, increasing levels of internalized racism increased risks to past-year major depressive disorder. At low levels of internalized racism participants with high ethnic identity were at lower odds for past-year major depressive disorder than those with low ethnic identity.	Everyday discrimination was a control variable in the moderation models for ethnic identity and self-esteem. No data presented on direct or indirect effects of discrimination on health outcomes.
Kong (2016)	Study 2: 76	Study 2: (*M* = 37.08, *SD* = 7.91)	Latino/Hispanic American	Longitudinal Self-report survey	Collective self-esteem	Paranoia	When collective self-esteem was low, perceived ethnic discrimination was positively related to paranoia; when collective self-esteem was high, perceived ethnic discrimination was not significantly related to paranoia.	Perceived ethnic discrimination was positively related to paranoia. The interaction of perceived ethnic discrimination and collective self-esteem was negatively related to paranoia.

Meanley et al. (2020)	172	18 to 24 (*M* = 21.7, *SD* = 1.8)	Non-Hispanic, white, Racial/ ethnic minority (not specified)	Cross-sectional Online survey	Self-esteem	Depressive symptoms	Self-esteem was measured as an outcome. Race-based discrimination did not significantly predict self-esteem.	There were no significant associations between self-esteem and race-based discrimination, race-based discrimination excluding ancestry/ skin color, ancestry-based discrimination, and skin color-based discrimination.
Mereish et al. (2016)	1,746	<u>African American Participants</u> 18 to 93 (*M* = 43.29, *SD* = 16.22) <u>Afro-Caribbean Participants</u> 18 to 83 (*M* = 40.62, *SD* = 15.44)	African American, Afro-Caribbean	Cross-sectional Structured, face-to-face interviews	Self-esteem	Depressive symptoms	Self-esteem was associated with fewer depressive symptoms when controlling for nativity status. There was a significant indirect effect of everyday discrimination on depressive symptoms through self-esteem for African American men.	Everyday discrimination was associated with more depressive symptoms while accounting for nativity status and less depressive symptoms when accounting for self-esteem. Everyday discrimination had an indirect effect on self-esteem through ethnicity.
Miller and Orsillo (2020)	436	20 to 70 (*M* = 30.51, *SD* = 8.62)	Black Hispanic, Multiracial, American Indian/ Alaska Native, Native Hawaiian/ Pacific Islander, Middle Eastern, Other	Cross-sectional Online survey	Belongingness	Psychosocial functioning	Higher perceived belonging was associated with lower depression, anxiety, and stress. When controlling for values and acceptance, sense of belonging no longer had a unique effect on anxiety but significantly predicted unique variance in depression and stress.	As the levels of these racial stressors increased, the levels of self-reported psychological distress also increased. When controlling for values and acceptance, racist experiences had a significant effect on anxiety but not depression or stress, while microagressions did not have a significant effect on depression, anxiety, or stress.

Mossakowski et al. (2019)	444	*M* = 56.70, *SD* = 17.05	Non-Hispanic white, Hispanic, Non-Hispanic Black, Other race/ ethnicity, Mixed race/ ethnicity	Cross-sectional Telephone-based structured interviews	Ethnic identity	Psychological distress	A stronger ethnic identity was linked with lower levels of distress among immigrants. The interaction effect between ethnic identity and discrimination in predicting psychological distress was not significant. For U.S-born participants, a stronger ethnic identity intensified the association between frequently experiencing everyday discrimination and distress.	Everyday discrimination was significantly associated with higher levels of psychological distress in both the U.S.-born sample and the foreign-born sample. Everyday discrimination did not significantly interact with ethnic identity to buffer or exacerbate distress in the foreign-born sample.
Odafe et al. (2017)	243	18 to 65 (*M* = 35.89, *SD* = 12.41)	African American	Cross-sectional Pencil-and-paper survey	Self-esteem social support	Hopelessness	Self-esteem social support had a significant direct effect on predicting hopelessness.	Race-related stress had a significant direct effect on predicting hopelessness.
Ogbenna et al. (2021)	1,765	*M* = 43.2 (*SE* = 0.74)	Asian/ Native Hawaiian/ Other Pacific Islander, non-Hispanic	Cross-sectional Face-to-face structured interviews	Ethnic identity	Sleep difficulty Sleep duration	There was a significant effect modification by nativity and ethnic identity for sleep difficulty, but not sleep duration. Among individuals with low ethnic identity, both moderate and high discrimination were associated with sleep difficulty.	High discrimination was associated with shorter sleep duration compared to low discrimination. Compared to experiencing low discrimination, moderate and high discrimination were associated with sleep difficulty and shorter sleep duration in all models adjusting for covariates.
Ouch and Moradi (2019)	209	*M* = 28.1, *SD* = 8.8, *Mdn* = 25	Black, Asian, Hispanic, white, Other, American Indian, Middle Eastern, Pacific Islander	Cross-sectional Online survey	Emotion-focused, Problem-focused, and Socially-focused coping self-efficacy	Psychological distress	Problem-focused and emotion-focused coping self-efficacy (but not socially based coping self-efficacy) significantly accounted for the positive associations of expectation of stigma with psychological distress	Perceived discrimination had a significant unique positive direct link with psychological distress

Parra and Hastings (2020)	202	18 to 29 (*M* = 24.06, *SD* = 2.73)	Latinx	Cross-sectional Self-report, pencil-and-paper questionnaires	Identity integration	Stress (salivary and diurnal cortisol)	Challenges to identity integration was negatively associated with salivary cortisol intercepts but was not associated with diurnal cortisol slopes. The interaction term between heterosexist and racist discrimination on salivary cortisol intercepts and diurnal cortisol slopes through challenges to identity integration was non-significant.	The total and direct effects of racist discrimination on salivary cortisol intercepts and diurnal cortisol slopes were non-significant. Racist discrimination was positively associated with challenges to identity integration. Racist discrimination had a specific indirect effect on salivary cortisol intercepts through challenges to identity integration.
Perry et al. (2015)	243	18 to 35	Black/ African American	Cross-sectional & Longitudinal Cohort study Online survey	State level self-esteem Racial identity centrality (Centrality, Ideology, Regard)	Well-being (Depression, Anxiety, Fatigue, Stress)	As racial centrality increased, depression, anxiety, perceived stress, and fatigue increased and state self-esteem decreased	As everyday discrimination increased, depression, anxiety, perceived stress, and fatigue increased and state self-esteem decreased
Peterson et al. (2020)	276	18 to 25 (*M* = 21.74, *SD* = 2.21)	Black/ African American	Experimental (Pre-post test) Online survey	Perceived control	Stress (salivary cortisol)	Perceived control was a significant predictor of cortisol response. The relation between racial exclusion and cortisol release was mediated only by reduced perceived control.	Participants subjected to exclusion reported less perceived control and had greater cortisol output than participants subjected to the inclusion control. In testing the effect of racial exclusion on cortisol as mediated by negative affect or perceived control, subjection to exclusion predicted lower perceived control and greater negative affect.

Szymanski and Lewis (2016)	212	18 to 47 (*M* = 19.50, *SD* = 3.87)	Black/ African American, Biracial	Cross-sectional Online survey	Identity centrality	Psychological distress	Identity centrality did not moderate the gendered racism-psychological distress link. The indirect path between gendered racism and psychological distress through detachment coping was not significant when identity centrality was low but was significant when identity centrality was high or at the mean.	Gendered racism predicted psychological distress for women with high identity centrality. There was no support for the associated conditional indirect effects of gendered racism on psychological distress through coping.
Thibeault et al. (2018)	290	18 to 25 (*M* = 18.87, *SD* = 1.32)	Asian, Latino/a, Black, Middle Eastern, Multiethnic	Cross-sectional Online survey	Affirmation and Belonging	Depressive symptoms	Depressive symptoms were inversely related to affirmation/belonging: stronger affirmation/ belonging was associated with less depressive symptoms	Depressive symptoms were positively associated with perceived ethnic discrimination stress.
Velez et al. (2018)	276	18 to 64 (*M* = 32.77, *SD* = 9.07, *Mdn* = 30)	Black, Asian/ Pacific Islander, Hispanic, Bi-/ Multiracial, American Indian, Middle Eastern, Other	Cross-sectional Online survey	Self-esteem	Psychological distress	Self-esteem was negatively correlated with psychological distress.	Racist workplace discrimination yielded negative correlations with self-esteem and positive correlations with psychological distress. Workplace discrimination also yielded a positive unique indirect relation with psychological distress through self-esteem.
Velez et al. (2015)	173	18 to 70 (*M* = 31.10, *SD* = 11.32, *Mdn* = 28.50)	Hispanic/ Latina/o	Cross-sectional Online survey	Internalized racism Self-esteem	Psychological distress	Internalized racism did not have a unique relationship with psychological distress but did have a negative unique link with self-esteem. For individuals with low internalized racism, racist discrimination was negatively associated with self-esteem; for those with high internalized racism, this association was positive.	Racist discrimination yielded a positive unique relation with psychological distress. Racist discrimination was not associated uniquely with self-esteem.

Volpe et al. (2019)	119	*M* = 19.45, *SD* = 1.42	Black/ African American Bi-/ multi-racial African Afro-Central/South American/ Caribbean Black	Cross-sectional & Experimental (Pre-post test) Online survey & lab testing	Racial identity (Private regard, Public regard, Centrality)	Respiratory sinus arrhythmia	More frequent racial discrimination was associated with augmentation in respiratory sinus arrhythmia recovery at low levels of racial centrality.	More frequent racial discrimination was associated with augmentation in respiratory sinus arrhythmia reactivity at low levels of racial centrality. The interactions between racial discrimination and private regard and racial discrimination and public regard were nonsignificant in predicting respiratory sinus arrhythmia.
Watson et al. (2016)	368	18 to 58 (*M* = 23.24, *SD* = 5.74)	Black, Asian/ Asian American, Hispanic/ Latina, Multiracial, Middle Eastern, Native American, Other, East Indian	Cross-sectional Online survey	Self-esteem Ethnic identity strength (Exploration, Commitment, Belonging, Affirmation)	Trauma symptomatology	Lower self-esteem was related to more trauma symptoms. Ethnic identity strength was directly related to self-esteem. Self-esteem significantly mediated the positive relationship between racist discrimination and trauma symptoms.	Lifetime racist experiences were related to lower levels of self-esteem and more trauma symptoms. At low levels of ethnic identity strength, racism was positively associated with trauma symptoms.
Wheeler et al. (2021)	Time 1 = 246 families Time 2 = 185 families Time 3 = 173 families	<u>Fathers</u> *M* = 40.70, *SD* = 5.78 <u>Mothers</u> *M* = 39.00, *SD* = 4.63	Hispanic of Mexican-origin	Longitudinal Computer-assisted, face-to-face interviews	Self-esteem	Well-being (Depressive symptoms) Self-esteem Global physical health	Self-esteem was measured as an outcome.	Parents' discrimination was related to higher depressive symptoms and lower self-esteem and global physical health. Under conditions of high father-youth conflict the negative association between fathers' perceptions of workplace discrimination and self-esteem was stronger than under low father-youth conflict.
Yoon et al. (2019)	397	65 and older	African American	Cross-sectional Computer-assisted, telephone interviews	Self-acceptance	Mental health problems Psychological well-being (Self-acceptance, Purpose in life)	Self-acceptance was a significant predictor of mental health in both men and women. The strength of the relationship between discrimination and mental health was weakened by psychological well-being.	Everyday discrimination was a significant predictor of mental health for men and women.

Of the included articles, 60% (n = 23) included a definition for racism (Table 2.2). The common theme across these definitions was unfair or unjust treatment based on race or ethnicity. The included articles also classified foundational definitions that categorize racism as socially constructed, systematic, and negative. Furthermore, gendered or sexual racism was identified as a multiplicative and intersectional experience with discrimination or unfair treatment based on gender and race. The inclusion criteria for this review required the inclusion of perceived racism measures; measures of perceived racism used by the included articles depended on each study population. Seventeen (n = 17) articles used general perceived discrimination measures, including the Everyday Discrimination Scale or the Experiences of Discrimination Scale. Such scales were designed to measure the frequency of experiences with discrimination, the perceived cause of discrimination experiences, and the perceived pervasiveness or stressfulness of discrimination experiences. Other measures used to assess perceived racism were pre-specified for assessing ethnic or racial discrimination, not general discrimination, and were used in 55% (n = 21) of the included articles.

Table 2.2

Definitions of Racial Discrimination as Described in the Included Articles

Term	Definitions	Source
Discrimination/ perceived discrimination	an uncontrollable and unpredictable social stressor characterized by perceptions of unfair treatment based on one's characteristics, such as race/ethnicity or sexual orientation	Alexander et al., 2019
	differential treatment based on gender, race and ethnicity, and sexual orientation	Brittian et al., 2015
	self-reported unfair treatment by others based on one's race and/or ethnic membership	Cheng et al., 2016
	differential treatment of members of [minority] groups by both individuals and social institutions	Miller & Orsillo, 2020
	unfair treatment (not necessarily because of race or ethnicity)	Mossakowski et al., 2019

	unjust or prejudicial treatment of individuals based on race, age, sex, or another socially defined characteristic (e.g. actual or perceived membership of a specific group); can be encountered within the structured institution of governance or in personal interactions	Ogbenne et al., 2021
	manifestation of a negative attitude, judgment, or unfair treatment toward members of a group	Cokley et al., 2017
Prejudice	attitudes toward a socially marginalized group	Allen et al., 2017
Major lifetime discrimination	significant or critical events which happened some years ago that adversely affect one's status or other important aspects of life	Yoon et al., 2019
Everyday discrimination	routine, less overt, chronic experience of unfair treatment	Cokley et al., 2017
	more recent daily frequent events/assault on one's character	Yoon et al., 2019
Racial/ ethnic/ perceived ethnic/ perceived ethnic-racial/ perceived racial discrimination	actions by members of dominant racial groups that have negative and differential impacts on members of non-dominant racial groups	Volpe et al., 2019
	actions, practices, and/ or behaviors by members of socially dominant groups that have a differential and negative impact on members of socially subordinate groups	Allen et al., 2017
	Unfair treatment attributable to one's ethnic background	Thibeault et al., 2018
	the subjective experience of institutional (i.e., organizational policies and procedures that restrict opportunities for workers based on race/ ethnicity) and interpersonal bias (i.e., negative beliefs, attitudes, feelings, and resulting negative actions and behaviors toward workers based on race/ethnicity) that results in unfair treatment of members of marginalized groups	Wheeler et al., 2021
	unfair or negative treatment based on one's ethnic background	Cano et al., 2016
	denying individuals equality of treatment because of their [ethnic] background	Kong, 2016
	Unequal job treatment or lack of positive opportunities because of one's ethnicity as well as unequal socioemotional treatment or negative relational experience because of one's ethnicity	Kong, 2016
Racial microaggressions	everyday slights, indignities, put-downs, and insults by individuals toward a marginalized group; these behaviors are initiated by deep-rooted attitudes and thoughts often times outside of one's conscious awareness leading to unconscious	Allen et al., 2017

	manifestations of a worldview of inclusion/exclusion and superiority/inferiority	
	brief and commonplace daily verbal, behavioral and environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory or negative slights and insults to the target person or group	Miller & Orsillo, 2020
Racial/ ethnic teasing	explicit or subtle social derision of physical characteristics and appearance practices (e.g., skin color, facial features, wearing cultural dress) associated with minority racial/ethnic culture	Cheng et al., 2017
Racism/ perceived racism	unfair treatment thought to be received because of one's ethnicity (a person's race or culture); as such perceived racism is a cultural construct	Atkins, 2015
	beliefs, attitudes, institutional arrangements, and acts that denigrate individuals because of race	Bamishigbin et al., 2017
	beliefs, attitudes, and individual and systemic approaches that degrade people based on the color of their skin, that is the deployment of power against groups perceived as inferior at both institutional and individual levels and through both intentional and unintentional action	Graham et al., 2016
	a systemic form of oppression that can be enacted through discrimination and constitutes a severe and pervasive form of social stress. Racism refers to beliefs and actions that evaluate a person's non-majority cultural heritage or a person's non-majority external social classification based on phenotype, language, or membership in an ethnic/racial group as inferior to, or less than, that of a majority group member	Parra & Hastings, 2020
	beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of their phenotypic characteristics or ethnic group affiliation	Yoon et al., 2019
	An ideology of superiority that results in discriminatory and prejudicial behavior in three dimensions: individual, institutional, and cultural	Yoon et al., 2019
Individual racism	racism that individuals experience on a personal level	Graham et al., 2016
Institutional racism	social and institutional policies that prevent Blacks from benefits offered to majority members of society	Graham et al., 2016
Cultural racism	cultural practices of the majority group being held as superior to cultural practices of minority groups	Graham et al., 2016

Perpetual foreigner racism	when visible minorities, particularly those of Asian descent, are perceived by the public as cultural and linguistic outsiders, and are questioned as authentic Americans regardless of citizenship status or generational lineage in the United States	Cheng et al., 2017
Gendered/ sexual racism	Experiences with the intersection of racism and sexism	Szymanski & Lewis, 2016
	A form of discrimination that includes the intersections of racial and gender oppression	Watson et al., 2016
	type of discrimination that constitutes being rejected or sexually objectified based on one's racial/ethnic background. These experiences communicate and reinforce stereotypes, and elicit perceptions of a racial hierarchy	Meanley et al., 2020
Race-related exclusion	Being ignored, overlooked, or not given service due to one's race	Peterson et al., 2020

Of the included articles, 79% (n = 30) provided definitions for the include self-concept sub-dimensions (Table 2.3). None of the included articles explicitly measured self-concept as a construct, though 13.2% (n = 5) of the included articles did mention self-concept in the definition of the included sub-dimensions (Cheng et al., 2016; Clifton et al., 2021; Mossakowski et al., 2019; Szymanski & Lewis, 2016; Thibeault et al., 2018).

Table 2.3

Definitions of Self-Concept Sub-dimensions as Described in the Included Articles

Term	Definition	Source
Racial and Ethnic Identity	Perceived closeness to one's ethnic group	Ai et al., 2015
	One aspect of an individual's overall identity that stems from the sense of belonging individuals gain from ethnic group affiliation; defined by cultural heritage and attributes, such as values, traditions, and language; includes aspects of one's identity that are derived from ethnic identification and ethnic group membership	Brittian et al., 2015
	An aspect of self-concept that refers to the worth one places on belonging to one's racial group	Clifton et al., 2021
	Feelings of closeness to one's racial/ ethnic group	James, 2017

	Includes fundamental elements of group (or collective) identity formation; includes self-categorization (as a member of a group), evaluation (positive or negative), affective attachment, behavioral involvement, and the degree of importance (low to high) of a particular group membership within an individual's self-concept	Mossakowski et al., 2019
	a sense of ethnic appreciation, preservation, and participation in cultural practices or a sense of belonging, is conceptualized as a buffer against the negative impacts of discrimination on health problems	Ogbenna et al., 2021
	an ethnically/ racially diverse person's sense of belonging to their cultural heritage and ethnic/racial group	Parra & Hastings, 2020
	the cultural component of social identity and refers to the cultural self in relation to cultural others, as well as the sense of identification with others in the same ethnic group	Thibeault et al., 2018
	the significance and qualitative meaning that individuals attribute to being [African American] in their conceptualizations of self	Perry et al., 2016
	the significance and meaning that Black individuals place on race when defining themselves; includes centrality, private regard, and public regard	Volpe et al., 2019
	a dynamic and multidimensional process that includes a sense of exploration of and belonging to one's cultural group; involves exploration and commitment	Watson et al., 2016
Positive ethnic-racial affect	Optimistic feelings about one's ethnocultural group; encompasses specific constructs such as affirmation and belonging	Thibeault et al., 2018
Personal identity formation	Involves exploration, knowledge, and commitment	Mossakowski et al., 2019
Racial centrality/ racial identity centrality	The extent to which an individual considers race to be a part of their identity/self-concept	Clifton et al., 2021
	a dimension of racial identity that refers to "the extent to which a person normatively defines himself or herself with regard to race"	Perry et al., 2016
	how important being an African American woman is to one's self-concept; it is considered to be stable across situations and contexts	Szymanski & Lewis, 2016
	The degree to which one defines oneself in terms of race	Volpe et al., 2019
Ethnic Identification	Affiliation with one's ethnic group	Brittian et al., 2015

Ethnic identity commitment	A subjective sense of ethnic group belonging, affirmation, and affective attachment; a cultural resource that has protective functions to offset the negative influence of minority stress on mental health by enhancing self-concept and facilitating group pride and solidarity	Cheng et al., 2016
	a sense of belonging and attachment to one's ethnic identity, but does not necessarily indicate a mature or confident identity	Watson et al., 2016
Ethnic identity search/ exploration	Seeking experiences or information related to one's ethnic group	Cheng et al., 2016
	Searching for information and experiences that pertain to one's ethnicity	Watson et al., 2016
Sexual identity integration	a dynamic process of empowerment through the adoption of positive attitudes and beliefs about one's marginalized sexual identities and the disclosure of one's sexual identities to others (i.e., outness)	Parra & Hastings, 2020
Coping self-efficacy	the belief that one has coped effectively with stressors in the past and can do so with anticipated stressors in the future	Ouch & Moradi, 2019
Perceived self-efficacy for smoking cessation	Perceived confidence in not smoking during certain situations or scenarios	Alexander et al., 2019
Self-esteem	Individual's positive or negative assessment of the self; it is a feeling of worthiness that one is good enough	Atkins, 2015
	A resilience resource that enables individual to better manage their lives, persist, and grow in the context of trauma or long-term chronic stress	Bamishigbin et al., 2017
	one's sense of self-worth	Gayman et al., 2018
	the sense of self-worth	Hughes et al., 2015
	A sense of self-worth	James, 2017
	Overall perceptions of self-worth and value	Mereish et al., 2016
	how people view and feel about themselves as individuals	Watson et al., 2016
Collective/ group self-esteem	relatively positive or negative evaluations of or attitudes toward one's group	Hughes et al., 2015
	individuals' positive self-views based on their memberships in ascribed social groups pertaining to gender, ethnicity, sexual orientation, age, socioeconomic status, and so forth	Kong, 2016

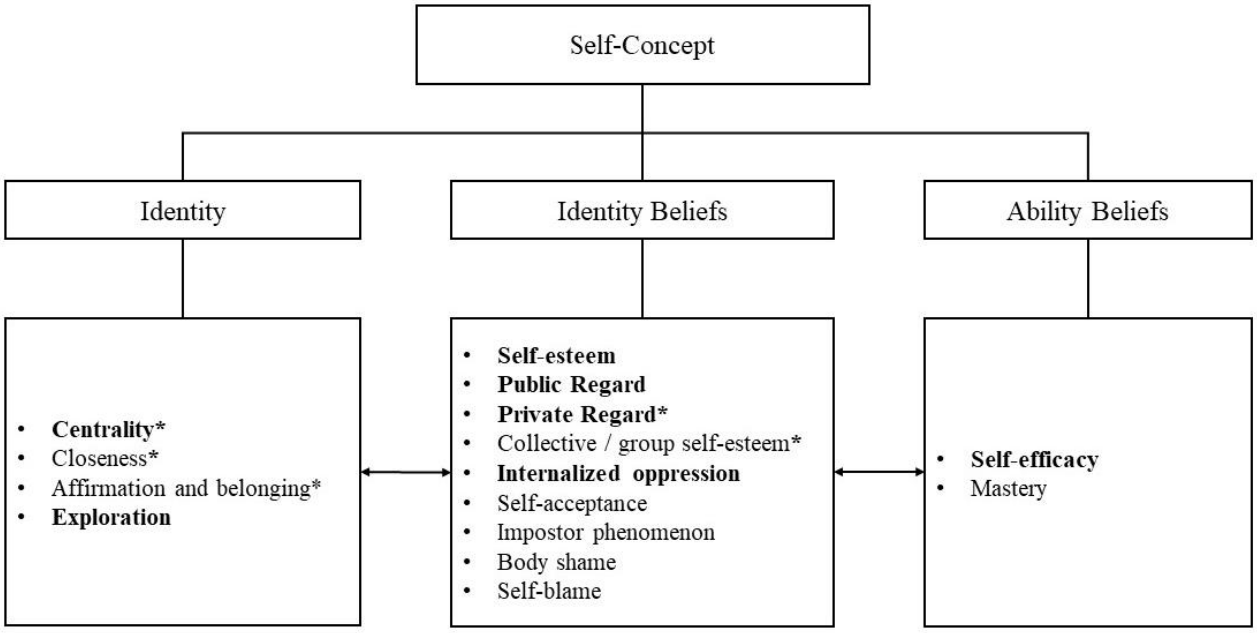
Self-esteem support	the presence of others to whom one might compare oneself favorably	Odafe et al., 2017
Public Regard	The perception of others' evaluation of one's social category	Kong, 2016
	How one believes others view members of their racial/ethnic group	Volpe et al., 2019
Private Regard	How one views members of their racial/ethnic group and their own group membership	Volpe et al., 2019
Imposter phenomenon	Feelings of intellectual incompetence including questions about the validity of intellectual ability, attribution of success to external factors, or fear that intellect and accomplishments will be exposed as false or fraudulent	Bernard et al., 2017
	the belief in oneself as an intellectual fraud and involves an individual finding it difficult to internalize her or his achievements	Cokley et al., 2017
	an internal experience of intellectual phoniness in high achievers who are unable to internalize successful experiences	Cokley et al., 2017
Self-blame	Blaming negative experiences on oneself; internal attributions focus on the self-directed causes of outcomes	Blodorn et al., 2016
Self-objectification	the adoption of an observer's perspective on their physical selves; the tendency to take an outsider's view of one's body with a focus on how it looks	Cheng et al., 2017
Media internalization	the internalization of sociocultural beauty ideals, such as those in the media; media influence and internalization of physical ideals portrayed in the media	Cheng et al., 2017
Body shame	internalized shame about one's body; shame that one's body does not conform to cultural body standards	Cheng et al., 2017
Internalized racism (or internalized oppression)	The acceptance, by the marginalized group, of negative and critical beliefs about one's self-worth	Graham et al., 2016
	Accepting the negative racial stereotypes of minority groups that pervade society and applying them to oneself as a group member	Hughes et al., 2015
	the acceptance, by marginalized racial populations, of the negative societal beliefs and stereotypes about themselves	James, 2017
	The internalization of negative attitudes or feelings about one's minority group or identity	Velez et al., 2015

Social identity	A person's awareness of belonging to a social category or group, together with value and emotional significance of belonging	Hughes et al., 2015
	the component of one's self-concept derived from membership within a social group	Thibeault et al., 2018
Self-categorization	Identifying as a group member and assessing oneself as being more or less typical of or similar to the group	Hughes et al., 2015
Affective commitment	having strong ties to or a sense of closeness to a group or a sense of interconnection with the group	Hughes et al., 2015
Mastery	A sense of control over one's outcomes	Hughes et al., 2015
Perceived control	The belief that one has power over their internal states and behavior and can influence their environment to bring about desired outcomes	Peterson et al., 2020
Belongingness/ affirmation and belonging	Feeling that one is valued, needed, accepted, and that one "fits" in a particular system or environment	Miller & Orsillo, 2020
	one's sense of attachment to their ethnic group	Thibeault et al., 2018

Self-concept sub-dimensions were most commonly measured as self-esteem (n = 19), followed by racial/ethnic identity (n = 12). Other repeated self-concept sub-dimensions measured in the reviewed articles included self-efficacy (n = 2), internalized racism (n = 2), belonging (n = 2), and imposter phenomenon (n = 2). In total, self-concept was assessed across fifteen sub-dimensions which we categorized into three primary dimensions of identity, identity beliefs, and ability beliefs. Figure 2.2 depicts the proposed conceptual taxonomy for the structure of self-concept. The model demonstrates a proposed hierarchical structure that includes each self-concept dimension and the associated sub-dimensions as measured across the included studies.

Figure 2.2

Self-Concept Conceptual Taxonomy



Note. Significant or commonly represented sub-dimensions are in bold.
*Indicated sub-dimensions are conceptually identical.

Self-Concept Dimensions

As noted in Figure 2.1, we identified three primary dimensions of self-concept. Each primary dimension categorizes hierarchical sub-dimensions measured across the included studies.

Identity

Four sub-dimensions of identity were commonly included in this review: centrality, closeness, affirmation and belonging, and exploration (Figure 2.2). Notably, other terms described similar identity sub-dimension, including identity integration (Parra & Hastings, 2020) and identity commitment (Cheng et al., 2016; Mossakowski et al., 2019; Watson et al., 2016) which were not depicted in the conceptual taxonomy. Based on the definitions collated from the included studies (Table 2.3), we identified two core sub-dimensions of identity: exploration and

centrality. While the terms used to describe these sub-dimensions varied across the included studies, the themes of the included definitions were similar. *Identity* refers to group membership and perceived closeness with that group. Therefore, centrality, affirmation and belonging, closeness, and commitment are synonymous terms for the same construct. As such, we highlight centrality and exploration as the most representative sub-dimensions under identity in our proposed self-concept taxonomy (Figure 2.2).

Identity Beliefs

The identity beliefs dimension includes several sub-dimensions as assessed in the included studies. As opposed to including self-esteem as an independent self-concept dimension, we grouped self-esteem with other sub-dimensions nested in the hierarchical structure under the identity beliefs dimension. Other sub-dimensions of identity beliefs include self-acceptance, imposter phenomenon, internalized oppression, public and private regard, body shame, and self-blame. Two (n = 2) of the included studies measured private and public regard based on definitions and measures of racial identity (Hughes et al., 2015; Volpe et al., 2019). However, other sub-dimensions, such as group or collective self-esteem and internalized racism, were defined similarly to private regard (i.e., perceptions or views about a social group and one's group membership; Table 2.3). Additionally, we posit that internalized oppression, while similar in definition to private regard and group/ collective self-esteem, distinctively refers to one's intrinsic *and* oppressive perceptions and beliefs about one's group membership. As such, internalized oppression is highlighted as a distinctive sub-dimension apart from private regard. Conversely, public regard describes intrinsic beliefs about others' perceptions of one's social group membership, which is distinct from identification or integration with one's group

membership. Therefore, private and public regard were considered sub-dimension of identity beliefs, not sub-dimensions describing identity.

Similarly, included articles defined self-esteem as overall perceptions of self-worth and value (Table 2.3). While self-esteem was most often measured as trait-level self-esteem (n = 16), other studies measured collective or group self-esteem (n = 1; Kong, 2016) state-level self-esteem (n = 1; Perry et al., 2015) and self-esteem social support (n = 1; Odafe et al., 2017. Across the studies, self-esteem measures assessed perceptions of worth and value tied to one's race, ethnicity, gender, or other social identities. Given this understanding, we classified trait-level self-esteem and group or collective self-esteem as identity beliefs. Other sub-dimensions of identity beliefs included impostor phenomenon (n = 2) (Bernard et al., 2017; Cokley et al., 2017), body shame (n = 1) (Cheng et al., 2017), and self-blame (n = 1) (Blodorn et al., 2016). These sub-dimensions are related to intrinsic perceptions about one's worth or value; therefore, while not commonly measured, we included these as sub-dimensions of identity beliefs in our proposed taxonomy (Figure 2.2).

Ability Beliefs

The third self-concept dimension established under this review is ability beliefs, commonly understood as self-efficacy. However, in this review, it was clear that efficacy beliefs were not just particular to health behaviors such as smoking abstinence (n = 1; Alexander et al., 2019 or coping (n = 1; Ouch & Moradi, 2019. Efficacy and ability beliefs also included the mastery sub-dimension, or a sense of control over one's outcomes. As mastery and self-efficacy pertain to ability beliefs, we categorized these sub-dimensions under ability beliefs in the presented self-concept taxonomy (Figure 2.2).

Relationship between Health, Racism, and Self-Concept

Across the fifteen identified sub-dimensions, self-concept was included as a predictor of health in all but three of the included studies (n = 35). The remaining three articles (n = 3) assessed self-concept (measured as self-esteem) as an outcome measure but not as a predictor (Foynes et al., 2015; Meanley et al., 2020; Wheeler et al., 2021). In assessing self-concept as a predictor of health, 66% (n = 25) of the included studies identified dimensions of self-concept as significant moderators (n = 10) or mediators (n = 15) in the relationship between racism or discrimination and health. Similarly, racism and discrimination were associated with health and self-concept in 76% (n = 29) and 63% (n = 24) of the included studies, respectively. Overall, the included studies show that experiences with racism or discrimination negatively affected health outcomes; this relationship was sometimes mediated or moderated by self-concept dimensions and sub-dimensions. In two of the included studies (n = 2), the self-concept dimensions fully mediated the effects of racism and discrimination on health (Cokley et al., 2017; Graham et al., 2016). Notably, the relationship between the self-concept dimensions, racism, and health depended on other sociodemographic and psychosocial factors in the included studies. Depending on the included covariates, the relationship between the main variables changed, sometimes affecting the model significance for predicting health outcomes. This variability further supports a firm understanding that the self-concept dimensions and sub-dimensions are situationally-dependent, and measures of these dimensions should be particularized to the target population and health outcomes.

Discussion

This review provided an overarching evaluation of studies that examine the relationship between racism, health, and self-concept for U.S. adults. We found that health outcomes assessed

in relation to racism and self-concept were most often psychological, including anxiety and depression. In operationalizing self-concept in health and racism research, it is clear that self-concept includes a range of assessments, including self-esteem, racial/ ethnic identity, and self-efficacy. Overall, self-concept in health research comprises fifteen sub-dimensions classified across three primary dimensions of identity, identity beliefs, and ability beliefs. Of the fifteen identified sub-dimensions, we determined that ten adequately represent the three primary dimensions of self-concept. Each self-concept dimension was situationally-dependent and analyzed with covariates distinctive to each health topic and population. Self-concept dimensions and sub-dimensions were often included as predictors of health outcomes and occasionally included as primary psychosocial well-being outcomes. Additionally, the relationship between racism and health outcomes was most often mediated or moderated by the self-concept dimensions.

This review aligns closely with the structure of the non-academic self-concept considered in the Shavelson et al. hierarchical model of self-concept (Marsh & Shavelson, 1985; Shavelson et al., 1976). This review increases evidence of the self-concept's hierarchical structure, where lower structural sub-dimensions are fluid and situationally dependent. However, unlike other self-concept models, this assessment categorized the sub-dimensions of self-concept for adults in health and racism research across three primary dimensions. These three primary dimensions were selected based on similarities across the defined characteristics of each variable assessed in the included studies. It is essential to understand that this assessment does not provide an exhaustive list of all the examinable factors of adult health and racism research; this review does, however, offer a novel assessment of how self-concept is defined and assessed in relation to health and racism.

Similar to the description of non-academic self-concept outlined in the previously described hierarchical model of self-concept (Shavelson et al., 1976), we find that self-concept comprises multiple dimensions with increasingly specific and situationally-dependent beliefs and perceptions. For example, one study in this review included assessments of body image and disordered eating behaviors (Cheng et al., 2017). The self-concept dimensions and sub-dimensions assessed in the Cheng et al. (2017) study were specific to the physical self-concept considered under the Shavelson et al. model (Marsh & Shavelson, 1985; Shavelson et al., 1976). However, concerning the other studies included in the current review, the sub-dimensions assessed for body image and body surveillance were closely related to other sub-dimensions of identity beliefs. Likewise, impostor phenomenon, which two studies identified as a self-concept sub-dimensions (Bernard et al., 2017; Cokley et al., 2017), is a factor that most closely relates to academic self-concept under the Shavelson et al. model (Marsh & Shavelson, 1985; Shavelson et al., 1976). However, regarding the effects of impostor phenomenon on health outcomes and not academic success, we affirm that impostor phenomenon is also a sub-dimension of identity beliefs. Given this understanding of factors such as impostor phenomenon and body image, this review provides evidence that the proposed dimensions of self-concept (i.e., identity, identity beliefs, and ability beliefs) are correlated and are not independent. The identified sub-dimensions may function across the three primary dimension depending on the health outcomes and assessed populations. For this reason, sub-dimensions like impostor phenomenon, body image/ surveillance, and shame can affect identity centrality, closeness, affirmation and belonging, and self-efficacy to engage in specific roles and behaviors.

Regarding the assessment of identity as a primary dimension of self-concept, the Multidimensional Model of Racial Identity (MMRI) classifies racial identity as a

multidimensional structure that is integral to understanding how racial group membership influences the beliefs one has about oneself (i.e., one's self-concept) (Sellers, Smith, et al., 1998). Moreover, Sellers et al. (1998) expound that racial identity comprises centrality, salience, regard, and ideology. As such, the Multidimensional Inventory for Black Identity (MIBI) accurately measures racial identity, specifically for Black populations (Sellers et al., 1997). Subscales of the MIBI were used to measure racial identity in two of the included studies in this review (Clifton et al., 2021; Perry et al., 2015) (Appendix B). Other studies included in this review used additional items and measures similar to the items assessing centrality included in the MIBI (Sellers et al., 1997). The Ethnic Identity Scale (Brittian et al., 2015; Ogbenna et al., 2021) and the Revised Multigroup Ethnic Identity Measure (MEIM) (Cheng et al., 2016; Mossakowski et al., 2019) were used to assess the affirmation and belonging, closeness, and commitment sub-dimensions. As mentioned, when reviewing the definitions of these sub-dimensions and the items used to assess them, we found these sub-dimensions were synonymous with racial centrality as outlined in the MMRI (Sellers, Smith, et al., 1998). One notable difference in assessing ethnic identity over racial identity was the inclusion of exploration. Exploration, while not classified as a component of the MMRI, was a reoccurring sub-dimension identified in this review; therefore, we included exploration as a separate and representative sub-dimensions of identity in our proposed conceptual taxonomy (Figure 2.2). Based on the evidence provided by this review and other studies (Sellers, Chavous, et al., 1998; Sellers et al., 1997; Sellers, Smith, et al., 1998), there is a clear understanding that identity, particularly the sub-dimensions of centrality and exploration, is a multidimensional and integral factor in one's self-conceptualization.

A previous meta-analytic review of the literature addressing the relationship between racism and self-concept classified similar sub-dimensions from this review as behavioral and psychological cultural outcomes (Carter et al., 2019). A lack of cohesive self-concept measures, definitions, and constructs compromises the reproducibility and synthesis of health and racism research findings. Therefore, there is a clear need for better conceptualization and operationalization of self-concept and its associated dimensions for health and racism research. Based on theories of self and social psychology, social and personal components comprise the self, which makes constructs like self-concept multifaceted. Cultural self-concept dimensions are still fundamental to understanding the effects of social experience and identity on the cognitive appraisal processes required to evaluate self-worth and beliefs about self attributes. However, the present review attempts to synthesize a large and varying body of research by translating commonly used constructs in health research based on the theoretical foundations previously established in social psychology research. It is necessary that psychosocial constructs used across different fields of research share operational definitions. The research on racial/ ethnic identity must include constructs that reference the robust theoretical foundations of identity and identity development described in social psychology. For these reasons, we recommend the inclusion of such constructs within the self-concept structural model for improved classification of psychosocial determinants of well-being.

Additionally, this review targeted the operationalization and utility of self-concept and racism in health research. Therefore, the proposed taxonomy may not be comprehensive to all aspects of self-concept, including the most commonly reviewed academic self-concept. Of the 2,461 articles that were excluded based on the exclusion criteria (Figure 2.1), we identified a large body of research that assessed children and adolescents (n = 365), including records

assessing academic self-concept and educational pedagogies (n = 385). While this area of research is necessary and provides utility for understanding child developmental psychology and academic success, researchers must understand that self-concept is not only youth-specific. The studies included in this review provide evidence that the dimensions of self-concept are situationally dependent and, therefore, fluid throughout the life course. We recommend that health researchers attempt to include multiple dimensions of self-concept in assessments of health and racism rather than focusing on just one facet of the general self-concept structure. For example, rather than reviewing self-esteem as a stand-alone, trait-level measure of psychosocial functioning or well-being, consider including self-esteem, self-efficacy to engage in coping, and social identity belonging and affirmation in assessing health outcomes. This cohesive inclusion is crucial to understanding the social determinants of health, including experiences with oppression. Those attempting to understand the complex relationship between racism and health might consider including measures that assess all three primary dimensions of self-concept for a comprehensive understanding of psychosocial well-being.

It is essential to understand that many of the dimensions of self-concept presented in this review are related, and some are interchangeable. Theoretical foundations document self-esteem as a component of self-concept; self-esteem is often regarded as the cognitive evaluation or appraisal of self and identity, while self-concept is a more holistic understanding of self and identity. In Carl Rogers's assessment, self-concept comprises three components: the ideal self, self-esteem, and self-image (Ford, 1991; Rogers, 1961). We do not classify the ideal self under a primary dimension in our taxonomy; we instead classify aspects of self-esteem and self-image across identity, identity beliefs, and ability beliefs. Because the process of self-concept development is rooted in an evaluative appraisal of one's attributes and worth, we do not find it

necessary to include a measure of the ideal self in our conceptual structure of self-concept. However, in framing self-concept as a larger hierarchical model, Rogers's factors of self-esteem and self-image can be comprehensively measured with psychosocial health and well-being outcomes. Other theoretical foundations such as self-concept clarity posit identity as a personal and social dichotomy; therefore, we categorized the dimensions identified in this review based on how social identity affects internalized or intrinsic perceptions of self. This understanding is vital given social identity's role in racism, discrimination, and other forms of oppression.

Similarly, other studies and theoretical foundations support an association between overarching self-concept and identity, self-esteem, and locus of control or perceived control (Burke & Reitzes, 1981; Campbell, 1990; Diesterhaft & Gerken, 1983), which can translate to the three primary dimensions presented in our model: identity, identity beliefs, and ability beliefs. We formulated the identity dimension to classify the components of social identity typically explored as stand-alone constructs of social psychology. We also structured the identity beliefs dimension to include self-esteem and other assessments of self and social identity. In constructing this model to be more inclusive of other cognitive appraisals of self-worth and attributes, we can include several comprehensive dimensions in addition to self-esteem. Therefore, we can measure the foundations of Rogers's self-concept appraisal in addition to the theoretical foundations of self-concept clarity and self-categorization (Campbell et al., 2003; Onorato & Turner, 2004; Rogers, 1961; Turner & Onorato, 1999).

Depression, anxiety, and other mental health symptomatology were the most commonly reported health outcomes across the included studies in this review. Entire systematic reviews have demonstrated strong associations between self-esteem and mental health (Sowislo & Orth, 2013), as well as clear associations between racism and discrimination and self-esteem across the

life course (Carter et al., 2019; Paradies et al., 2015). While these associations are well established and offer a compelling rationale for including self-esteem in mental health and racism assessments, the other identified dimensions require a more thorough examination. In this review, we assert that a comprehensive structure of self-concept can help improve the utility and inclusion of psychosocial well-being measures in adult health research. These same foundations could translate to other areas of health research, including other forms of discrimination and other social determinants of health. Because most social determinants of health are rooted in systematic oppression and inequalities (Williams et al., 2019), the personal, social, and collective self are distinct assessments of self-concept that warrant comprehensive assessments.

Limitations and Future Research

While this review is comprehensive to recent studies of health outcomes engaging both racism and self-concept, there are limitations to the breadth of the work conducted here. This review presented a conceptual taxonomy and structural model of self-concept that works best for health and racism research for adults in the U.S. We acknowledge that this taxonomy is preliminary and rooted in theoretical foundations. However, this review provides evidence of the need for a more systematic assessment of the literature to evaluate the proposed taxonomy further and demonstrate greater association strength through statistical analysis. We recommend conducting additional analyses of the proposed structural model to identify additional evidence for its utility in assessing psychosocial well-being. Furthermore, we based this model on studies with U.S. adults. While other countries and populations experience racism and discrimination, this review is restricted to an understanding of U.S. adults. We suggest testing a similar model with a larger, more comprehensive population to increase its utility. However, we assert that

examining self-concept at the dimension level for each population will require a thorough understanding of the complex social and cultural influences that affect each community.

Given its multifaceted definition and occurrence, researchers can assess racism and discrimination differently throughout health research. This review was limited in assessing perceived racism and discrimination. While three of the included studies measured internalized racism (Graham et al., 2016; James, 2016; Velez et al., 2015), we maintain that such perceptions of one's racial/ ethnic group and group membership are distinctive components of identity beliefs and are therefore a part of the self-concept structure. Similarly, implicit bias may be classified as a component of self-concept if one internalizes the perceptions based on group membership (i.e., internalized racism). However, we did not include studies where the only assessment of racism or discrimination was implicit bias, given evidence that perceived racism is the most appropriate measure of the effects of racism on health and well-being (Clark et al., 1999). Similarly, other measures of psychosocial well-being, such as those found in the included studies (e.g., familism, social support, and acculturative and perceived stress), were not included in the dimensions of self-concept in our proposed model (see Appendix B for more information on the included variables in each study). These other markers of psychosocial well-being were not direct measures of one's group membership (identity) or perceptions about group membership (identity beliefs) and abilities (ability beliefs).

Conclusions

Overall, our taxonomy offers an original perspective on the relationship between the dimensions of self-concept in health and racism research. This review demonstrates the opportunity to integrate social psychology constructs in health and well-being research. Furthermore, this review provides a formative argument for understanding the implications of

social determinants like racism and discrimination on self-concept development and adult health outcomes.

References

Agency for Healthcare Research and Quality. (2019). *2018 national healthcare quality & disparities report*.

Ai, A. L., Pappas, C., & Simonsen, E. (2015). Risk and protective factors for three major mental health problems among Latino American men nationwide. *American journal of men's health, 9*(1), 64-75. https://doi.org/10.1177/1557988314528533

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, *32*(4), 665-683. https://doi.org/https://doi.org/10.1111/j.1559-1816.2002.tb00236.x

Alexander, A. C., Hébert, E. T., Businelle, M. S., & Kendzor, D. E. (2019). Everyday discrimination indirectly influences smoking cessation through post-quit self-efficacy. *Drug and alcohol dependence*, *198*, 63-69. https://doi.org/10.1016/j.drugalcdep.2019.01.033

Allen, G. E. K., Conklin, H. a., & Kane, D. K. (2017). Racial discrimination and psychological health among Polynesians in the U.S. *Cultural diversity & ethnic minority psychology*, *23*(3), 416-424. https://doi.org/10.1037/cdp0000133

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5 ed.). https://doi.org/https://doi.org/10.1176/appi.books.9780890425596

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, *8*(1), 19-32. https://doi.org/10.1080/1364557032000119616

Arnold, T., Braje, S. E., Kawahara, D., & Shuman, T. (2016). Ethnic socialization, perceived discrimination, and psychological adjustment among transracially adopted and

nonadopted ethnic minority adults. *American Journal of Orthopsychiatry*, *86*(5), 540-551. https://doi.org/10.1037/ort0000172

Atkins, R. (2015). Depression in Black single mothers: A test of a theoretical model. *Western journal of nursing research*, *37*(6), 812-830. https://doi.org/10.1177/0193945914528289

Bailey, Z. D., Krieger, N., Agenor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*, *389*(10077), P1453-1463. https://doi.org/https://doi.org/10.1016/S0140-6736(17)30569-X

Bamishigbin, O. N., Dunkel Schetter, C., Guardino, C. M., Stanton, A. L., Schafer, P., Shalowitz, M., Lanzi, R. G., Thorp, J., & Raju, T. (2017). Risk, resilience, and depressive symptoms in low-income African American fathers. *Cultural diversity & ethnic minority psychology*, *23*(1), 70-80. https://doi.org/10.1037/cdp0000088

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education and Behavior*, *31*(2), 143-164. https://doi.org/10.1177/1090198104263660

Bandura, A., Valentine, E. R., Nesdale, A. R., Farr, R., Goodnow, J. J., Lloyd, B., & Duveen, G. (1989). Social cognition. In J. P. Forgas & J. M. Innes (Eds.), *Recent advances in social psychology: An international perspective* (pp. 127-188). North-Holland.

Bernard, D. L., Lige, Q. M., Willis, H. A., Sosoo, E. E., & Neblett, E. W. (2017). Impostor phenomenon and mental health: The influence of racial discrimination and gender. *Journal of counseling psychology*, *64*(2), 155-166. https://doi.org/10.1037/cou0000197

Blodorn, A., Major, B., & Kaiser, C. (2016). Perceived discrimination and poor health: Accounting for self-blame complicates a well-established relationship. *Social Science & Medicine*, *153*, 27-34. https://doi.org/10.1016/j.socscimed.2016.01.053

Borrell-Carrió, F., Suchman, A. L., & Epstein, R. M. (2004). The biopsychosocial model 25 years later: Principles, practice, and scientific inquiry. *Ann Fam Med*, *2*(6), 576-582. https://doi.org/10.1370/afm.245

Bowleg, L. (2012). The problem with the phrase women and minorities: Intersectionality-an important theoretical framework for public health. *Am J Public Health*, *102*(7), 1267-1273. https://doi.org/10.2105/AJPH.2012.300750

Brittian, A. S., Kim, S. Y., Armenta, B. E., Lee, R. M., Umaña-Taylor, A. J., Schwartz, S. J., Villalta, I. K., Zamboanga, B. L., Weisskirch, R. S., Juang, L. P., Castillo, L. G., & Hudson, M. L. (2015). Do dimensions of ethnic identity mediate the association between perceived ethnic group discrimination and depressive symptoms? *Cultural diversity & ethnic minority psychology*, *21*(1), 41-53. https://doi.org/10.1037/a0037531

Burke, P. J., & Reitzes, D. C. (1981). The link between identity and role performance. *Social Psychology Quarterly*, *44*(2), 83. https://doi.org/10.2307/3033704

Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *J Pers Soc Psychol*, *59*(3), 538-549.

Campbell, J. D., Assanand, S., & Di Paula, A. (2003). The structure of the self-concept and its relation to psychological adjustment. *J Pers*, *71*(1), 115-140. https://doi.org/10.1111/1467-6494.t01-1-00002

Cano, M. Á., Castro, Y., de Dios, M. A., Schwartz, S. J., Lorenzo-Blanco, E. I., Roncancio, A. M., Martinez, M. J., Sheehan, D. M., Auf, R., Piña-Watson, B., Huynh, Q.-L., & Zamboanga, B. L. (2016). Associations of ethnic discrimination with symptoms of anxiety and depression among Hispanic emerging adults: A moderated mediation model.

Anxiety, stress, and coping, *29*(6), 699-707. https://doi.org/10.1080/10615806.2016.1157170

Carter, R. T., Johnson, V. E., Kirkinis, K., Roberson, K., Muchow, C., & Galgay, C. (2019). A meta-analytic review of racial discrimination: Relationships to health and culture. *Race and Social Problems*, *11*(1), 15-32. https://doi.org/https://doi.org/10.1007/s12552-018-9256-y

Cheng, H.-L., Tran, A. G. T. T., Miyake, E. R., & Kim, H. Y. (2017). Disordered eating among Asian American college women: A racially expanded model of objectification theory. *Journal of counseling psychology*, *64*(2), 179-191. https://doi.org/10.1037/cou0000195

Cheng, H. L., Tracie, L. H., Eve, M. A., & Charlotte, W. (2016). Minority stress and depressive symptoms. *The Counseling Psychologist*, *44*(6), 841. https://doi.org/10.1177/0011000016660377

Christie-Mizell, C. A., Kimura, I. A., & Keith, V. M. (2010). The consequences of self-esteem and happiness. *Journal of Black Studies*, *40*(6), 1189-1211. https://doi.org/10.1177/0021934708325457

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, *54*(10), 805-816.

Clifton, R. L., Rowe, A. T., Banks, D. E., Ashburn-Nardo, L., & Zapolski, T. C. B. (2021). Examining the effects of implicit and explicit racial identity on psychological distress and substance use among Black young adults. *Experimental and clinical psychopharmacology*, *29*(5), 479-486. https://doi.org/10.1037/pha0000489

Cokley, K., Smith, L., Bernard, D., Hurst, A., Jackson, S., Stone, S., Awosogba, O., Saucer, C., Bailey, M., & Roberts, D. (2017). Impostor feelings as a moderator and mediator of the

relationship between perceived discrimination and mental health among racial/ethnic minority college students. *Journal of counseling psychology*, *64*(2), 141-154. https://doi.org/10.1037/cou0000198

Colquhoun, H. L., Levac, D., O'Brien, K. K., Straus, S., Tricco, A. C., Perrier, L., Kastner, M., & Moher, D. (2014). Scoping reviews: Time for clarity in definition, methods, and reporting. *Journal of Clinical Epidemiology*, *67*(12), 1291-1294. https://doi.org/10.1016/j.jclinepi.2014.03.013

Diesterhaft, K., & Gerken, K. (1983). Self-concept and locus of control as related to achievement of junior high students. *Journal of Psychoeducational Assessment*, *1*(4), 367-375. https://doi.org/10.1177/073428298300100406

Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, *196*(4286), 129-136. http://www.jstor.org.proxy.library.vcu.edu/stable/1743658

Fishbein, M. (2008). A reasoned action approach to health promotion. *Med Decis Making*, *28*(6), 834-844. https://doi.org/10.1177/0272989x08326092

Ford, J. G. (1991). Rogerian self-actualization. *Journal of Humanistic Psychology*, *31*(2), 101-111. https://doi.org/10.1177/0022167891312011

Foynes, M. M., Smith, B. N., & Shipherd, J. C. (2015). Associations between race-based and sex-based discrimination, health, and functioning: A longitudinal study of Marines. *Medical Care*, *53*(4), S128-S135. https://doi.org/10.1097/MLR.0000000000000300

Gayman, M. D., Lennox Kail, B., Spring, A., & Greenidge, G. R. (2018). Risk and protective factors for depressive symptoms among African American men: An application of the stress process model. *The journals of gerontology. Series B, Psychological sciences and social sciences*, *73*(2), 219-229. https://doi.org/10.1093/geronb/gbx076

Graham, J. R., West, L. M., Martinez, J., & Roemer, L. (2016). The mediating role of internalized racism in the relationship between racist experiences and anxiety symptoms in a Black American sample. *Cultural diversity & ethnic minority psychology, 22*(3), 369-376. https://doi.org/10.1037/cdp0000073

Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., Burling, J., Lyon, D., Simon, L., & Pinel, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology*, *63*(6), 913-922. https://doi.org/10.1037/0022-3514.63.6.913

Gu, Q., Burt, V. L., Paulose-Ram, R., Yoon, S., & Gillum, R. F. (2008). High blood pressure and cardiovascular disease mortality risk among U.S. adults: The third National Health and Nutrition Examination Survey mortality follow-up study. *Annals of Epidemiology, 18*(4), 302-309. https://doi.org/https://doi.org/10.1016/j.annepidem.2007.11.013

Hancock, A. (2016). *Intersectionality: An intellectual history*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199370368.001.0001

Hughes, M., Kiecolt, K. J., Keith, V. M., & Demo, D. H. (2015). Racial identity and well-being among African Americans. *Social Psychology Quarterly*, *78*(1), 25-48. https://doi.org/10.1177/0190272514554043

James, D. (2016). Internalized racism and past-year major depressive disorder among African-Americans: The role of ethnic identity and self-esteem. *Journal of Racial and Ethnic Health Disparities*, *4*(4), 659-670. https://doi.org/10.1007/s40615-016-0269-1

Jones, C. P. (2000). Levels of racism: A theoretic framework and a gardener's tale. *American Journal of Public Health, 90*(8), 1212-1215. https://doi.org/10.2105/ajph.90.8.1212

Kong, D. T. (2016). Ethnic minorities' paranoia and self-preservative work behaviors in response to perceived ethnic discrimination, with collective self-esteem as a buffer. *Journal of Occupational Health Psychology*, *21*(3), 334-351. https://doi.org/10.1037/ocp0000013

Krieger, N., Smith, K., Naishadham, D., Hartman, C., & Barbeau, E. M. (2005). Experiences of discrimination: Validity and reliability of a self-report measure for population health research on racism and health. *Soc Sci Med*, *61*(7), 1576-1596. https://doi.org/10.1016/j.socscimed.2005.03.006

Marin, M.-F., Lord, C., Andrews, J., Juster, R.-P., Sindi, S., Arsenault-Lapierre, G., Fiocco, A. J., & Lupien, S. J. (2011). Chronic stress, cognitive functioning and mental health. *Neurobiology of Learning and Memory*, *96*(4), 583-595. https://doi.org/https://doi.org/10.1016/j.nlm.2011.02.016

Markus, H., & Kunda, Z. (1986). Stability and malleability of the self-concept. *Journal of Personality and Social Psychology*, *51*(4), 858-866. https://doi.org/10.1037//0022-3514.51.4.858

Marsh, H. W., & Shavelson, R. (1985). Self-concept: Its multifaceted, hierarchical structure. *Educational Psychologist*, *20*(3), 107-123.

Meanley, S., Bruce, O., Hidalgo, M. A., & Bauermeister, J. A. (2020). When young adult men who have sex with men seek partners online: Online discrimination and implications for mental health. *Psychology of Sexual Orientation and Gender Diversity*, *7*(4), 418-432. https://doi.org/10.1037/sgd0000388

Mereish, E. H., N'Cho H, S., Green, C. E., Jernigan, M. M., & Helms, J. E. (2016). Discrimination and depressive symptoms among Black American men: Moderated-

mediation effects of ethnicity and self-esteem. *Behav Med*, *42*(3), 190-196. https://doi.org/10.1080/08964289.2016.1150804

Miller, A. N., & Orsillo, S. M. (2020). Values, acceptance, and belongingess in graduate school: Perspectives from underrepresented minority students. *Journal of Contextual Behavioral Science*, *15*, 197-206. https://doi.org/10.1016/j.jcbs.2020.01.002

Montano, D. E., & Kasprzyk, D. (2015). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior: Theory, Research, and Practice* (5th ed., pp. 95-124). Jossey-Bass.

Mossakowski, K. N., Wongkaren, T., Hill, T. D., & Johnson, R. (2019). Does ethnic identity buffer or intensify the stress of discrimination among the foreign born and U.S. born? Evidence from the Miami-Dade Health Survey. *Journal of Community Psychology*, *47*(3), 445-461. https://doi.org/10.1002/jcop.22130

O'Donnell, K., Brydon, L., Wright, C. E., & Steptoe, A. (2008). Self-esteem levels and cardiovascular and inflammatory responses to acute stress. *Brain, Behavior, and Immunity*, *22*(8), 1241-1247. https://doi.org/https://doi.org/10.1016/j.bbi.2008.06.012

Odafe, M. O., Salami, T. K., & Walker, R. L. (2017). Race-related stress and hopelessness in community-based African American adults: Moderating role of social support. *Cultural diversity & ethnic minority psychology*, *23*(4), 561-569. https://doi.org/10.1037/cdp0000167

Ogbenna, B. T., Ryu, S., Lee, S., & Slopen, N. (2021). Discrimination and sleep among Asians and Pacific Islanders adults. *Sleep*, *44*(10), 1. https://doi.org/10.1093/sleep/zsab109

Onorato, R. S., & Turner, J. C. (2004). Fluidity in the self-concept: The shift from personal to social identity. *European Journal of Social Psychology*, *34*(3), 257-278. https://doi.org/10.1002/ejsp.195

Ouch, S., & Moradi, B. (2019). Cognitive and affective expectation of stigma, coping efficacy, and psychological distress among sexual minority people of color. *Journal of counseling psychology*, *66*(4), 424-436. https://doi.org/10.1037/cou0000360

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan -— A web and mobile app for systematic reviews. *Systematic Reviews*, *5*(210). https://doi.org/10.1186/s13643-016-0384-4

Paradies, Y., Ben, J., Denson, N., Elias, A., Priest, N., Pieterse, A., Gupta, A., Kelaher, M., & Gee, G. (2015). Racism as a determinant of health: A systematic review and meta-analysis. *PLoS One*, *10*(9), e0138511. https://doi.org/10.1371/journal.pone.0138511

Parra, L. A., & Hastings, P. D. (2020). Challenges to identity integration indirectly link experiences of heterosexist and racist discrimination to lower waking salivary cortisol in sexually diverse Latinx emerging adults. *Frontiers in Psychology*, *11*, 228-228. https://doi.org/10.3389/fpsyg.2020.00228

Peek, M. E., Nunez-Smith, M., Drum, M., & Lewis, T. T. (2012). Adapting the Everday Discrimination Scale to medical settings: Reliability and validity testing in a sample of African American patients. *Ethn Dis*, *21*(4), 502-509.

Perry, S. P., Hardeman, R., Burke, S. E., Cunningham, B., Burgess, D. J., & van Ryn, M. (2015). The impact of everyday discrimination and racial identity centrality on African American medical student well-being: A report from the medical student CHANGE study. *Journal*

of Racial and Ethnic Health Disparities, *3*(3), 519-526. https://doi.org/10.1007/s40615-015-0170-3

Peters, M. D. J., Godfrey, C., McInerney, P., Munn, Z., Tricco, A. C., & Kahlil, H. (2020). Scoping reviews. In E. Aromataris & Z. Munn (Eds.), *JBI Manual for Evidence Synthesis*. https://doi.org/https://doi.org/10.46658/JBIMES-20-12

Peterson, L. M., Stock, M. L., Monroe, J., Molloy-Paolillo, B. K., & Lambert, S. F. (2020). Racial exclusion causes acute cortisol release among emerging-adult African Americans: The role of reduced perceived control. *The Journal of Social Psychology*, *160*(5), 658-674. https://doi.org/10.1080/00224545.2020.1729685

Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: Advancing the approach and enhancing the consistency. *Research Synthesis Methods*, *5*(4), 371-385. https://doi.org/10.1002/jrsm.1123

Pieterse, A. L., Todd, N. R., Nevill, H. A., & Carter, R. T. (2012). Perceived racism and mental health among Black American adults: A meta-analytic review. *Journal of counseling psychology*, *59*(1), 1-9. https://doi.org/doi:10.1037/a0026208

Prochaska, J. O., Redding, C. A., & Evers, K. E. (2015). The transtheoretical model and stages of change. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health Behavior: Theory, Research, and Practices* (5th ed., pp. 125-148). Jossey-Bass.

Ragen, B. J., Roach, A. E., & Chollak, C. L. (2016). Chronic stress, regulation of emotion, and functional activity of the brain. In G. Fink (Ed.), *Stress: Concepts, Cognition, Emotion, and Behavior* (pp. 241-249). Academic Press. https://doi.org/https://doi.org/10.1016/B978-0-12-800951-2.00029-7

Rogers, C. (1961). *On becoming a person: A therapist's view of psychotherapy*. Houghton Mifflin.

Rosenberg, M. (1989). Self-concept research: A historical overview. *Social Forces, 68*(1), 34-44. https://doi.org/10.2307/2579218

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78. https://doi.org/10.1037/0003-066X.55.1.68

Sellers, R. M., Chavous, T. M., & Cooke, D. Y. (1998). Racial ideology and racial centrality as predictors of African American college students' academic performance. *Journal of Black Psychology, 24*(1), 8-27. https://doi.org/10.1177/00957984980241002

Sellers, R. M., Rowley, S. A. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional inventory of Black identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology, 73*(4), 805-815. https://doi.org/10.1037/0022-3514.73.4.805

Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. A. J., & Chavous, T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review, 2*(1), 18-39. https://doi.org/10.1207/s15327957pspr0201_2

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research, 46*(3), 407-441.

Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin, 139*(1), 213-240. https://doi.org/10.1037/a0028931

Stamatakis, K. A., Lynch, J., Everson, S. A., Raghunathan, T., Salonen, J. T., & Kaplan, G. A. (2004). Self-esteem and mortality: Prospective evidence from a population-based study. *Annals of Epidemiology, 14*(1), 58-65. https://doi.org/10.1016/S1047-2797(03)00078-4

Stokes, J. E. (2020). Social integration, daily discrimination, and biological markers of health in mid- and later life: Does self-esteem play an intermediary role? *Innov Aging*, *4*(4). https://doi.org/10.1093/geroni/igaa026

Sugg Skinner, C., Tiro, J., & Champion, V. L. (2015). The Health Belief Model. In K. Glanz, B. K. Rimer, & K. VIswanath (Eds.), *Health Behavior: Theory, Reasearch, and Practice* (5th ed.). Jossey-Bass.

Szymanski, D. M., & Lewis, J. A. (2016). Gendered racism, coping, identity centrality, and African American college women's psychological distress. *Psychology of women quarterly*, *40*(2), 229-243. https://doi.org/10.1177/0361684315616113

The EndNote Team. (2013). *EndNote*. In (Version EndNote X9) [64 bit]. Clarivate.

Thibeault, M. A., Stein, G. L., & Nelson-Gray, R. O. (2018). Ethnic identity in context of ethnic discrimination: When does gender and other-group orientation increase risk for depressive symptoms for immigrant-origin young adults? *Cultural diversity & ethnic minority psychology*, *24*(2), 196-208. https://doi.org/10.1037/cdp0000174

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K., Colquhoun, H., Kastner, M., Levac, D., Ng, C., Sharpe, J. P., Wilson, K., Kenny, M., Warren, R., Wilson, C., Stelfox, H. T., & Straus, S. E. (2016). A scoping review on the conduct and reporting of scoping reviews. *BMC medical research methodology*, *16*(1). https://doi.org/10.1186/s12874-016-0116-4

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, *20*(5), 454-463.

Turner, J. C., & Onorato, R. S. (1999). Social identity, personality, and the self-concept: A self-categorization perspective. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), *The Psychology of the Social Self* (pp. 11-46). Lawrence Erlbaum.

Velez, B. L., Cox, R., Polihronakis, C. J., & Moradi, B. (2018). Discrimination, work outcomes, and mental health among women of color: The protective role of womanist attitudes. *Journal of counseling psychology, 65*(2), 178-193. https://doi.org/10.1037/cou0000274

Velez, B. L., Moradi, B., & DeBlaere, C. (2015). Multiple oppressions and the mental health of sexual minority Latina/o individuals. *The Counseling Psychologist, 43*(1), 7-38. https://doi.org/10.1177/0011000014542836

Vogt, T., Pope, C., Mullooly, J., & Hollis, J. (1994). Mental health status as a predictor of morbidity and mortality: A 15-year follow-up of members of a health maintenance organization. *American Journal of Public Health, 84*(2), 227-231. https://doi.org/10.2105/ajph.84.2.227

Volpe, V. V., Lee, D. B., Hoggard, L. S., & Rahal, D. (2019). Racial discrimination and acute physiological responses among Black young adults: The role of racial identity. *Journal of adolescent health, 64*(2), 179-185. https://doi.org/10.1016/j.jadohealth.2018.09.004

Walker, E. R., McGee, R. E., & Druss, B. G. (2015). Mortality in mental disorders and global disease burden implications. *JAMA Psychiatry, 72*(4), 334. https://doi.org/10.1001/jamapsychiatry.2014.2502

Watson, L. B., DeBlaere, C., Langrehr, K. J., Zelaya, D. G., & Flores, M. J. (2016). The influence of multiple oppressions on women of color's experiences with insidious trauma. *Journal of counseling psychology, 63*(6), 656-667. https://doi.org/10.1037/cou0000165

Wheeler, L. A., Updegraff, K. A., Umaña-Taylor, A. J., & Crouter, A. C. (2021). Mexican-origin parents' workplace discrimination and well-being: The roles of familism values, family conflict, and gender. *Cultural diversity & ethnic minority psychology*, *27*(4), 717-727. https://doi.org/10.1037/cdp0000483

Williams, D. R. (2018). Stress and the mental health of populations of color: Advancing our understanding of race-related stressors. *J Health Soc Behav*, *59*(4), 466-485. https://doi.org/10.1177/0022146518814251

Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: Evidence and needed research. *Annu Rev Public Health*, *40*, 105-125. https://doi.org/10.1146/annurev-publhealth-040218-043750

Williams, D. R., Yu, Y., & Jackson, J. S. (1997). Racial differences in physical and mental health: Socio-economic status, stress, and discrimination. *Journal of Health Psychology*, *2*(3), 335-351.

Woods, K. C., Buchanan, N. T., & Settles, I. H. (2009). Sexual harassment across the color line: Experiences and outcomes of cross- versus intraracial sexual harassment among Black women. *Cultural diversity & ethnic minority psychology*, *15*(1), 67-76. https://doi.org/10.1037/a0013541

Yearby, R., Clark, B., & Figueroa, J. F. (2022). Structural racism in historical and modern U.S. health care policy. *Health Affairs*, *41*(2), 187-194. https://doi.org/10.1377/hlthaff.2021.01466

Yoon, E., Coburn, C., & Spence, S. A. (2019). Perceived discrimination and mental health among older African Americans: The role of psychological well-being. *Aging & mental health*, *23*(4), 461-469. https://doi.org/10.1080/13607863.2017.1423034

CHAPTER 3

PAPER 2

"BEING A BLACK WOMAN MEANS EVERYTHING TO ME": A PHENOMENOLOGICAL ASSESSMENT OF HEALTHCARE-MEDIATED RACISM AND THE BLACK MATERNAL SELF-CONCEPT

Abstract

Background: U.S. Black women face significant maternal health disparities due to racism in maternity care. However, the effects of healthcare-mediated racism on Black women's maternal and psychosocial health are not fully understood. Self-concept, a core construct of psychosocial health, refers to the beliefs and perceptions about one's psychosocial self and attributes. Exposure to racism impacts dimensions of the self-concept and overall psychosocial health and well-being. Therefore, this study examines the relationship between exposure to racism while receiving maternity care and the development of Black women's maternal self-concept.

Method: We used an in-depth, semi-structured interview guide to conduct virtual interviews with Black women who gave birth in the U.S. in the last six months (n=10). Interviews addressed Black maternal identity beliefs, maternity care experiences, and the effects of lived experiences on Black maternal identity development. Using a transcendental phenomenological approach, we identified significant statements, clustered statements into themes, and developed a structural description of the effects of healthcare-mediated racism on Black maternal self-conceptualization. **Results:** We identified two central themes: 1) defining Black maternal identity and 2) the effects of maternity care experiences on identity development and behaviors. Each theme comprises several subthemes, including intersectionality, transitioning, community and culture, maternity care quality, ability beliefs, and maternal role perceptions. We find that the Black maternal self-concept is multidimensional and comprises identity centrality, identity beliefs, and perceived abilities. **Conclusion**: We found that exposure to racism in maternity care and other social experiences affect Black maternal self-conceptualization. These findings are essential to understanding the effects of social experiences on Black women's psychosocial well-being and maternal health outcomes.

Background

Black women in the U.S. face significant maternal morbidity and mortality disparities (Howell, 2018; Hoyert, 2022; Petersen et al., 2019). Specifically, Black women are three to four times more likely than white women to die a pregnancy-related death (Howell, 2018; Hoyert, 2022). Compared to other racial groups, U.S. Black women have the highest diagnosis rates on 88% of severe maternal morbidity markers (Creanga et al., 2014; Howell, 2018). Specifically, Black women are more likely to experience pregnancy-related hemorrhage, preeclampsia, hypertension, and other cardiac events (Callaghan et al., 2012; Howell et al., 2016; Liese et al., 2019).

While many studies have attempted to understand and address these disparities, maternal morbidity and mortality rates have continued to increase for U.S. Black and Hispanic women. Maternal morbidity and mortality rates were significantly higher for Black and Hispanic women between 2019 and 2020, while rates were not significantly different for white women across the same period (Hoyert, 2022). Furthermore, estimates show that maternal mortality and morbidity rates will continue to increase without the necessary action to address the fundamental and structural causes of health disparities (Callaghan et al., 2012; Hoyert, 2022; Singh, 2021). As disparities in U.S. maternal morbidity and mortality rates persist, research and interventions must address the inequitable causes of maternal health disparities.

Racism and Maternal Health Disparities

Racism is considered the most significant psychosocial predictor of health inequity in the U.S. and is the attributable cause of many health disparities (Howell, 2018; Williams et al., 2019). *Racism* is a systematic and social mechanism whereby inferior and superior racial/ethnic groups are created, and the denoted inferior group is subjected to worse or unequal treatment for

the benefit of the superior group (Bonilla Silva, 1997; Jones, 2000; Williams et al., 2019). As such, racism exists across several societal levels, including interpersonal, intrapersonal, and systemic racism (Bailey et al., 2017; Jones, 2000; Yearby et al., 2022). At each level, racism mechanistically maintains oppression and marginalizes populations. Racism also directly influences other psychosocial health determinants, such as provider level factors (e.g., implicit bias, cultural competence, and communication), patient or individual level factors (e.g., sociodemographic characteristics, health beliefs, and healthcare self-efficacy), systemic level factors (e.g., access to quality of care, policy, and structural racism), and community level factors (e.g., the built environment and social support) (Howell, 2018). Therefore, the effects of racism are multiplicative, dynamic, and pervasive, requiring an in-depth assessment of its impact on health and well-being.

Based on the biopsychosocial model (Clark et al., 1999), racism is a stressor that causes a physiological and psychological stress response. Chronic stress increases the risk for cardiovascular disease, inflammation, and poor mental and psychosocial well-being (e.g., anxiety, depression, and poor self-esteem) (Carter et al., 2019; Colen et al., 2018; Paradies et al., 2015). Stress significantly affects pregnancy by increasing inflammation and cardiovascular disease, which are attributable to poor birth outcomes like preeclampsia, eclampsia, hypertension, and preterm birth (Riggan et al., 2020; Ross et al., 2019; Zhang et al., 2013). Black women who give birth experience these outcomes at higher rates, furthering maternal morbidity and mortality disparities (Dominguez, 2011; Howell, 2018; Liese et al., 2019).

Healthcare Quality and Standards

Black women's increased risk for severe maternal morbidity outcomes is associated with poor care quality stemming from systemic and interpersonal racism in healthcare (Howell, 2018;

Liese et al., 2019; Taylor, 2020). The Agency for Healthcare Research and Quality reports that Black patients receive poorer quality of care on 40% of quality care metrics, including measures of surveillance and responsiveness (Agency for Healthcare Research and Quality, 2019). Specifically, Black women receiving maternity care report experiences with poor provider responsiveness and communication, resulting in feeling ignored, dismissed, stereotyped, or not taken seriously (Mehra et al., 2020; Vedam et al., 2019; Ward et al., 2013). Additionally, poor quality and substandard care are associated with delays in diagnosis, a lack of provider referrals, and failure to conduct appropriate interventions (Howell & Zeitlin, 2017). Failure to provide appropriate care increases the risk of severe maternal morbidity outcomes such as maternal hemorrhage (Howell & Zeitlin, 2017).

Inequities in quality care delivery are especially problematic, given that most cases of pregnancy-related deaths are preventable. In 2022, the Centers for Disease Control and Prevention released a report demonstrating that over 80% of pregnancy-related deaths between 2017 and 2019 could have been prevented (Trost et al., 2022). Other studies have estimated that upwards of 50 to 60% of maternal mortality cases are preventable with adequate medical team responsiveness and surveillance of patients (Petersen et al., 2019; Zuckerwise & Lipkind, 2017). Poorer quality care and inadequate support in healthcare systems mean that Black women are at greater risk for experiencing severe yet preventable complications.

Experiences with racism and discrimination during maternity are also multifaceted and intersectional. Black women's intersectional social identities create complex experiences with forms of oppression, such as gendered racism (i.e., unfair or unjust experiences that occur because of the intersection of race and gender roles) (Essed, 1991, p. 31). Black women's intricate experiences of engaging with healthcare in the U.S. are embedded in the unethical and

unjust treatment of Black women in medical history. Certain historical practices subjected Black women to non-consensual practices and procedures that invaded patient autonomy in healthcare decision-making processes. Examples of unethical cases in gynecology and obstetrics include the non-consensual use of cervical cells to develop the HeLa cell line (Beskow, 2016; Skloot, 2011). Other unethical and harmful gynecological cases include J. Marion Sims's vaginal fistula surgical experiments. Sims is heralded as the "modern father of gynecology" despite an extensive history of conducting experimental surgeries on enslaved Black and Brown women without pain medication, anesthesia, or documented consent procedures (Cooper Owens, 2017; Taylor, 2020; Washington, 2006). These histories facilitate systemic racism in modern healthcare systems by creating policies, procedures, practices, and cultural norms rooted in the oppression and unethical treatment of Black and Brown people (Cooper Owens, 2017; Taylor, 2020).

However, many research findings obtained through these unethical treatments are still heralded as breakthroughs in medical science, establishing the modern gynecological and obstetric practices used in U.S. medicine today (Cooper Owens, 2017; Taylor, 2020). These practices exemplify how systemic discrimination influences maternal care quality. Modern gynecologic and obstetric care practices that maintain oppressive histories do not adequately support the health and well-being of Black birthing persons (Cooper Owens, 2017; Taylor, 2020). Without adjusting the standards of care to improve autonomy and ethical and equitable care practices for diverse populations, systemic and interpersonal racism will continue to have detrimental effects on the health and well-being of Black women.

Maternity: A Psychosocial Phenomenon

Similar to racism, maternity can be considered a psychosocial phenomenon. Some sociological assessments classify pregnancy as a societal role shift where pregnant individuals

must perform behavioral changes (Arnold-Baker, 2019; Myers & Grasmick, 1990; Rubin, 1984). Physical and psychosocial changes during pregnancy and maternity may alter the birthing person's perceived societal and behavioral expectations (Arghavanian et al., 2020; Myers & Grasmick, 1990; Rubin, 1984). Given pregnancy's psychosocial implications, many assessments examine pregnancy as a social phenomenon in which women experience extreme shifts in their identity and self-perceptions (Arghavanian et al., 2020; Bornemark & Smith, 2016; Rubin, 1984).

Psychosocial changes in self-esteem, self-acceptance, and maternal self-efficacy are associated with differences in maternal health behaviors, depression, anxiety, and life satisfaction (Bassi et al., 2017; Brunton et al., 2020; Hernandez et al., 2022). These psychosocial factors are also components of the self-concept — the beliefs and perceptions one has about oneself and one's attributes (Onorato & Turner, 2004; Turner & Onorato, 1999). The explorations of the effects of pregnancy on self-concept are limited, and very few studies specifically focus on Black women. Many studies attempt to understand the effects of racism and pregnancy on mental and emotional well-being but do not address the multidimensionality of self-concept during maternity. Because of Black women's dynamic maternity experiences and the role of psychosocial determinants in health, understanding the relationship between exposure to racism in maternity and the development of the Black maternal self-concept is essential.

The Current Study

This study aimed to examine the role of maternity healthcare experiences in maternal self-concept and identity development for U.S. Black women who have given birth. We used a transcendental phenomenological approach to analyze Black women's lived experiences and their intrinsic development of Black maternal self-concept.

A Transcendental Phenomenological Approach

According to the Standpoint Theory, lived experiences are knowledge, and individuals are experts in their lived experiences (Harding, 1992). Health equity research should focus on lived experiences and understanding experts' assessments of those experiences (Harding, 1992; Hill Collins, 2002). Qualitative analysis is a valuable tool for garnering in-depth details about lived experiences from experts in the community. Specifically, phenomenology is an approach to qualitative research methodology rooted in the understanding that lived experiences spread knowledge about social phenomena like pregnancy, childbirth, and motherhood. Phenomenology is an effective methodological approach when researchers want to understand the *meaning* of lived experiences (Creswell & Poth, 2017; Sanders, 1982). Studies have applied phenomenological approaches when assessing sensitive and particular experiences, such as intimate partner violence during pregnancy and birth after miscarriage (Engnes et al., 2013; Kurz, 2020).

This analysis employs a transcendental phenomenological approach, a branch of phenomenological research created by Husserl and further developed by Moustakas (1994). The philosophical and theoretical foundations of transcendental phenomenology support its use as an approach for decreasing bias in qualitative research methodologies to accurately examine the true essence of a phenomenon (Moustakas, 1994). Specifically, researchers using a transcendental phenomenological approach should employ steps and procedures to bracket personal biases and preconceptions when conducting the steps of qualitative data collection, analysis, and interpretation (Moustakas, 1994). A transcendental phenomenological approach allows researchers to focus on experiences as the unit of analysis with minimal personal bias, making it

a practical approach for understanding Black women's experiences with healthcare-mediated racism and self-conceptualization.

Method

We conducted an in-depth assessment of Black women's maternity care experiences and their development of Black maternal self-concept by engaging in steps of transcendental phenomenology as outlined by Moustakas (1994). We used an in-depth interview guide to conduct virtual interviews with Black women between 18 and 35 who gave birth in the U.S. in the last six months (n =10). Throughout study development, data collection, and data analysis, we integrated the attitudes of transcendental phenomenology by engaging in reflexivity and bracketing (Kockelmans, 1994; Moustakas, 1994).

Role of Researchers

Transcendental phenomenology requires temporarily suspending personal preconceptions and biases to assess the true essence of a phenomenon (Kockelmans, 1994; Moustakas, 1994). Epoché, or bracketing, is the phenomenological attitude that allows researchers to decrease bias when examining lived experiences (Kockelmans, 1994; Moustakas, 1994; Sanders, 1982). Epoché is an attitude that encourages the researcher to suspend their preconceptions and focus on the true meaning or essence of lived experiences (Kockelmans, 1994; Sanders, 1982). About epoché and transcendence, Moustakas writes, "presumably [the researcher] has set aside biases and has come to a place of readiness to gaze on whatever appears and to remain with that phenomenon until it is understood, until a perceptual closure is realized" (Moustakas, 1994, p. 73). While it is impossible to eliminate all bias or obtain complete objectivity, epoché is necessary for decreasing bias and encourages researchers to remain open to emerging themes.

Epoché: Transcending Preconceptions and Biases

Here we briefly describe the primary researcher's biases and the strategies and processes used to maintain epoché throughout this assessment.

I (the primary researcher) am a U.S.-born, cis-gender, biracial (Black and white) female. The community of Black women and mothers in my life has helped shape my understanding of Blackness, womanhood, and motherhood. My experiences with my Blackness have shaped my preconceptions about maternal roles and expectations for Black women; however, I have never been pregnant and do not have children. My nulliparous status has given me years of practice listening to others and understanding their experiences with pregnancy and maternity. My limited personal experience with maternity allowed me to distance my preconceptions while assessing the phenomenon of Black maternity. I have personal experiences with racial and gender identity development, racism and discrimination, and encounters with the U.S. healthcare system.

I wrote journal entries before and after collecting data from each participant to address my preconceptions and biases with strategies for bracketing and reflexivity (Creswell & Poth, 2017; Kockelmans, 1994; Morse, 1994; Tufford & Newman, 2010). In journal entries, I reflected on how my experiences with oppression and identity development could influence my interpretations of the participants' stories. I also reflected on the emotions or responses I felt when listening to participants' experiences, noting where I felt sadness, anger, and empathy. To aid in emotional reflexivity and to decrease bias from emotional interpretation, I maintained at least three days between data collection and analysis. By allowing time between my initial reactivity and the process of analytical interpretation, I aimed to increase my ruminative engagement with analysis. Additionally, I read each transcript at least three times and listened to

the audio from each interview at least once. This process allowed me to be fully immersed in the data while setting aside my preconceptions.

Throughout the process of this analysis, I focused on my training in qualitative analysis and my foundational grounding in feminist research epistemologies. I convened with research team members, including senior researchers and graduate students in maternal health, sociology, social and behavioral science, and women and gender studies. I intentionally engaged with this team of research experts to check my assumptions during the process of analysis. I share these processes and experiences in complete transparency and authenticity to clarify my role in conducting this analysis.

Participants and Recruitment

We recruited Black women who gave birth in the last six months to participate in virtual, in-depth interviews. We conducted recruitment using social media and word-of-mouth techniques between September 2021 and August 2022. We posted and boosted recruitment posts on Facebook and Instagram using paid advertisement services through the Meta Business Suite (see Appendix C for examples of recruitment posts and ads). Interested individuals were asked to click an embedded link to an external interest form hosted on RedCap. Interested individuals provided their contact information, which the first author (HMM) used to conduct eligibility screening calls. Black women were eligible to participate if they were between 18 and 35 and had given birth in the last six months. We excluded individuals if their last pregnancy was high-risk or ended in a stillbirth or miscarriage. We also excluded individuals who did not live in the U.S. or who did not experience racism while receiving maternity care during their last pregnancy. Eligible individuals were invited to schedule an interview session.

This analysis followed qualitative data collection guidelines that recommend determining sample size using saturation of themes. Guidelines suggest 5 to 25 participants for adequate saturation of themes in phenomenological studies (Creswell & Poth, 2017; Morse, 1994). We began by collecting and analyzing data from five interviews to identify themes. Based on the analysis of the first five interviews, we determined that new and relevant themes were still emerging. Therefore, we collected and analyzed another five interviews. At this point, we did not identify new relevant themes and determined we had reached saturation (n = 10). This stepwise process of data collection and analysis ensured significant data to answer the research questions without concerns of oversaturation and irrelevant themes.

Procedure and Data Collection

Interviews lasted approximately 90 minutes and were conducted using an in-depth interview guide (see Appendix D). Questions asked in the guide were developed to assess participants' specific experiences with pregnancy and childbirth and their healthcare experiences throughout pregnancy and the postpartum period. Additionally, we asked structured questions assessing participants' relevant sociodemographic characteristics, including insurance status, type of providers seen for maternity care (e.g., midwife, obstetrician), and use of maternity care resources. Guiding interview questions we asked participants include "how did pregnancy influence how you viewed yourself" and "how do you currently feel about being a Black woman who has given birth?" A complete list of interview questions, including questions assessing sociodemographic characteristics, is reported in the interview guide in Appendix D. The primary author (HMM) conducted all interview sessions. Participants who completed an interview were provided a $20 gift card for their participation. Interviews were audio-recorded using Zoom Online Meeting software (Zoom Video Communications, 2021) and were transcribed using Rev

Transcription services (Rev, 2022). The Virginia Commonwealth University Institutional Review Board approved this study.

Data Analysis

This analysis followed Moustakas's (1994) steps for conducting transcendental phenomenology by 1) identifying significant statements and *delimiting meaning units*, 2) *clustering* meaning units into themes, and 3) synthesizing the themes to identify a specific *structural description* of the central experience. We present the findings of this phenomenological assessment using these steps as a framework.

We uploaded all interview transcripts to MAXQDA Plus 2022 software (VERBI Software, 2021) for analysis. The first author (HMM) read each transcript at least three times, making notes, memoing ideas, and journaling to bracket her biases during interpretation. HMM read each transcript while documenting significant statements about pregnancy experiences and maternal identity. HMM then clustered significant and non-redundant statements to create codes that semantically described the similarities between clusters of significant statements. Codes were condensed into subthemes based on similarities, and subthemes were condensed into central themes specific to participants' experiences and appraisals of Black maternal self-conceptualizations. We describe the participants' experiences using textural descriptions for each theme organized by elaborating on the subthemes. We also provide a structural description of racism and the Black maternal self-concept.

Results

Participants

A total of 45 individuals completed the interest form; we were able to contact and screen 20 of those individuals. Of those who completed the screening, 15 were eligible to participate,

and ten individuals completed an interview (n = 10). Participants were between 23 and 32 years of age (M_{age} = 29.5). Most participants delivered their baby vaginally (n = 6), compared to four participants who gave birth through a Cesarean section (n =4). Two participants (n = 2) had additional children they were responsible for in their homes. All participants (n = 10) obtained prenatal care during their most recent pregnancy. Only three participants received care from a doula during their pregnancy or delivery (n = 3).

Most participants had an insurance plan purchased through an employer before and after their pregnancy (n = 8). In contrast, two participants had insurance through Medicaid (n = 2). All but one of the participants had obtained a postpartum checkup since their delivery (n = 9), while all ten participants had obtained a well-baby checkup for their newborn since giving birth (n = 10). Most participants described the time during their most recent pregnancy as a happy time with few problems (n = 6) or a moderately hard time (n = 3). One participant described the time as one of the worst times of their life (n = 1) and none of the participants described the time as one of the happiest (n = 0).

Meaning Units and Themes

We asked women to define their identity and describe the effects of their maternity experiences on their beliefs about themselves and their attributes. In this analysis, women expressed their experiences regarding two central themes: 1) defining Black maternal identity and 2) the effects of maternity care experiences on identity development and behaviors. Each theme has several subthemes that help to describe the overarching structure of the Black maternal self-concept. Table 3.1 depicts the clustering of major codes and subthemes into two central themes of Black women's conceptualization of the maternal self. Examples of significant statements that support each theme and subtheme are provided throughout the textural

descriptions. Note that ‘P1’ through ‘P10’ are included next to quoted statements to denote from which participant each significant statement is derived.

Table 3.1

Summary of Themes, Subthemes, and Major Codes for Assessing Black Maternal Self-Concept

Themes	Subthemes	Major Codes
Defining Black maternal identity	Intersectionality of identity	• More than one identity • Comparing Black womanhood and maternity • Complex experiences with oppression
	Transition and identity development	• Shifts in identity perceptions • Challenges to autonomy and individuality
	Community, culture, and traditions in identity development	• Community membership • Cultural heritage • Storytelling and culture sharing • Overcoming generational curses
The effects of maternity care experiences on identity development and behaviors	The standards and quality of maternity care	• Positive care experiences • Racism and discrimination in care • Uncertainty and speculation about care
	Advocacy, maternal roles, and abilities	• Provider advocacy • Self-advocacy • Undue burdens of advocacy • Others’ perceptions of behavior and abilities • Perseverance and strength

Defining Black Maternal Identity

When asked to prescribe meaning to being a Black woman who has given birth, women identified three key subthemes: 1) intersectionality of identity; 2) transition and identity development; and 3) community, culture, and traditions in identity development.

Intersectionality of Identity. The Black women in this study defined their identity as a distinctive experience that was not wholly exclusive or singularly specific to womanhood, motherhood, or Blackness. Several multidimensional roles and social expectations shape Black women's maternal identity. Women not only experienced the cultural and societal connections and perceived obligations of race and gender but also described their obligations as students, employees, spouses and partners, and general members of society:

> *That's not all that we are or all that we have to be. It's like, it's not just a duality. It's intersectional. You know, being a woman in this, um, in the structure, and being just a person, being creative or kind, or whatever you are as a person, all kind of goes into that.* (P1)

The complexity of Black maternal identity also establishes an understanding of the relationship between Black womanhood and maternity. At the same time that women describe their identity as intersectional, some participants closely associate Black womanhood with maternity. Participants described Black womanhood as synonymous with maternity in statements like, "being a Black woman and being a mother […] I feel like it goes hand in hand" (P2). However, the perceived synonymy between Black womanhood and maternity is not necessarily an intrinsic value or identity belief.

Participants described an association between Black womanhood and maternity as stereotypical and reductive. They expressed that Black maternal identity is genuinely intersectional, and women should not be expected to give birth and raise children just to be socially perceived as women. Furthermore, many women in the study expressed that they never really wanted children, making them question the perceived norm that motherhood and womanhood are the same. Not all participants felt motherhood was a natural occurrence; some

described their experience navigating maternity as challenging to their perceptions of womanhood and femininity.

> *I'm not one of those people who necessarily thinks that motherhood is an essential experience to womanhood […] but as someone who has never been incredibly confident in my femininity, I think […] there's something that's undeniably feminine […] about birth. While it's not like an essential part of womanhood […] it does unequivocally make you more. I think to older generations, they're like, you're a woman now*. (P3)

Women's expressions of identity also defined the complexity of lived experiences, including experiences with oppression. Women could not always identify the precise cause of differential treatment in maternity care settings. Because identity comprises many social classifications, including race and gender, participants perceived their maternity care experiences in complex ways. One participant explained, "You can't really separate it [discrimination]. Like, is it a microaggression? Is it racism? Is it sexism? But it doesn't really matter because it's all kind of wrapped up in one anyway" (P1).

Women also compared their experiences with discrimination in maternity care to other groups' experiences, such as the experiences of non-Black women. While they share some experiences with other women, there is a novel and intersectional experience of being a Black woman in maternity care. Participants explained that white women or other non-Black birthing people likely had similar experiences with oppression in maternity care, but for Black women, the experiences are multiplicative.

> *It's a shared experience across women to be discriminated [against] in healthcare […] and that made me feel a little less alone […]. As women, do we feel like we've had discrimination in healthcare just for being women? And there are so many instances*

> *where […] even the white girls were like, 'Yeah, like this incident happened where my doctor wasn't taking me seriously […]. He just wasn't listening to me […].' [But] I feel like being Black, a Black woman, it's like a double whammy*. (P4)

Transition and Identity Development. The inherently intersectional nature of Black maternal identity also resulted in participants experiencing a state of transition during pregnancy. Women explained that pregnancy and childbirth diversified their already intersectional understanding of identity: "What I've been identifying more recently as is not just Black woman. It's like Black woman in transition […] and sort of feeling this transition in like my Black womanhood" (P5). Women's roles shifted as maternity created novel experiences and responsibilities. The transition was noted explicitly among the eight participants who did not already have other children in their homes prior to their most recent birth. The transition from a non-pregnant person to pregnancy and then postpartum and parenting bought out feelings of change and uncertainty as women navigated their Black maternal identity and roles.

Similar to understanding Black maternal identity as intersectional, the transition into motherhood also required complex assessments of participants' values, beliefs, and aspirations. Many participants did not want the transition into maternity to overshadow or redefine the other aspects of their identity centrality: "I spent a lot of my pregnancy fighting sort of like this new reality. So like the question of like being a Black woman and giving birth, it was like […] I don't want my identity defined by motherhood" (P5).

Participants did not want to lose their autonomy or individuality through the sacrifice of motherhood; women desired to preserve their happiness and well-being over conforming to certain expectations. While participants often noted the obligation to raise, protect, and educate their children, they also described diligence in upholding personal values, such as education,

employment, and relationship status. Women did not want to ascribe to traditionally perceived maternity roles out of social expectation but were adamant that their self-preservation and autonomy were integral to being a good role model in parenting and motherhood.

> *I could have been with my baby daddy […]. We could be together right now, raising our child together. That's not what I wanted for myself. I'm not gonna force myself to be with you, I'm not gonna do that. Even for the sake of her, like I'm not gonna do it. I can't be my best self and be a good mom if I'm forcing myself in the situations I don't wanna be in*. (P2)

Even when comparing themselves to other mothers and maternal figures, participants explained their desire not to give up or sacrifice specific goals and ambitions they had for themselves. For example, compared to her mother-in-law, one participant described an unwillingness to forego her degree program to become a stay-at-home mother:

> *[My mother-in-law], she's such a good definition of like what it really means to sacrifice in motherhood, because, I was not willing to do that. I was not willing to stop my degree and just stay home. Like, no, that is not me*. (P4)

Such examples demonstrate that the women in this analysis did not want the identity they developed before pregnancy and motherhood to be restricted. Their existing roles and identity beliefs were essential in establishing their Black maternal identity even as they transitioned into motherhood.

Community, Culture, and Traditions in Identity Development. Women's social networks also played a vital role in defining Black maternal identity, as the women in this study described Black maternity as a cultural and community experience. Specifically, the Black

women in this study described their identity as more of a community or an exclusive membership. Participants described Black motherhood as a "club," "exclusive," and a "sorority."

> *Motherhood is […] like an expectation and also like a club. Like a sorority or something […]. You're being accepted into the group of the adult women in your life […]. Like, 'oh, you have a baby. Like, oh, you can sit with us now.' So I guess it's like […] social capital*. (P6)

Women also found that the transition into motherhood connected them to other generations of women. One participant experienced a stronger connection to their heritage through their pregnancy and maternity experience: "I think the biggest view of being a Black woman that changed [during pregnancy] was just feeling more connected […]. I felt more connected to my roots, my ancestors […] more connected to my Blackness" (P4). Overall, women felt their shift into Black maternity earned them social status and created a bond with other women who shared the experiences of pregnancy and childbirth.

The entrance into the Black maternal community bears "a lot of responsibility in terms of carrying on tradition" (P7). Black women described an obligation to share the traditions and culture of Blackness with their children. One of the participants described having a child as an experience that "changed me as a Black woman because it made me more aware and intentional about instilling Blackness in myself and infusing our rich culture into my child" (P6). Not only did the roles and responsibilities of sharing the culture and traditions extend to their children, but participants also expressed an overwhelming need to provide resources and support to other Black women. Through storytelling and resource sharing, participants described an obligation to support and help other Black women as they navigated maternity: "I have more responsibility not only to my family but also to other Black women who are […] in this situation" (P1). Sharing

resources and storytelling were ways that women established more profound connections with the Black mothering community. This comradery was also a way to continue the generational sharing of culture and traditions with future Black mothers.

> *Being a person who serves as a resource to other moms is now a new part of my identity […]. Like what is my responsibility to other Black women? […] Like I had this birthing experience, but it becomes, 'what does this birthing experience mean for other Black women?' […] I feel this responsibility to be like, let me go help other Black women*. (P5)

These examples demonstrate a sense of cohesiveness and community with other Black women. However, participants also described a desire to break traditions or generational experiences that did not align with their personal goals and values as mothers. Women did not want to give their children the responsibility of navigating generational traumas, curses, and baggage. The cultural and traditional connectivity of Blackness also translated to an understanding of generational experiences. One participant explained that generational experiences shaped her understanding of her identity: "A lot to my friends are in this Black woman, generational curse breaking situation. And that's where I feel my identity. There's this responsibility […] in this beauty, there's also some things to unlearn" (P8). Another participant described her past experiences as "baggage" that she must navigate when raising her daughter:

> *I think the other part of it is navigating how to raise her as a Black woman, without the baggage that I think I have, or without some of the baggage. You can't get rid of all of it, but without some of the baggage that I think I have, and my family has as Black women*. (P3)

Another woman described that raising her daughter made her responsible for creating a "better generation," just as her mother raised her to be part of a better generation of women:

> *Like my mom's generation was okay, but she created me and I feel like I'm part of a better generation of women. And now I have the part to take care of [my daughter] and make her a better generation of women. And I feel like it's just, it's gonna make her better. Being Black, it's gonna make her better*. (P2)

These descriptions outline generational influences on how women choose to raise their children. Furthermore, these descriptions demonstrate that Black women's perceived maternal responsibilities include engaging with and continuing the development of a community and culture of Blackness and Black womanhood.

The Effects of Maternity Care Experiences on Identity Development and Behaviors

We have already described Black maternal identity, mentioning how experiences with racism and discrimination in maternity care influence certain aspects of behavior and identity development. In describing the second theme of this analysis, we will explain specific experiences and exposures while receiving maternity care. The subthemes that categorized the effects of maternity care experiences in identity development are 1) the standards and quality of maternity care and 2) advocacy, maternal roles, and abilities. Women also responded to questions about healthcare needs and areas for healthcare system improvement. These descriptions are outside the scope of defining the Black maternal self-concept and are not reviewed in this analysis.

Standards and Quality of Care. Women in this study described maternity care experiences as positive and negative, explicitly focusing on standards and quality of care. Every participant in this analysis had at least one exchange with a healthcare professional that they described as a positive experience. Some women had professionals like nurses, midwives, and obstetricians who went above and beyond in providing care. Participants who described positive

experiences with providers explained that their providers were “compassionate” and “considerate.” Others described their providers as attentive to their needs, aware of and intentional in preventing maternal health risks for Black women, and transparent when communicating with patients.

However, standards and quality of care also perpetuated racism or discrimination. Women in this study expressed uncertainty when processing their experiences with care. Participants did not always know the standard medical practice and therefore did not feel confident that their experiences were rooted in racism. One woman explained, “I think I just don't know what's routine and what's not routine” (P3). This same participant later described that her lack of medical expertise limited how much she knew of the standards in maternity care practice: “Because that's not my expertise […] I have so many issues knowing what's normal. I just don't know what things were supposed to happen and what things weren't supposed to happen” (P3).

Specific experiences with healthcare that left women feeling uncertain were providers asking specific questions multiple times, such as questioning if a participant needed a waiver for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC):

> *I could see it also being a normal thing, but the number of times I was asked if my husband was my husband and the number of times I was asked, like, ‘will you be requiring a WIC waiver?’ Like, I wasn't sure if that's just something they asked because we're in [a major city] and I was at an urban hospital and presumably there's a population that would require that […]. Don't know that I need to be asked a couple times […]. I don't know, but […] that kind of grated on me every time a white man asked me if I needed WIC.* (P3)

Another specific experience that held negative connotations and caused uncertainty about the standard of care was drug testing during prenatal care visits. Four women described being given a toxicology or drug test during prenatal care without being informed of the test and why it was ordered. One of these four participants, a nurse, explained her experience when she went to provide her lab cultures:

> *I get to the lab room and it's they need me to pee in a cup again because they wanna do a drug screen […]. Like, I'm not sure if that's routine or not, having not been pregnant but it was like, I'm not- no. We didn't discuss this. I'm not taking a drug screen. Like I'm not doing drugs. I know that I'm not doing drugs. I'm not paying for this […]. Like I'm not doing it. And the fact that like, it's like, would he [the doctor] have discussed that with me and told me all this stuff if I was not Black? […] But it's like don't treat me like I'm some type of drug addict*. (P2)

Other experiences that left women questioning providers' intentions included being ignored or not taken seriously. Some women felt ignored, "dismissed," or "waved along" when they presented their concerns or requests for specific care. In some instances, dismissal occurred during potentially life-threatening complaints like chest pain. It took one participant several tries, plus her mother's request for help from the healthcare team, to finally get a provider to check her concern for postpartum chest pain. This participant describes,

> *I needed somebody take me seriously about the chest pain. And before it started to die down, like nobody was taking me serious. Nobody was taking me serious that my chest was hurting. And I did not like that. Like chest pain is a serious thing and I didn't want it to be serious […]. I don't wanna be this person, but my chest is hurting*. (P2)

Women also speculated about their treatment. All but two of the participants (n = 8) explicitly stated that they wondered if they would have received different treatment if they were not Black. Specifically, participants wondered if the care they received was the standard that all maternity patients receive or if they received subpar care that would have been better if they were white. The participant who experienced chest pain also explained,

> *The nurse was a good nurse and she probably was treating me as she treats all her patients. But once it came to that chest pain, it's like, 'lady I could be dying right now […]. I'm having chest pain and you're not taking it seriously. And I know that if I was white, you would have cared.'* (P2)

When asked how they would feel if they knew their treatment was the standard of care and not physician bias, some participants said they would still feel frustrated or angry. Even if all women experienced the same treatment, participants expressed how concerning it was that providers could accept a lack of transparency and poor patient communication as acceptable care standards. One participant explained that if these experiences were standards of care, "it really kind of contextualizes the issues that you see a lot of other people have" (P10). She describes added burdens for women who had higher-risk pregnancies or for women whose infants had to stay in the Neonatal Intensive Care Unit for extensive periods:

> *I would be infuriated […]. I don't have the energy […]. Irritation abounds […]. I just don't have the energy to fight all the battles. And maybe they're counting on that, but I just don't have the energy*. (P10)

These expressions define how important it is for providers and healthcare professionals to understand the implications of practices, policies, and procedures. Even if these practices are

standards of care, participants found them biased and stereotypical perceptions of Black communities.

Advocacy, Maternal Roles, and Abilities. This subtheme describes how the abovementioned experiences influenced Black women's beliefs about their roles and abilities in maternity. Black women in this study explicitly describe the necessity of advocacy when engaging with the healthcare system. Some women found support from healthcare providers and professionals who advocated for them in maternity settings. These positive experiences with providers included awareness of Black women's maternal health risks and disparities. One participant explained that when providers were aware of maternal health disparities, she felt they wanted to do their best to prevent poor outcomes for their Black patients:

> *Black women have like worst outcomes in maternity than non-Black women. I'm already aware of that. And I just felt that like the very responsive practitioners that I had were also aware of that and wanted me to have a good experience because of that*. (P1)

Other women described their providers as highly respectful of their wishes and ensured that the rest of the medical team was also intentional and respectful of the patient's wishes. One participant described how being a survivor of sexual assault in the past made pregnancy an extremely uncomfortable and vulnerable experience; she described asking her providers to practice trauma-informed care, such as asking for consent before touching her. This participant explained that one of the nurses on her delivery team gave exceptional care by ensuring that the entire medical team knew of and respected the patient's needs and wishes. When reflecting on how those experiences made her feel, the participant explained that it "was like a breath of fresh air […]. It was the first time in my pregnancy where I felt like I wasn't being violated" (P4). Another participant explained she did not have to advocate for herself because she had an active

delivery team while in labor: “So I never had to a like actually advocate for myself because I had a team that was doing it” (P9).

Some Black women in this study also had to advocate for themselves throughout their maternity care experiences. Advocating for oneself with providers meant that women felt they had to be more prepared and knowledgeable. Women in this study obtained detailed healthcare information from other sources to appear knowledgeable to their healthcare providers. One participant explained that she had to internet search her symptoms to determine what tests she needed to demand from her providers:

> *I had a headache for a week, and Google will tell you that if you're at the end of your pregnancy and you have a headache for a week, you need to be tested for preeclampsia, and the tests would be protein, urine, and blood pressure, and the headache would be like huge red flags for that. So I go in, and they don't ask for urine and I'm like, ‘I'm here because I had a headache for a week […]. Are you gonna do anything about that?’* (P7)

Above, we mention a participant who experienced postpartum chest pain and felt ignored by her provider. She described advocating for herself as follows: “I paid more attention […] like after the chest pain situation, I monitored myself more closely because it was clear that nobody else was gonna take me seriously. So I had to take myself seriously” (P2). In addition to monitoring their health, participants also took measures to become more literate in medical terminology to advocate for their healthcare needs. One participant even described taking a college-level medical terminology course so that she could speak with medical professionals during her pregnancy:

> *I went and took like a medical term class […]. I read so much and did so much research and did like so much more learning […] because I was like, I wanna know what I'm*

> *talking about. And as long as I have the correct language, I feel like they'll take me more seriously […]. I shouldn't have to do that*. (P4)

Advocating for quality maternity care and respect in healthcare settings was a problematic and undue burden on Black women throughout pregnancy and delivery:

> *It was a lot to even have to advocate for myself, like [advocating] takes a lot out of you, just because it shouldn't be extra hard to get healthcare. So I think just like adding stress, adding possible traumatic experiences*. (P8)

The burden of advocating for oneself in healthcare settings also raised concerns over public perceptions of behavior. Participants were hesitant to ask for help or vocalize their concerns to healthcare providers. While they sometimes felt the need to advocate for their health and safety, some participants described the fear of being stereotyped and ignored as a "problem patient" or an "angry Black woman." One woman explained that she had "reservations about asking for help" (P8). Another participant described the fear of being stereotyped as aggressive and angry when advocating for her healthcare needs:

> *In stressful situations, when I have to advocate for myself, I turn into like what someone would define as a bitch. Others would say I'm just aggressive […]. But it all depends. And as a Black woman, I was even more scared. Cause I was like, 'oh, they're not gonna like my attitude, [I'm] coming off as like a know-it-all, angry Black woman who doesn't even know what she's talking about.'* (P10)

Monitoring one's behavior and emotions to avoid being stereotypically perceived is part of women's behavioral expectations and maternal roles. Women's abilities to advocate for themselves and persevere through unfair treatment were inherent aspects of Black maternity. About their abilities after pregnancy and labor, women said they felt powerful and highly

capable of perseverance: “Birthing has taught me that like, we have so much power and like Black women really are the most powerful beings on earth” (P9). Women also described the community of Black women as capable of enduring trauma and still persevering. One woman explains that this power is generational and shared between all Black women: “The biggest role Blackness plays in motherhood is power […]. Like we hold trauma and we've persevered through trauma in ways, generationally, that no other race has. And that's something incredibly powerful” (P7). Another participant discussed how Black women endure more yet can persevere through pregnancy and childbirth:

> *Not to say that like Black women are stronger than white women, but I feel like it is one hundred percent true. Like you mean to tell me that not only are Black women giving birth to future generations, but we're doing so with like higher rates of risk […]. Like bad shit happens to us in this process. And we still just move on with it. And we're strong and we persevere […] and we just move on. Like for me, it's just like power*. (P4)

Women were also surprised and proud of their ability to persevere through the physical and mental challenges of pregnancy and labor. About successfully giving birth, one woman said, “I feel powerful. I feel really proud of myself. I did that” (P9). Another woman explained, “My experiences made me realize that I'm a lot more powerful than I think I am” (P6).

While the intrinsic feelings of strength were primarily positive, women were also worried about being perceived as too strong and capable of enduring heavier burdens and more pain than is necessary. Specifically, women in this study expressed concern over non-white healthcare providers’ perceptions of Black women’s strength and ability to persevere. One woman described how healthcare providers’ perceptions of Black women as strong are potentially detrimental to Black women’s health and well-being:

> *I really dislike when white women talk about a Black woman in terms of her strength […]. My fear is that healthcare workers think we're strong […]. The idea that you are strong because you can bear more and it's removed from how much we should have to bear […]. Like, even if that is how things are done, should it be the way that things are done? […] If I can bear […] all this stuff doesn't mean that I should*. (P3)

Intrinsic perceptions of one's strength did not overshadow the exhaustion associated with the physically and emotionally taxing pregnancy experience. Black women described themselves as lacking "energy" and feeling "drained" and "tired" throughout the pregnancy, delivery, and postpartum periods. The undue burden of proving one's worth when advocating for maternity care also amplified the general exhaustion of pregnancy:

> *It was exhausting dealing with the system […]. Making sure I prove my worth, like prove that I'm worth listening to, like that was exhausting […]. Prepping myself for this appointment and prepping myself to make sure that […] I can communicate with the physician in a way where the physician takes me seriously […] that was exhausting*. (P4)

While women could advocate for themselves, the burden was mentally onerous and impacted women's feelings about being perceived as strong.

Overall, advocating for maternity care was an important way for women to navigate experiences with racism. The women in this study found themselves more capable of advocating for themselves. They also explained how these experiences harmed their overall well-being by inflicting emotional and mental exhaustion and fear of being stereotyped by providers.

Structural Description: Experiences with Racism and Black Maternal Self-Concept

Based on participants' descriptions, the Black maternal self-concept comprises identity, identity and ability beliefs, and role perceptions, whereby identity includes closeness to and

intrinsic beliefs about Black motherhood. Life course experiences inform the development of Black maternal identity by exposing women to Black maternal culture, traditions, and community. Furthermore, members of women's social networks, including other Black women, influence the perceptions, expectations, and beliefs about what behaviors and abilities constitute Black maternity. Black maternal identity develops through lived experiences and social group membership. Black women engage in intrinsic analytical assessments of their personal beliefs, values, and ambitions to preserve autonomy without overshadowing other intersecting social group memberships and roles. The transition into Black maternity results in a more robust understanding of identity, ability beliefs, and role perceptions as women intrinsically conceptualize the Black maternal self.

Women's unique experiences with racism and discrimination in maternity care also influence their perceived maternal roles and behaviors. Namely, experiences with poor quality care and less than adequate standards of care affect women's perceived roles in maternity care spaces. While navigating the transition to Black maternal identity, women must also serve as self-advocates when seeking maternity care. Additionally, even when advocating for their healthcare needs, Black women must still consider healthcare professionals' perceptions. These lived social experiences, including exposure to racism and discrimination in maternity care, influence the development of the Black maternal self-concept.

Discussion

This analysis utilized principles of transcendental phenomenology to understand development of the Black maternal self-concept for Black women who experience racism and discrimination when receiving maternity care. We found that the Black maternal self-concept is multidimensional and dependent on lived experiences. The Black maternal self-concept

comprises identity centrality with Blackness, womanhood, and motherhood. The Black maternal self-concept also comprises private and public regard and perceived roles, abilities, and behaviors specific to Black women who give birth. Experiences with racism and discrimination in maternity care and connections to community, culture, and tradition also influence the Black maternal self-concept.

To our knowledge, this is the first study to examine the Black maternal self-concept as a construct of psychosocial well-being. Pregnancy is well-reviewed as a social phenomenon (Bornemark & Smith, 2016), but few studies have examined motherhood as an identity that influences self-conceptualization. Pregnancy has been examined as a temporary sociological role (Myers & Grasmick, 1990); however, pregnancy is a brief intersection in the life course and is not inclusive of the dynamic transition between pre-pregnancy, pregnancy, postpartum, and motherhood. We offer evidence that the phenomenon of maternity and the development of a maternal identity extend throughout the life course. Women in this study developed beliefs and expectations about Black maternity even before they were pregnant. Furthermore, maternity extends beyond a sociological role to comprise identity. Women in this study described Black maternal identity in terms of transitioning; therefore, we propose that Black maternal identity modifies but does not eclipse Black women's pre-pregnancy identity. We propose that identity shifts occur throughout the life course, specifically during transitional life experiences like pregnancy and parenthood.

This analysis is specific to the novel construct of the Black maternal self-concept. Conversely, the general self-concept is the beliefs and perceptions one has about oneself and one's attributes. The general self-concept is structurally modeled as a hierarchical, multifaceted construct that includes several dimensions on multiple hierarchical levels (Marsh & Shavelson,

1985; Shavelson et al., 1976). The general self-concept is classified as relatively stable when examined as a core construct of psychosocial well-being; however, further down the hierarchical structure, the dimensions of self-concept are fluid and situationally dependent (Marsh & Shavelson, 1985; Shavelson et al., 1976). We provide evidence that the dimensions of self-concept are fluid and situationally dependent while positing Black maternal self-concept as a distinct construct of maternal psychosocial well-being. As the women in this study describe, identity and identity development are not isolated to singular moments and experiences. The aspects of identity and identity beliefs that shape general self-concept will also affect maternal self-concept. To our knowledge, no prior studies have examined maternal self-concept, especially while defining the specific intersectional dynamics of racialized gender identity. Furthermore, there is a need for more information about birthing persons' beliefs and perceptions about themselves and their maternity-specific attributes.

This analysis begins to define some maternity-specific dimensions of self-concept. Identity, self-esteem, private and public regard, and self-efficacy and confidence to perform specific behaviors are essential in understanding general self-concept (Campbell, 1990; Szymanski & Lewis, 2016; Volpe et al., 2019). In this analysis, Black women who give birth define maternity and motherhood using similar dimensions of identity, self-efficacy, and private and public regard. Specifically, Black women describe their maternal identity centrality by defining their connection to the exclusive community, culture, and traditions of Black motherhood. The women in this study also describe their experiences with storytelling, resource sharing, and knowledge acquisition during their transition into motherhood; this information-seeking and culturally immersive behavior are similar to identity exploration, a key component of identity development (Phinney, 1992; Sellers et al., 1998). Women in this study also explain

their self-efficacy to engage in specific behaviors, including the physical act of carrying and birthing their infants and advocating for their maternity care needs. Additionally, the women in this study described private and public regard for Black maternal group membership through their intrinsic perceptions, expectations, and beliefs about Black women who give birth and how others perceive Black women who give birth. Throughout each aspect of maternal self-conceptualization, Black women specifically identify with Blackness, womanhood, and motherhood, making the Black maternal self-concept a distinct and multidimensional construct of maternal psychosocial well-being.

Black women in this analysis described their private and public regard toward the social group of Black women who give birth. Private regard is specific to the intrinsic perceptions one has about their group membership. For example, in this analysis, Black women described the social group of Black women who give birth as “strong” or “magic.” Conversely, public regard refers to the intrinsic perceptions one has about how external others view members of the social group. In this study, Black women described their perceptions and beliefs about how doctors, white women, and other non-group members view Black women who give birth. As such, private and public regard can include negative perceptions that increase the risk of stereotype threat. Stereotype threat refers to the psychological assessment of risk associated with behaviors, mannerisms, and actions to which a negative stereotype applies (Ho & Sidanius, 2009; Steele, 1997; Steele & Aronson, 1995). Participants in this study specifically mentioned the perceived stereotypical role beliefs of the strong Black woman and the angry Black woman. Stereotype threat associated with these roles can increase the risk for anxiety and poor neuropsychological performance (Steele, 1997; Steele & Aronson, 1995; Thames et al., 2013).

Similarly, stereotypical role perceptions can affect health and health behaviors. The strong Black woman schema is potentially beneficial and detrimental to health (Abrams et al., 2019; Allen et al., 2019; Liao et al., 2020). Studies show that Black women who desire to adhere to the strong Black woman schema also report increased depressive symptomatology and are less likely to express or seek help or support when needed (Abrams et al., 2019; Liao et al., 2020). Participants in this study described Black women who give birth as inherently strong and capable of persevering through pain and the difficulty of pregnancy. The result was that women described pride and surprise at their ability to successfully give birth and advocate for their needs in maternity care. As such, the intrinsic perceptions of Black women as strong and capable of enduring difficult experiences may be a benefit when facing the physically and mentally exhausting experiences of pregnancy and childbirth.

However, participants clearly explained that perceptions of themselves as strong and capable were not the same as being perceived as strong by healthcare providers. Providers' perceptions of Black women as strong could be associated with the perception that Black women do not feel intense pain or do not need additional medical interventions (Hall et al., 2015). A study of medical students demonstrated a belief in stereotypes like Black patients do not feel pain (Hoffman et al., 2016). Other studies have shown that Black patients do not receive equitable monitoring, attentiveness, and treatment interventions, including in maternity care settings (Agency for Healthcare Research and Quality, 2019; Fannin, 2019; Zuckerwise & Lipkind, 2017). Healthcare providers' stereotypical perceptions of Black women as strong can affect the quality and types of care they receive.

Advocacy and assertiveness were necessary for Black women to be taken seriously and to have their maternity healthcare needs effectively and efficiently met. However, when advocating

for themselves, women in this study had to monitor their behaviors, expressions, and emotions out of fear of being perceived as angry or irrational. As the women in this study explained, the constant monitoring of one's behavior and the anticipation of bias resulted in feelings of exhaustion, frustration, and anger. Stereotypes of the angry Black woman schema made some women in this study worry that they would be perceived as the "problem patient" who would be treated rudely, ignored, or dismissed by healthcare professionals. Managing and monitoring one's behavior and emotions to not be perceived as an angry Black woman also has detrimental effects on psychosocial well-being and life satisfaction (Donovan & West, 2015; Thomas et al., 2004).

Stereotypical perceptions of Black women also affect how women perceive their care. Women described feeling unsure if their experiences were racist or just the standard of care. This experience can be understood by examining the lack of provider transparency and communication in drug testing practices. The American College of Obstetricians and Gynecologists recommends verbally screening all pregnant women who receive prenatal care (American College of Obstetricians and Gynecologists, n.d.; Newman, 2016). Women identified as high risk for substance use through screening *and* who consent to drug testing should receive a urine toxicology test. Over 88% of medical facilities that provide basic maternity care were in favor of universal toxicology screenings for all pregnant women (Newman, 2016). These recommendations and findings demonstrate that toxicology testing may be more standard than is universally understood. However, even if toxicology testing is a routine medical practice for all pregnant patients, Black women's descriptions of the lack of transparency in ordering and consent to run these tests is cause for concern. The women in this study did not know the routine procedures for drug testing and were not informed of these tests until after their physician had

ordered them. While participants did not discuss whether providers conducted a screening to indicate drug testing necessity, the lack of patient-provider discussion around ordering these tests held racist connotations.

Without universal guidelines around substance use testing for pregnant women, Black and Hispanic populations are more likely to be tested. A recent study of medical chart history found that Black patients in hospital Labor and Delivery units were significantly more likely to receive a urine toxicology test than white patients (Winchester et al., 2022). However, the positive drug testing result rate was not significantly different between racial groups (Winchester et al., 2022). Furthermore, it was found that less than 12% of all toxicology tests ran, regardless of race, provided substantial documentation of the patient's consent (Winchester et al., 2022). Higher rates of substance use testing among Black populations without substantial cause, as outlined through screenings, may be a direct result of implicit bias and racial stereotyping.

Furthermore, substance use is stigmatized, especially among pregnant women (American College of Obstetricians and Gynecologists, n.d.; Blount et al., 2021; Winchester et al., 2022). Subjection to drug testing for pregnant women without transparent communication from their providers increases the risk for women reporting experiences with perceived racism. Limited transparent communication also introduces concerns for shame, fear, and lack of trust between patients and their providers. Participants' feelings around these events could be mitigated through transparent communication regarding routine procedures and their purpose. It is important to note that the intentions behind medical procedures and practices do not excuse the potentially detrimental effects they have on Black women's psychosocial well-being.

Some of the experiences shared by participants in this analysis were universal to all women. Black women explained that other women and birthing persons likely experience some

level of uncertainty in maternity care and also experience other forms of discrimination. However, Black women's experiences are intersectional, stemming from multiple forms of oppression (e.g., racism, sexism, and gendered racism). The added experience of pregnancy and childbirth amplifies the risk of oppression, especially when receiving obstetric and gynecological care. Many systematic levels of oppression underlie modern obstetrics and gynecology (Cooper Owens, 2017). As such, interventions must be tailored to prevent and address the multiplicative effects that compound forms of oppression have on Black women. Some Black women's needs are shared with other non-white and non-cis-gender birthing persons. However, the added burdens of gendered racism require intensive support interventions tailored to Black women's intersectional needs (Essed, 1991; Szymanski & Lewis, 2016). Actively working to eliminate oppression in all forms supports Black women and other birthing persons of varying racial and ethnic identities. Understanding that maternity care has the potential to multiplicatively impact the health and well-being of intersectional populations further demands a more holistic and justice-oriented approach to supporting patients' needs.

Future Research and Recommendations

The analysis of these experiences provides evidence of the relationship between identity, abilities, behaviors, beliefs, and lived experiences. However, the essence of Black women's experiences with discrimination in healthcare settings is not universally described here. While these descriptions provide a thorough understanding of Black maternal experiences and identity development, we cannot make generalizations about maternal experiences, especially for non-Black and non-cis-gender birthing persons. We understand that some of the experiences in this analysis may be shared across populations; however, other populations' experiences are likely

specific to other group memberships. Community-specific and appropriate research must be conducted to understand the notable phenomenon of maternity in diverse communities.

Furthermore, this analysis was not exhaustive in describing the experiences of all Black women. We identified other unique and budding themes that did not directly inform our understanding of the Black maternal self-concept and identity development. These themes included areas of need in maternity care and strategies for improving maternity care for Black women. We recommend studies that expand on these themes and intervention development to address community-identified needs. We also recommend continued assessments of the relationship between maternity, self-conceptualization, and lived experiences for Black women who give birth. Additional qualitative work is needed to understand the essence of maternity as a phenomenon, especially in diverse populations. Further quantitative work, such as survey measurement development and model testing, is needed to understand better the structure of the Black maternal self-concept, including the dimensions we identified in this analysis (e.g., identity, regard, ability beliefs, and role perceptions).

Conclusions

This analysis provides evidence of the relationship between lived experiences and self-conceptualization for Black women who give birth. Furthermore, this assessment provides compelling evidence for centering research on the lived experiences of populations. Continued effort should address lived experiences as valuable sources of knowledge, especially in understanding psychosocial health and well-being for maternal populations.

References

Abrams, J. A., Hill, A., & Maxwell, M. (2019). Underneath the mask of the strong Black woman schema: Disentangling influences of strength and self-silencing on depressive symptoms among U.S. Black women. *Sex Roles, 80*(9-10), 517-526. https://doi.org/10.1007/s11199-018-0956-y

Agency for Healthcare Research and Quality. (2019). *2018 national healthcare quality & disparities report*.

Allen, A. M., Wang, Y., Chae, D. H., Price, M. M., Powell, W., Steed, T. C., Rose Black, A., Dhabhar, F. S., Marquez-Magaña, L., & Woods-Giscombe, C. L. (2019). Racial discrimination, the superwoman schema, and allostatic load: exploring an integrative stress-coping model among African American women. *Annals of the New York Academy of Sciences, 1457*(1), 104-127. https://doi.org/10.1111/nyas.14188

American College of Obstetricians and Gynecologists. (n.d.). *Policy priorities: Substance use disorder in pregnancy*. https://www.acog.org/advocacy/policy-priorities/substance-use-disorder-in-pregnancy#:~:text=Routine%20urine%20drug%20screening%20is,factor%20in%20determining%20family%20separation.

Arghavanian, F. E., Roudsari, R. L., Heydari, A., & Bahmani, M. N. D. (2020). Pregnant women's experiences of social roles: An ethnophenomenological study. *Iran J Nurs Midwifery Res, 25*(1), 31-39. https://doi.org/10.4103/ijnmr.IJNMR_54_19

Arnold-Baker, C. (2019). The process of becoming: Maternal identity in the transition to motherhood. *Existential Analysis, 30*(2), 260.

Bailey, Z. D., Krieger, N., Agenor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*, *389*(10077), P1453-1463. https://doi.org/https://doi.org/10.1016/S0140-6736(17)30569-X

Bassi, M., Delle Fave, A., Cetin, I., Melchiorri, E., Pozzo, M., Vescovelli, F., & Ruini, C. (2017). Psychological well-being and depression from pregnancy to postpartum among primiparous and multiparous women. *J Reprod Infant Psychol*, *35*(2), 183-195. https://doi.org/10.1080/02646838.2017.1290222

Beskow, L. M. (2016). Lessons from HeLa cells: The ethics and policy of biospecimens. *Annu Rev Genomics Hum Genet*, *17*, 395-417. https://doi.org/10.1146/annurev-genom-083115-022536

Blount, T. N., LaGuardia, A. C., & Fitzpatrick, D. C. (2021). African American women's substance use recovery experiences: A phenomenological inquiry. *Counseling and Values*, *66*(1), 92-110. https://doi.org/https://doi.org/10.1002/cvj.12146

Bonilla Silva, E. (1997). Rethinking racism: Toward a structural interpretation. *American Sociological Review*, *62*(3), 465-480.

Bornemark, J., & Smith, N. (2016). *Phenomenology of pregnancy*. Södertörns högskola. https://books.google.com/books?id=To_KjwEACAAJ

Brunton, R., Simpson, N., & Dryer, R. (2020). Pregnancy-related anxiety, perceived parental self-efficacy and the influence of parity and age. *International Journal of Environmental Research and Public Health*, *17*(18), 6709. https://doi.org/10.3390/ijerph17186709

Callaghan, W. M., Creanga, A. A., & Kuklina, E. V. (2012). Severe maternal morbidity among delivery and postpartum hospitalizations in the United States. *Obstet Gynecol*, *120*(5), 1029-1036. https://doi.org/http://10.1097/AOG.0b013e31826d60c5

10.1097/aog.0b013e31826d60c5

Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *J Pers Soc Psychol*, *59*(3), 538-549.

Carter, R. T., Johnson, V. E., Kirkinis, K., Roberson, K., Muchow, C., & Galgay, C. (2019). A meta-analytic review of racial discrimination: Relationships to health and culture. *Race and Social Problems*, *11*(1), 15-32. https://doi.org/https://doi.org/10.1007/s12552-018-9256-y

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, *54*(10), 805-816.

Colen, C. G., Ramey, D. M., Cooksey, E. C., & Williams, D. R. (2018). Racial disparities in health among nonpoor African Americans and Hispanics: The role of acute and chronic discrimination. *Soc Sci Med*, *199*, 167-180. https://doi.org/10.1016/j.socscimed.2017.04.051

Cooper Owens, D. (2017). *Medical bondage race gender and the origins of American gynecology*. University of Georgia Press.

Creanga, A. A., Bateman, B. T., Kuklina, E. V., & Callaghan, W. M. (2014). Racial and ethnic disparities in severe maternal morbidity: A multistate analysis, 2008-2010. *Am J Obstet Gynecol*, *210*(5), 435 e431-438. https://doi.org/10.1016/j.ajog.2013.11.039

Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches* (4 ed.). SAGE Publications, Inc.

Dominguez, T. P. (2011). Adverse birth outcomes in African American women: The social context of persistent reproductive disadvantage. *Social Work in Public Health*, *26*(1), 3-16. https://doi.org/10.1080/10911350902986880

Donovan, R. A., & West, L. M. (2015). Stress and mental health: Moderating role of the strong Black woman stereotype. *Journal of Black Psychology*, *41*(4), 384-396. https://doi.org/10.1177/0095798414543014

Engnes, K., Lidén, E., & Lundgren, I. (2013). Women's experiences of important others in a pregnancy dominated by intimate partner violence. *Scandinavian Journal of Caring Sciences*, *27*(3), 643-650. https://doi.org/10.1111/j.1471-6712.2012.01073.x

Essed, P. (1991). *Understanding everyday racism: An interdisciplinary theory* (Vol. 2). SAGE Publications, Incorporated. https://doi.org/10.4135/9781483345239

Fannin, M. (2019). Labour pain, 'natal politics' and reproductive justice for Black birth givers. *Body & Society*, *25*(3), 22-48. https://doi.org/10.1177/1357034X19856429

Hall, W. J., Chapman, M. V., Lee, K. M., Merino, Y. M., Thomas, T. W., Payne, B. K., Eng, E., Day, S. H., & Coyne-Beasley, T. (2015). Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: A systematic review. *Am J Public Health*, *105*(12), e60-76. https://doi.org/10.2105/AJPH.2015.302903

Harding, S. (1992). Rethinking standpoint epistemology: What is "strong objectivity?". *The Centennial Review*, *36*(3), 437-470.

Hernandez, N. D., Francis, S., Allen, M., Bellamy, E., Sims, O. T., Oh, H., Guillaume, D., Parker, A., & Chandler, R. (2022). Prevalence and predictors of symptoms of perinatal mood and anxiety disorders among a sample of urban Black women in the south.

Maternal and Child Health Journal, *26*(4), 770-777. https://doi.org/10.1007/s10995-022-03425-2

Hill Collins, P. (2002). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment* (2nd ed.). Routledge.

Ho, A. K., & Sidanius, J. (2009). Preserving positive identities: Public and private regard for one's ingroup and susceptibility to stereotype threat. *Group Processes & Intergroup Relations*, *13*(1), 55-67. https://doi.org/10.1177/1368430209340910

Hoffman, K. M., Trawalter, S., Axt, J. R., & Oliver, M. N. (2016). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between Blacks and whites. *Proc Natl Acad Sci U S A*, *113*(16), 4296-4301. https://doi.org/10.1073/pnas.1516047113

Howell, E. A. (2018). Reducing disparities in severe maternal morbidity and mortality. *Clin Obstet Gynecol*, *61*(2), 387-399. https://doi.org/10.1097/GRF.0000000000000349

Howell, E. A., Egorova, N. N., Balbierz, A., Zeitlin, J., & Hebert, P. L. (2016). Site of delivery contribution to black-white severe maternal morbidity disparity. *Am J Obstet Gynecol*, *215*(2), 143-152. https://doi.org/10.1016/j.ajog.2016.05.007

Howell, E. A., & Zeitlin, J. (2017). Improving hospital quality to reduce disparities in severe maternal morbidity and mortality. *Semin Perinatol*, *41*(5), 266-272. https://doi.org/10.1053/j.semperi.2017.04.002

Hoyert, D. (2022). *Maternal mortality rates in the United States, 2020* (NCHS Health E-Stats, Issue.

Jones, C. P. (2000). Levels of racism: A theoretic framework and a gardener's tale. *American Journal of Public Health*, *90*(8), 1212-1215. https://doi.org/10.2105/ajph.90.8.1212

Kockelmans, J. J. (1994). *Edmund Husserl's phenomenology*. Purdue University Press.

Kurz, M. R. (2020). When death precedes birth: The embodied experiences of women with a history of miscarriage or stillbirth—A phenomenological study using artistic inquiry. *American Journal of Dance Therapy*, *42*(2), 194-222. https://doi.org/10.1007/s10465-020-09340-9

Liao, K. Y.-H., Wei, M., & Yin, M. (2020). The misunderstood schema of the strong Black woman: Exploring its mental health consequences and coping responses among African American women. *Psychology of women quarterly*, *44*(1), 84-104. https://doi.org/10.1177/0361684319883198

Liese, K. L., Mogos, M., Abboud, S., Decocker, K., Koch, A. R., & Geller, S. E. (2019). Racial and ethnic disparities in severe maternal morbidity in the United States. *J Racial Ethn Health Disparities*, *6*(4), 790-798. https://doi.org/10.1007/s40615-019-00577-w

Marsh, H. W., & Shavelson, R. (1985). Self-concept: Its multifaceted, hierarchical structure. *Educational Psychologist*, *20*(3), 107-123.

Mehra, R., Boyd, L. M., Magriples, U., Kershaw, T. S., Ickovics, J. R., & Keene, D. E. (2020). Black pregnant women “get the most judgment”: A qualitative study of the experiences of Black women at the intersection of race, gender, and pregnancy. *Women's health issues*, *30*(6), 484-492. https://doi.org/10.1016/j.whi.2020.08.001

Morse, J. M. (1994). Designing funded qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 220-235). Sage Publications, Inc.

Moustakas, C. (1994). *Phenomenological research methods*. https://doi.org/10.4135/9781412995658

Myers, S. T., & Grasmick, H. G. (1990). The social rights and responsibilities of pregnant women: An application of Parsons's sick role model. *The Journal of Applied Behavioral Science*, *26*(2), 157-172. https://doi.org/10.1177/0021886390262005

Newman, L. (2016, March 1). As substance abuse rises, hospitals drug test mothers, newborns. *Clinical Laboratory News*. https://www.aacc.org/cln/articles/2016/march/as-substance-abuse-rises-hospitals-drug-test-mothers-newborns

Onorato, R. S., & Turner, J. C. (2004). Fluidity in the self-concept: The shift from personal to social identity. *European Journal of Social Psychology*, *34*(3), 257-278. https://doi.org/10.1002/ejsp.195

Paradies, Y., Ben, J., Denson, N., Elias, A., Priest, N., Pieterse, A., Gupta, A., Kelaher, M., & Gee, G. (2015). Racism as a determinant of health: A systematic review and meta-analysis. *PLoS One*, *10*(9), e0138511. https://doi.org/10.1371/journal.pone.0138511

Petersen, E. E., Davis, N. L., Goodman, D., Cox, S., Syverson, C., Seed, K., Shapiro-Mendoza, C., Callaghan, W. M., & Barfield, W. (2019). Racial/ethnic disparities in pregnancy-related deaths -- United States, 2007-2016. *MMWR Morbidity and Mortality Weekly Report*, *68*, 762-765. https://doi.org/10.15585/mmwr.mm6835a3external icon.

Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, *7*(2), 156-176. https://doi.org/10.1177/074355489272003

Rev. (2022). *Rev transcription services*. rev.com

Riggan, K. A., Gilbert, A., & Allyse, M. A. (2020). Acknowledging and addressing allostatic load in pregnancy care. *J Racial Ethn Health Disparities*, *8*(1), 69-79. https://doi.org/10.1007/s40615-020-00757-z

Ross, K. M., Dunkel Schetter, C., McLemore, M. R., Chambers, B. D., Paynter, R. A., Baer, R., Feuer, S. K., Flowers, E., Karasek, D., Pantell, M., Prather, A. A., Ryckman, K., & Jelliffe-Pawlowski, L. (2019). Socioeconomic status, preeclampsia risk and gestational length in Black and white women. *J Racial Ethn Health Disparities*, *6*(6), 1182-1191. https://doi.org/10.1007/s40615-019-00619-3

Rubin, R. (1984). *Maternal identity and the maternal experience*. Springer Pub. Co.

Sanders, P. (1982). Phenomenology: A new way of viewing organizational research. *The Academy of Management Review*, *7*(3), 353-360. https://doi.org/10.2307/257327

Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. A. J., & Chavous, T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review, 2*(1), 18-39. https://doi.org/10.1207/s15327957pspr0201_2

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, *46*(3), 407-441.

Singh, G. K. (2021). Trends and social inequalities in maternal mortality in the United States, 1969-2018. *Int J MCH AIDS*, *10*(1), 29-42. https://doi.org/10.21106/ijma.444

Skloot, R. (2011). *The immortal life of Henrietta Lacks*. Crown Publishing Group.

Steele, C. M. (1997). A threat in the air. How stereotypes shape intellectual identity and performance. *Am Psychol*, *52*(6), 613-629. https://doi.org/10.1037//0003-066x.52.6.613

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *J Pers Soc Psychol*, *69*(5), 797-811. https://doi.org/10.1037//0022-3514.69.5.797

Szymanski, D. M., & Lewis, J. A. (2016). Gendered racism, coping, identity centrality, and African American college women's psychological distress. *Psychology of women quarterly*, *40*(2), 229-243. https://doi.org/10.1177/0361684315616113

Taylor, J. K. (2020). Structural racism and maternal health among Black women. *J Law Med Ethics*, *48*(3), 506-517. https://doi.org/10.1177/1073110520958875

Thames, A. D., Hinkin, C. H., Byrd, D. A., Bilder, R. M., Duff, K. J., Mindt, M. R., Arentoft, A., & Streiff, V. (2013). Effects of stereotype threat, perceived discrimination, and examiner race on neuropsychological performance: Simple as black and white? *Journal of the international neuropsychological society*, *19*(5), 583-593. https://doi.org/10.1017/s1355617713000076

Thomas, A. J., Witherspoon, K. M., & Speight, S. L. (2004). Toward the development of the stereotypic roles for Black women scale. *Journal of Black Psychology*, *30*(3), 426-442. https://doi.org/10.1177/0095798404266061

Trost, S. L., Beauregard, J., Chandra, G., Njie, F., Berry, J., Harvey, A., & Goodman, D. A. (2022). *Pregnancy-related deaths: Data from maternal mortality review committees in 36 US states, 2017-2019*. https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc.html

Tufford, L., & Newman, P. (2010). Bracketing in qualitative research. *Qualitative Social Work*, *11*(1), 80-96. https://doi.org/10.1177/1473325010368316

Turner, J. C., & Onorato, R. S. (1999). Social identity, personality, and the self-concept: A self-categorization persepctive. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), *The psychology of the social self* (pp. 11-46). Lawrence Erlbaum.

Vedam, S., Stoll, K., Taiwo, T. K., Rubashkin, N., Cheyney, M., Strauss, N., McLemore, M., Cadena, M., Nethery, E., Rushton, E., Schummers, L., & Declercq, E. (2019). The giving voice to mothers study: Inequity and mistreatment during pregnancy and childbirth in the United States. *Reproductive Health*, *16*(1). https://doi.org/10.1186/s12978-019-0729-2

VERBI Software. (2021). *MAXQDA 2022 [computer software]*. In VERBI Software. maxqda.com

Volpe, V. V., Lee, D. B., Hoggard, L. S., & Rahal, D. (2019). Racial discrimination and acute physiological responses among Black young adults: The role of racial identity. *Journal of adolescent health*, *64*(2), 179-185. https://doi.org/10.1016/j.jadohealth.2018.09.004

Ward, T. C. S., Mazul, M., Ngui, E. M., Bridgewater, F. D., & Harley, A. E. (2013). "You learn to go last": Perceptions of prenatal care experiences among African-American women with limited incomes. *Maternal and Child Health Journal*, *17*(10), 1753-1759. https://doi.org/10.1007/s10995-012-1194-5

Washington, H. A. (2006). *Medical apartheid: The dark history of medical experimentation on Black Americans from colonial times to present*. Doubleday.

Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: Evidence and needed research. *Annu Rev Public Health*, *40*, 105-125. https://doi.org/10.1146/annurev-publhealth-040218-043750

Winchester, M. L., Shahiri, P., Boevers-Solverson, E., Hartmann, A., Ross, M., Fitzgerald, S., & Parrish, M. (2022). Racial and ethnic differences in urine drug screening on labor and delivery. *Matern Child Health J*, *26*(1), 124-130. https://doi.org/10.1007/s10995-021-03258-5

Yearby, R., Clark, B., & Figueroa, J. F. (2022). Structural racism in historical and modern U.S. health care policy. *Health Affairs*, *41*(2), 187-194. https://doi.org/10.1377/hlthaff.2021.01466

Zhang, S., Ding, Z., Liu, H., Chen, Z., Wu, J., Zhang, Y., & Yu, Y. (2013). Association between mental stress and gestational hypertension/preeclampsia: A meta-analysis. *Obstetrical & gynecological survey*, *68*(12), 825-834. https://doi.org/10.1097/OGX.0000000000000009

Zoom Video Communications, I. (2021). *Zoom cloud meetings (Version 5.11.1) [Computer software]*. In https://vcu.zoom.us/

Zuckerwise, L. C., & Lipkind, H. S. (2017). Maternal early warning systems —Towards reducing preventable maternal mortality and severe maternal morbidity through improved clinical surveillance and responsiveness. *Semin Perinatol*, *41*(3), 161-165. https://doi.org/10.1053/j.semperi.2017.03.005

CHAPTER 4

PAPER 3

THE BLACK MATERNAL SELF-CONCEPT: TOWARD A COMPREHENSIVE MODEL OF MATERNAL PSYCHOSOCIAL WELL-BEING

Abstract

Background: For Black women in the U.S., experiences with racism, discrimination, and maternity create complex and dynamic effects on maternal health and psychosocial well-being. Given the implications of these experiences, researchers must develop comprehensive assessments of Black maternal psychosocial well-being. Therefore, we propose the novel Black maternal self-concept as a multidimensional construct with implications for assessing comprehensive Black maternal psychosocial well-being. **Method:** Using an iterative, mixed methods approach, we developed the Black Maternal Self-Concept Model (BMSCM) as a hierarchical, multidimensional structure with three primary dimensions (identity, identity beliefs, and ability beliefs) and eight sub-dimensions. We tested the proposed BMSCM structure by developing and testing the Black Maternal Self-Concept Inventory (BMSCI). We disseminated the developed BMSCI in an online survey with Black women who gave birth in the last two years (n = 265). Survey data was used to conduct item and factor analysis under the structural equation modeling framework. **Results**: The final 33-item BMSCI partially supports the proposed hierarchical, multidimensional structure of the BMSCM. Evidence from the final hierarchical model suggests that the BMSCI measures Black maternal identity (comprised of centrality and exploration), private and public regard, advocacy self-efficacy, and maternal role beliefs as self-concept dimensions. **Conclusions:** The BMSCM provides preliminary evidence to support the Black maternal self-concept as a hierarchical multidimensional construct. We provide future directions and recommendations for the continued development and validation of the BMSCI as a comprehensive assessment of the Black maternal self-concept.

Background

Black women who give birth in the U.S. experience significant maternal health disparities stemming from racism and discrimination (Hoyert, 2022; Liese et al., 2019; Taylor, 2020). Specifically, Black women have the highest maternal morbidity and mortality rates of any racial group in the U.S. (Hoyert, 2022). Furthermore, despite decades of research examining these disparities and their causes, the Black maternal mortality rate is rising (Hoyert, 2022; Singh, 2021; Zuckerwise & Lipkind, 2017). Maternal morbidity outcomes like preeclampsia, eclampsia, gestational hypertension, and cardiac events also occur at higher rates in Black women, affecting their health and well-being throughout their life course (Brown et al., 2020; Liese et al., 2019; Taylor, 2020).

These maternal health disparities stem from systemic racism and discrimination affecting the quality of care that Black women receive (Dominguez, 2011; Slaughter-Acey et al., 2019; Taylor, 2020). Most maternal morbidity and mortality cases are preventable with quality care and adequate health monitoring and surveillance (Howell et al., 2016; Trost et al., 2022; Zuckerwise & Lipkind, 2017). However, Black patients in the U.S. are less likely to receive quality care (Agency for Healthcare Research and Quality, 2019; Hall et al., 2015; Taylor, 2020). Inequitable gynecologic and obstetric care policies, procedures, and practices result from systemic and cultural biases and contribute to a higher risk for maternal morbidity and mortality (Taylor, 2020; Yearby et al., 2022). Furthermore, Black women have intersectional experiences with multiple forms of oppression, including gendered racism (Bowleg, 2012; Szymanski & Lewis, 2016; Watson et al., 2016). These intersectional experiences with racism and discrimination multiplicatively affect Black women’s maternal health.

Maternal Health and Psychosocial Well-being

Many assessments of Black maternal health focus on physical and mental health outcomes, including preeclampsia, eclampsia, gestational hypertension, depression, and anxiety (Brown et al., 2020; Liese et al., 2019; Zhang et al., 2013). However, little is understood about the relationship between Black women's experiences throughout maternity, their comprehensive psychosocial well-being, and their physical and mental health. Evidence supports an association between markers of psychosocial well-being and overall physical and mental health (Carter et al., 2019; Hernandez et al., 2022; Sowislo & Orth, 2013). For example, self-esteem is considered a significant predictor of anxiety, depression, and psychological distress among Black adults (Hernandez et al., 2022; Sowislo & Orth, 2013). Self-efficacy, life satisfaction, and coping also have significant associations with physical and behavioral health outcomes (Alexander et al., 2019; Ouch & Moradi, 2019; Szymanski & Lewis, 2016). However, individual psychosocial predictors do not comprehensively measure psychosocial well-being when examined independently.

Furthermore, maternity has unique effects on psychosocial conceptualization and identity development. Studies have examined pregnancy and maternal identity as transitional experiences that change individuals' perceptions of their social roles and expectations (Arghavanian et al., 2020; Arnold-Baker, 2019; Rubin, 1984). Specifically, maternal identity is explored as the acceptance and integration of the maternal role within self perceptions (Arnold-Baker, 2019; Rubin, 1984). Other maternity-specific factors of psychosocial well-being include maternal or parental self-efficacy and maternal self-esteem; both factors are associated with the specific understanding of maternity and maternal roles in the development of self perceptions (Arnold-Baker, 2019; Brunton et al., 2020; Wonch Hill et al., 2017). However, the situational specificity

of the maternal self is not comprehensively understood. That is, there is no clear delineation of the relationship between maternal identity, other maternity-specific psychosocial factors, and the development of intrinsic perceptions about the maternal self and maternal attributes.

Conceptualizing the Black Maternal Self-Concept

Self-concept is a comprehensive construct for assessing the psychosocial self; it is defined as the perceptions and beliefs one has about oneself and one's attributes (Onorato & Turner, 2004; Turner & Onorato, 1999). In social psychology, the general self-concept is considered a relatively stable construct. However, models of self-concept like the Shavelson et al. hierarchical model posit self-concept as a multidimensional structure (Marsh & Shavelson, 1985; Shavelson et al., 1976). Other examinations of self-concept include the working and the spontaneous self-concepts, which refer to situationally specific conceptualizations of self (Markus & Kunda, 1986; Markus & Nurius, 1986; McGuire & Padawer-Singer, 1976). The spontaneous and working self-concepts define an understanding of self-concept as a situationally-specific idealization that is inspired by current moments and exposures. For example, one's perceptions and beliefs about the self may be greatly affected in a single moment after exposure to racism and discrimination. However, the overarching general self-concept is more stable and does not change from single moments, exposures, and events (Markus & Kunda, 1986; Markus & Nurius, 1986; McGuire & Padawer-Singer, 1976).

Assessing the spontaneous self-concept in health research often includes measures of the more situationally-dependent dimensions rather than trait-level characteristics (Marsh & Shavelson, 1985; McGuire & Padawer-Singer, 1976). For example, as opposed to measuring trait-level self-esteem, an assessment of spontaneous or working self-concept may assess behavior or role-specific factors (e.g., behavior-specific self-efficacy or parenting self-esteem).

As such, the many dimensions of self-concept refer to specific experiences that may reflect one's spontaneous self-concept at any moment in the life course (Markus & Kunda, 1986; Marsh & Shavelson, 1985; Shavelson et al., 1976). Therefore, the dimensions of self-concept can easily be tailored to assess specific health behaviors, health outcomes, and populations.

Additionally, while general self-concept is considered relatively stable, lived experiences that catalyze extreme identity transitions may result in significant changes to self perceptions and perceived attributes beyond a singular moment in the life course. Namely, experiences such as pregnancy, childbirth, and parenthood may result in extreme changes to self-conceptualization. Because it is part of the life course, the maternity transition may result in a more significant shift in self perceptions. A comprehensive understanding of how the maternal shift affects self perceptions and beliefs could provide a clearer and more concrete understanding of general self-concept, overall health, and maternal psychosocial well-being.

Examining maternal self-concept as a distinct construct can improve the understanding of maternal psychosocial well-being. Additionally, a well-structured maternal self-concept model can inform a comprehensive understanding of the relationship between lived experiences and maternal health and well-being. We propose that the maternal self-concept is a maternity-specific, multidimensional psychosocial construct. For Black women, we propose that the complex experiences at the intersections of race, gender, and maternity further influence self conceptualizations. Therefore, to comprehensively address maternal health disparities, there is a necessity for the development and operationalization of the Black maternal self-concept. Studies need to examine the complex and unique experiences of Black women and their associations with Black maternity. Research must examine the comprehensive structure of the Black maternal self-concept, which must account for Black women's specific and unique experiences with

discrimination and other maternal health factors. Conceptualizing and defining a comprehensive structure of Black maternal self-concept is necessary to effectively examine the relationship between discrimination, psychosocial well-being, and maternal health outcomes.

The Current Study

Using an iterative, mixed methods approach, we conducted a series of studies to build a conceptual model of the Black maternal self-concept. We define and structurally organize three dimensions within the Black Maternal Self-Concept Model (BMSCM): identity, identity beliefs, and ability beliefs. Next, we describe the processes for the preliminary development of the Black Maternal Self-Concept Inventory (BMSCI), including item generation and item and factor analysis. We conclude by providing recommendations for future research with the Black Maternal Self-Concept Model and further examination of the Black Maternal Self-Concept Inventory.

The Black Maternal Self-Concept Model (BMSCM)

The Black maternal self-concept is a novel construct used to describe beliefs and perceptions of the Black maternal self and Black maternal attributes. We used a series of studies to develop a foundational understanding of the dimensions and sub-dimensions of the Black Maternal Self-Concept Model (BMSCM). Based on these studies, we developed textural descriptions for these dimensions.

Study 1: Defining General Self-Concept in Racism and Health Research

In Study 1, we examined existing evidence for the structure of general self-concept in adult health and racism research (see Chapter 2: Paper 1 for a complete overview of this study). In summary, we conducted a systematic scoping review of the existing adult health literature to identify the dimensions and sub-dimensions of self-concept assessed in racism and health

research. We collated and synthesized data from 38 peer-reviewed articles published between 2015 and 2021, and developed a conceptual taxonomy to support the conceptualization and operationalization of self-concept in adult health and racism research. We identified fifteen self-concept sub-dimensions, which we categorized into the three primary dimensions of identity, identity beliefs, and ability beliefs. This evidence supports existing theoretical foundations that self-concept is a multidimensional and hierarchal construct of psychosocial well-being (Marsh & Shavelson, 1985; Shavelson et al., 1976).

Additionally, we extracted data from the 38 included articles to report how self-concept is measured in adult health and racism research. We identified survey items and pre-validated scales used to assess the fifteen sub-dimensions of general self-concept described across the existing adult health and racism research. We pooled these items and scales to be modified and tested for their use in developing of the Black Maternal Self-Concept Inventory, which we address below.

Study 2: Defining Black Maternal Self-Concept for Black Women who Give Birth

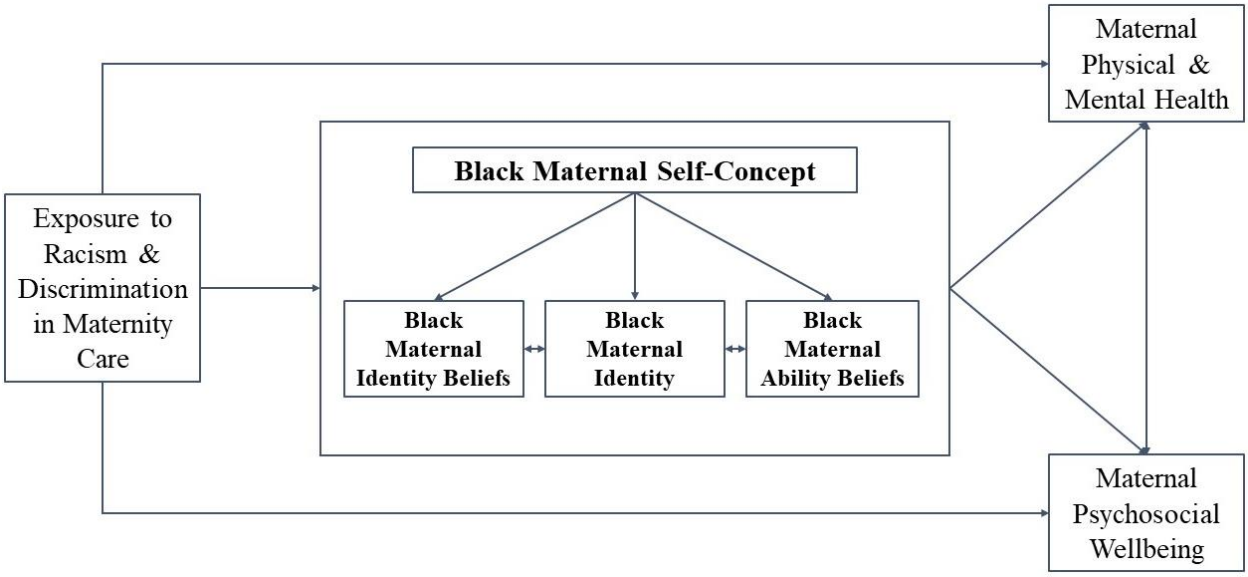
We procured an in-depth understanding of the Black maternal self-concept by conducting a qualitative study of U.S. Black women's maternity and maternity care experiences (see Chapter 3: Paper 2 for a complete overview of this study). Using a transcendental phenomenological approach, we conducted virtual, semi-structured interviews with Black women who recently gave birth in the U.S. (n = 10). Interviews assessed the phenomenon of maternity, women's experiences with racism in maternity care, and Black women's perceptions and beliefs about their maternal self and attributes (i.e., the Black maternal self-concept). We found that the Black maternal self-concept comprises Black maternal identity, maternity care advocacy self-efficacy,

private and public regard of Black women who give birth, and stereotypical role beliefs about Black women who give birth.

Women reported specific effects of their exposure to racism and discrimination on their maternal abilities and their perceptions about Black maternal roles and expectations. However, racism and discrimination were not explicitly described as dimensions included within the structure of the Black maternal self-concept. Instead, racism and discrimination were described similarly to other lived social experiences like the general transition into maternity. These descriptions demonstrate an association between lived experiences and the development of the Black maternal self-concept. Based on women's experiences and descriptions of their Black maternal self-conceptualizations, we propose a conceptual model of the relationship between Black maternal self-concept, racism, and health. Figure 1.1 represents a conceptual model for the hypothesized relationship between exposure to racism and discrimination in maternity care, Black maternal self-concept, and maternal physical and psychosocial health and well-being outcomes. We posit that this relationship is a comprehensive understanding of the effects of racism on the psychosocial, physical, and mental well-being of Black women who give birth. To describe the Black Maternal Self-Concept Model, we focus on the bolded terms in Figure 1.1. We define the dimensions of the BMSCM in detail below.

Figure 1.1

Conceptual Model for Black Maternal Self-Conceptualization



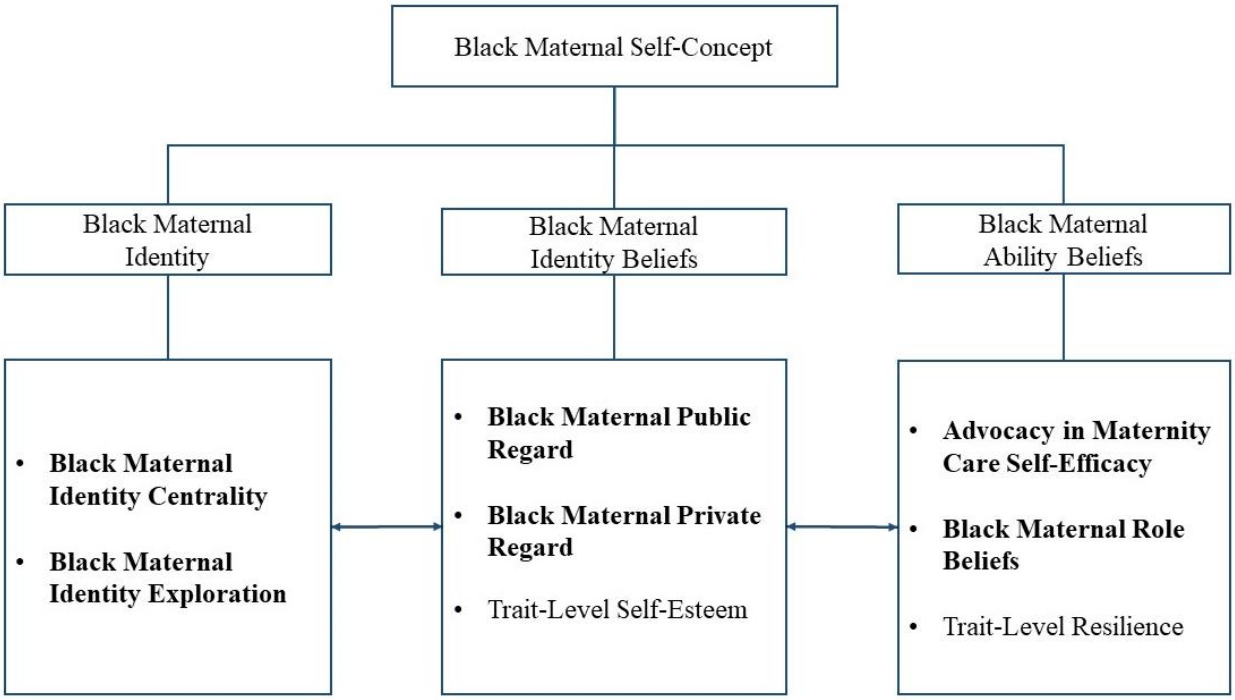
Note. The bolded section represents the structure of the Black Maternal Self-Concept Model (BMSCM). The BMSCM and its associated dimensions are the focus of this analysis. The overall structural model informs the rationale for the development of the BMSCM.

BMSCM Dimension Definitions

Based on the findings from Studies 1 and 2, we define three proposed dimensions of the Black maternal self-concept. Both studies provided underlying evidence that self-concept is a multidimensional structure comprising identity, identity beliefs, and ability beliefs. Furthermore, the Black maternal self-concept is specific to maternity, and the lived experiences of Black women who give birth. Therefore, our model defines three specific dimensions and six proposed sub-dimensions that comprise the Black maternal self-concept. Figure 4.1 depicts the proposed structural taxonomy for the Black Maternal-Self-Concept Model.

Figure 4.1

Black Maternal Self-Concept Model



Note. Bolded sub-dimensions included in the Black Maternal Self-Concept Inventory. Trait level self-esteem and resilience are not measured in the BMSCI because these sub-dimensions are believed to be more stable and are not specific to Black maternity.

Identity

In our examination of the existing research on self-concept, racism, and health, we found that racial and ethnic identity were central dimensions of self-concept (Study 1). Sellers et al. define racial identity as a multidimensional construct, which several studies have measured with the Multidimensional Inventory of Black Identity (Clifton et al., 2021; Sellers et al., 1997; Volpe et al., 2019). Similarly, several studies in our scoping review (Study 1) used subscales from the Multigroup Ethnic Identity Measure, which addresses ethnic identity as a dimension of self-conceptualization (Phinney, 1992). These findings from the literature on racism, health, and self-

concept provide evidence for the effects of racism on group identity and propose the importance of identity in self-conceptualization.

We expanded the understanding of racial and ethnic identity found in Study 1 to define Black maternal identity with Black women who recently gave birth (Study 2). Women describe Black maternity as an identity rather than a role, suggesting that maternity for Black women is dynamic and requires a multidimensional assessment. Furthermore, women described their Black maternal identity as an intersectional combination of Blackness, womanhood, and motherhood. These descriptions led to understanding two core sub-dimensions of Black maternal identity: centrality and exploration.

Centrality. *Identity centrality* is the perceived importance of group membership to the overall self-concept. Sellers et al. examine identity centrality as a dimension of racial identity (Sellers et al., 1998); conversely, the Multigroup Ethnic Identity Measure (Phinney, 1992; Roberts et al., 1999) and the Ethnic Identity Scale (Umaña-Taylor et al., 2014) examine aspects of identity centrality by assessing affirmation and belonging. In our scoping review (Study 1), several studies measured centrality or affirmation and belonging to assess the relationship between racism and the self-concept (Brittian et al., 2015; Clifton et al., 2021; Volpe et al., 2019).

Throughout their descriptions of Black maternal identity development, women in Study 2 described Black maternity as a culture or club exclusive to Black women who carry, birth, and raise children. These descriptions also reflected a similarity to identity centrality as described in the identity literature. For Black women who give birth, identity centrality must be specific to Black maternity. In the Black Maternal Self-Concept Model, we define *Black maternal identity centrality* as the importance of being a Black mother to the overall conceptualization of self.

Exploration. Identity exploration refers to one's search for a meaningful connection with group membership (Erikson, 1968; Phinney, 1992; Umaña-Taylor et al., 2014). In studies of self-concept in adult health and racism research (Study 1), measures of identity (e.g., Ethnic Identity Scale and Multigroup Ethnic Identity Measure) include assessments of identity exploration (Brittian et al., 2015; Roberts et al., 1999; Umaña-Taylor et al., 2014). Identity exploration commonly occurs during identity development and transition. For example, during social identity transitions, such as pregnancy and childbirth, individuals may seek more information about their identity by searching for greater knowledge, participating in social events, and talking with other social group members (Kroger et al., 2010; Syed et al., 2013).

Black women who recently gave birth described the responsibility of seeking new information throughout their transition into Black maternity (Study 2). Women described learning more about Black maternity through information seeking and storytelling with other trusted members of the Black maternal community. For example, Black women in Study 2 described reading books or materials that specifically address the uniqueness of Black maternity. Women also reported using social media, friends, and family when seeking additional information about Black maternity. As such, we operationalize *Black maternal identity exploration* as the search for a meaningful connection with Black maternity.

Identity Beliefs

While the identity dimension refers to centrality and exploration, the identity beliefs dimension comprises perceptions and beliefs one has about their group. Identity beliefs are distinct from integration, centrality, or exploration under the identity dimension. In identity beliefs, individuals apply worth and value to group membership rather than defining personal attachment to group membership. In the Multidimensional Model of Racial Identity, Sellers et al.

(1998) classify perceptions and beliefs about one's group as distinct sub-dimensions under identity. For example, regard is classified as an independent sub-dimension from centrality and exploration; however, these sub-dimensions correlate to create overarching identity (Ho & Sidanius, 2009; Sellers et al., 2006; Willis & Neblett, 2020). Based on Black women's descriptions of their identity beliefs (Study 2) and the findings in our scoping review (Study 1), we posit private regard, public regard, and self-esteem as distinctive sub-dimensions of identity beliefs.

Private Regard. Private regard refers to perceptions about a social group and social group membership. Private regard can include positive and negative perceptions and refers to general perceptions about group membership or specific perceptions about oneself as a social group member. For example, Black women in Study 2 reported intrinsic perceptions about Black women as a group, referring to them as strong and resilient. Similarly, women perceived themselves as strong or resilient because of their identity as Black women (Study 2). Private regard can also include negative perceptions about group membership. For example, in the scoping review in Study 1, we identified internalized oppression as negative beliefs about one's social group membership (Graham et al., 2016; Velez et al., 2015). For succinctness, we include negative beliefs about one's group membership, including internalized oppressive beliefs, as a component of private regard. We define *Black maternal private regard* as the positive and negative perceptions of Black maternal group membership.

Public Regard. The public regard sub-dimension describes beliefs about how others perceive group membership. For example, Black women in Study 2 expressed their belief that other people (e.g., healthcare providers) perceive Black women who give birth as strong and resilient. Women in Study 2 were clear that self-perceptions of strength are not the same as

others' perceptions of Black women as strong. Therefore, private and public regard are two separate sub-dimensions within identity beliefs.

Similar to private regard, public regard perceptions can be either positive or negative. Specifically, public regard may include others' stereotypic perceptions of Black women who give birth. We discuss stereotypic role beliefs in detail under the ability beliefs dimension; however, women may also believe that others stereotypically perceive Black women who give birth. Understanding these beliefs is essential, given the relationship between public regard and psychosocial well-being. Specifically, low or negative public regard is associated with poor life satisfaction, feelings of isolation, psychological distress, and depressive symptomatology for members of marginalized racial and gender groups (Sanchez, 2010; Sellers et al., 2006; Willis & Neblett, 2020). Therefore, Black women's beliefs about how others view Black maternity may be associated with maternal psychosocial well-being. Our conceptualization of *Black maternal public regard* is defined as Black women's intrinsic beliefs about how others perceive Black women who have given birth.

Self-Esteem. The *self-esteem* sub-dimension is a trait-level characteristic that refers to perceptions of worth and value tied to one's social identities (Rosenberg, 1965). Self-esteem is a common predictor of psychosocial well-being. In our scoping review (Study 1), self-esteem was the most commonly measured self-concept dimension and was most often assessed as a moderator or mediator of the relationship between racism and health (Study 1) (Mereish et al., 2016; Velez et al., 2018; Watson et al., 2016). For example, exposure to racism and discrimination is associated with poorer health outcomes for individuals with low self-esteem compared to individuals with high self-esteem (Cano et al., 2016; Mereish et al., 2016; Velez et

al., 2018). Based on these findings, we assert that self-esteem must be assessed for its effects on the relationship between racism/discrimination and health outcomes.

Furthermore, group or collective self-esteem is regarded as perceived worth and value associated with group membership. For example, maternal self-esteem references the value and worth an individual places on their maternal group membership (Farrow & Blissett, 2007; Wonch Hill et al., 2017). However, we posit that group-level self-esteem can be measured as importance (centrality) and positive and negative perceptions of group membership (private regard). Conversely, trait-level general self-esteem is an independent sub-dimension that warrants examination as part of identity beliefs. However, because it is a trait-level characteristic and is less likely to be maternity-dependent, we do not include self-esteem within the Black Maternal Self-Concept Inventory (BMSCI) (Figure 4.1). We exclude self-esteem from our measurement model but include it in these descriptions to encourage the use of the comprehensive structural model in future assessments.

Ability Beliefs

Within the ability beliefs dimension, we outline specific beliefs and perceptions about behavioral roles and expectations for Black maternity. The ability beliefs dimension is structured to include aspects of behavioral theory, including self-efficacy beliefs and perceived behavioral norms. However, these expectations and beliefs for Black maternity are situationally-dependent and are likely associated with other perceptions and beliefs about Black maternity. The ability beliefs dimension comprises sub-dimensions for advocacy in maternity care self-efficacy, Black maternal role beliefs, and trait-level resilience.

Advocacy Self-Efficacy. *Self-efficacy* refers to the perceived capability to perform specific behaviors. In the scoping review in Study 1, we identified self-efficacy, mastery, and

perceived control as factors related to behavioral beliefs for specific health behaviors. Specifically, studies assessed mastery as a trait-level characteristic (Hughes et al., 2015). However, self-efficacy was assessed concerning specific health behaviors, including smoking abstinence (Alexander et al., 2019) and coping (Ouch & Moradi, 2019). Other studies in health behavior include self-efficacy as a critical aspect of behavior change. The Social Cognitive Theory and the modified Health Belief Model demonstrate extensive theoretical foundations for the importance of self-efficacy in health behavior change (Bandura, 2004; Skinner et al., 2015). However, self-efficacy is not a general construct; self-efficacy must be applied to specific health behaviors to provide utility in understanding behavioral intention.

In interviews with Black women who recently gave birth (Study 2), we identified advocacy in maternity care as a central behavioral expectation throughout Black maternity. Black women described a need to advocate for themselves in healthcare settings to receive quality care and meet their healthcare needs. Therefore, we include advocacy self-efficacy as a sub-dimension within the proposed BMSCM. In this model, *advocacy self-efficacy* references the perceived capability to advocate in maternity care settings.

Black Maternal Role Beliefs. *Black maternal role beliefs* are the perceived behavioral expectations and social norms for Black maternity. Women in Study 2 described several perceived behavioral roles and expectations as they transitioned through maternity, and women specifically described stereotypic role beliefs and expectations for Black women who give birth. Regardless of maternity status, stereotypical roles for Black women include the strong Black woman (or superwoman) and the mammy schemas (Abrams et al., 2019; Liao et al., 2020; Sewell, 2013; Thomas et al., 2004). Studies have shown that Black women who internalize stereotypic role beliefs are at risk for experiencing poor psychosocial well-being, including

burnout, poor life satisfaction, and more anxiety and depressive symptoms (Abrams et al., 2019; Donovan & West, 2015; Liao et al., 2020).

Additionally, behavioral theories, including the Theory of Planned Behavior and the Integrated Behavior Model, outline the importance of perceived behavioral norms in determining health behaviors (Fishbein, 2008; Montano & Kasprzyk, 2015). These perceptions are fundamental in determining predictors of Black women's maternal health behaviors, including infant feeding behaviors (Villalobos et al., 2021), safe sleep practices (Chin et al., 2021), and dietary choices during pregnancy (Hutchinson et al., 2017). Therefore, measures of role beliefs must outline the perceived behavioral norms and expectations of Black maternity as well as the stereotypic role beliefs that may negatively influence well-being. To improve the measurement of multiple maternal role perceptions, we outline the role beliefs sub-dimension under ability beliefs within the BMSCM.

Resilience. The last sub-dimension of ability beliefs is resilience. Similar to self-esteem, resilience is regarded as a trait-level characteristic. For Black adults especially, resilience moderates the relationship between exposure to adverse experiences, such as racism, and health and well-being outcomes (Brown & Tylka, 2010; Bryant et al., 2022). In our phenomenological assessment of Black women's experiences with maternity, women overwhelmingly referred to Black women as strong and resilient (Study 2). More specifically, women explained the need to persevere through persistent exposure to racism and discrimination. However, assessments of resilience and perseverance assess the passion and inherent ability to overcome difficulties; these dimensions are most often assessed as trait-level, stable characteristics (Bryant et al., 2022; Duckworth et al., 2007; Smith et al., 2008).

Resilience, like self-esteem, is relatively stable and less affected by social experiences. Additionally, resilience is a general construct and is not readily adaptable to maternity-specific self perceptions. Therefore, we do not include resilience in the measurement model for the novel Black Maternal Self-Concept Inventory. However, we assert that resilience should be built into the Black maternal self-concept structural model and should be measured as a predictor when assessing the relationship between exposure to racism and discrimination and maternal health outcomes.

Assessment of the Black Maternal Self-Concept Inventory

We developed the Black Maternal Self-Concept Inventory to assess the dimensions of the Black Maternal Self-Concept Model (BMSCM). We generated, tested, and analyzed a pool of potential items using reduction strategies and modification to reduce the number of potential BMSCI items. Finally, we conducted factor analyses under structural equation modeling to test the structure of the measurement model and to identify emerging evidence for the dimensionality of the BMSCI. The Virginia Commonwealth University Institutional Review Board approved the presented strategies and methods.

Study 3: Item Generation

We identified, modified, and developed survey items to target the proposed dimensions and sub-dimensions of the Black maternal self-concept. We developed and modified 106 items targeting the six sub-dimensions of Black maternal self-concept (i.e., identity centrality and exploration, public and private regard, advocacy self-efficacy, and Black maternal role beliefs). We modified 87 items from preexisting scales, including the Multidimensional Inventory of Black Identity (Sellers et al., 1997), the Revised Multigroup Ethnic Identity Measure (Roberts et al., 1999), the Cross Racial Identity Scale (Worrell et al., 2004), the Stereotypic Roles for Black

Women Scale (Thomas et al., 2004), and the Perceived Efficacy in Patient-Physician Interactions questionnaire (Maly et al., 1998). We modified items to address Black maternity specifically; for example, items targeting aspects of racial identity were modified to target Black maternal identity.

Additionally, we created 19 new items to address themes and subthemes of Black maternal self-concept that were not addressed in other pre-validated scales and questionnaires (Study 2). The 19 newly developed items primarily targeted identity beliefs (private and public regard) and ability beliefs (role beliefs for Black women who give birth).

Pilot Testing of Items

We pilot-tested items with a sample of 18 to 40 year old (M_{age} = 26.8, *SD* = 3.9) Black women who recently gave birth in the U.S. (n = 26). Participants were recruited through social media and Amazon Mechanical Turk (MTurk) and were directed to an external Qualtrics link to complete the survey. Participants were eligible if they were Black women between 18 and 40 years old and have given birth in the U.S. in the last two years. We excluded individuals who gave birth in the last two years but whose child has since died.

Survey Procedures. Eligible participants were provided a general definition for identity, identity beliefs, and ability beliefs. Participants were then shown a subset of 35 items from the 106 items generated above. This subset of items included all 19 newly developed items, which primarily targeted public and private regard and Black maternal role beliefs. Participants were asked to classify each of the 35 items into identity, identity beliefs, or ability beliefs based on which definition they felt most closely aligned with each statement. Participants explained or justified their rationale for each item's classification by responding to open-ended questions (e.g., *"For the statement, '_____,' you selected '_____.' Please explain why you chose this*

classification"). The survey instrument for conducting cognitive testing surveys can be found in Appendix E.

Analysis. We assessed item performance by assessing the frequency of misclassification. We calculated the average number of categorizations for each time across the three dimensions (identity, identity beliefs, and ability beliefs). Items that were commonly misclassified were considered for modification or removal. We looked at the qualitative data from open-text responses and identified concerns, issues, are misconceptions about items. For example, we assessed key terms or phrases that participants used to justify their item classification and determined if the items were poorly worded, double-barreled, or if the items were overly difficult to understand. Since the modified items came from pre-validated measures and had evidence of validity and reliability in other samples, we primarily focused our analysis on the 19 newly developed items.

Item Modification and Reduction

We condensed the initial pool of 106 items by removing redundant items (e.g., '*Black mothers have to be strong,*' and '*Black mothers have to be strong to survive*'). Next, based on feedback through pilot testing, we removed and further modified the newly developed items. After item modification and reduction, we compiled a final pool of 53 items to be tested in Study 4 during scale development. Eight items targeted centrality (e.g., '*Being a Black mother is an important reflection of who I am*'). Four items targeted exploration (e.g., '*I have spent time trying to find out more about Black motherhood*'). Ten items targeted private regard (e.g., '*I am proud to be a Black mother*'). Seven items targeted public regard (e.g., '*Overall, Black mothers are considered good by others*'). Twenty items targeted role beliefs (e.g., '*Black mothers have no choice but to carry on*' and '*Black mothers have to be strong to survive*'). Five items targeted

advocacy self-efficacy (e.g., '*I am confident in my ability to get a maternity care provider to answer all of my questions*'). All items in the pool asked participants to indicate their level of agreement with each statement on a 5-point Likert response scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate greater or more positive perceptions of Black maternity and the Black maternal self. A list of the 53 items and their source can be found in Appendix F.

Study 4: Scale Development

We disseminated a survey to identify evidence of the BMSCI's structure and dimensionality when tested with Black women who have recently given birth. We conducted item and factor analyses to finalize the items included in the scale and to determine a preliminary structure for the Black Maternal Self-Concept Inventory.

Method

We disseminated the BMSCI items in an online survey to Black women between 18 and 40 who gave birth in the last two years.

Recruitment. We recruited participants for the online survey using social media recruitment and Amazon Mechanical Turk (MTurk). We posted recruitment materials on study-specific Facebook and Instagram profiles and used paid advertisement services through Meta Business to increase reach. Interested participants clicked an embedded link in the recruitment ads. Individuals recruited on MTurk were shown a worker task that invited them to complete the online interview. MTurk workers interested in completing the survey selected an embedded link to the externally hosted survey. Examples of recruitment advertisements and posts can be found in Appendix C.

The link for social media and MTurk recruitment took participants to an external survey hosted on Qualtrics. This survey asked participants to complete ten screening questions to

determine eligibility. Individuals were eligible if they were Black women between 18 and 40 years of age and if they had given birth in the last two years. Individuals were excluded if they did not meet inclusion criteria or if their most recent pregnancy ended in a stillbirth or miscarriage. Individuals were also excluded if, since giving birth, their infant has died, if they did not live in the U.S. during their pregnancy and delivery, or if they were currently pregnant. Ineligible participants were immediately exited from the survey and could not continue with the remaining questions.

Survey Procedure. Eligible individuals were directed to the study information sheet and were asked to provide their implied consent by continuing to the survey questionnaire. Individuals who continued to the next page were asked to complete the full survey. MTurk workers who were eligible and completed the survey received $5.00, which was disseminated to their worker account through MTurk. Participants who completed the survey through social media were entered in a drawing for one of fifteen $10 gift cards.

Measures. In addition to the 53 of the BMSCI, we assessed measures of psychosocial well-being (self-esteem, resilience, coping, and thriving), maternal physical and mental health (maternal morbidity outcomes, anxiety, and depression), maternal health history, and sociodemographic characteristics. The complete survey instrument can be found in Appendix G. For purposes of scale development, we focus our analysis on the 53 potential items of the BMSCI. We reserve the additional measures for further testing of the Black maternal self-concept conceptual model presented in Figure 1.1.

Analysis. Analysis for the development of the BMSCI was conducted in two phases: item analysis and factor analysis. All analyses were performed using R 4.2.2 software, and was factor

analysis was performed using the lavaan package for structural equation modeling (R Core Team, 2022; Rosseel, 2012).

Item Analysis. BMSCI items were assessed for their effectiveness prior to conducting factor analysis. We assessed items in relationship to other items within their targeted sub-dimensions from the BMSCM. We used item correlations, item discrimination scores, and Cronbach's alpha scores for the sub-dimensions to determine which items were least effective and could be removed from the inventory. We tested the Partial Credit Model, the Rasch or 1PL Partial Credit Model, the Generalized Partial Credit Model, and the constrained and unconstrained Graded Response Models under the Item Response Theory to determine the best fitting model for item analysis (Finch & French, 2019). Item discrimination values were calculated from the best fitting Item Response Theory model determined in ANOVA comparisons; items with extremely low or negative discrimination values compared to other items in each sub-dimension were considered for removal. We used inter-item and item-total correlations to assess the relationship of the items within each sub-dimension; items with very weak or almost zero correlations ($r < .30$) were considered for removal from the BMSCI. Lastly, we assessed Cronbach's alpha scores if each item were removed from their targeted sub-dimension group. Items that yielded an increased sub-dimension group alpha score were considered for removal prior to factor analysis.

Factor Analysis. We conducted confirmatory factor analysis based on the theoretical structure of the BMSCM. We categorized items according to their targeted sub-dimensions and specified a six-factor model to assess the characteristics of the six sub-dimensions before conducting hierarchical testing. Based on prior recommendations for assessing structural equation model fit indexes (Hu & Bentler, 1999), we determined that our measurement model

was acceptable if the comparative fit index (CFI) and Tucker-Lewis index (TLI) were ≥ .90, the root mean square error of approximation (RMSEA) was ≤ .05, and if the standardized root mean square residual (SRMR) was > .06 (Hu & Bentler, 1999). To improve model fit and to further reduce the total number of items in the inventory, we removed items with less than moderate loadings for each of the six sub-dimensions or factors ($\lambda < .50$). We then used the largest modification indices to specify additional associations supported by our theoretical assessments for the BMSCM. Lastly, we conducted a second-order confirmatory factor analysis specifying hierarchical factors where the first-order factors (sub-dimensions) were at least moderately associated ($\psi \geq .50$).

Results

Sample. A total of 266 individuals were eligible and completed the entire survey. For analysis of the BMSCI, we only included participants with less than 5% missing data; therefore, one participant was excluded from the analysis. Our final sample for scale development included 265 participants. Table 4.1 includes sociodemographic characteristics for the full sample (n = 266). Participants ranged in age from 19 to 40 and were, on average, 32 years old (*SD* = 4.26). Most participants were one race (Black, n = 243), while less than 9% of participants were Black and some other race(s) (n = 23). Only 5% of participants were of Hispanic ethnicity (n = 14). Most participants gave birth in the last six months (n = 100), and most gave birth vaginally (n = 147).

Table 4.1

Study 4 Sample Sociodemographic Characteristics (N = 266)

Characteristic	**Mean**	**SD**
Age	31.6	4.3
Number of Children	1.9	1.1
	N	**%**

Race/Ethnicity		
Only Black	243	91.4
Black and Other Race(s)	23	8.6
Hispanic or Latino/a	14	5.3
Months Since Last Pregnancy Ended		
One to Six Months	100	37.6
Seven to Eleven Months	70	26.3
One to Two Years	95	35.7
Mode of Delivery		
Vaginally	147	55.3
Cesarean (C-section)	86	32.3
Income		
$0 to $28,000	47	17.7
$28,001 to $48,000	44	16.5
$48,001 to $60,000	38	14.3
$60,001 to $85,000	46	17.3
$85,001 ≤	60	22.6
Type of Current Health Insurance		
Private	139	52.3
Medicaid or Medicaid	81	30.5
TRICARE	13	4.9
Uninsured	< 5	< 1.0
Relationship Status		
Married	133	50.0
Member of an Unmarried Couple	46	17.3
Never Married	43	16.2
Separated, Divorced, or Widowed	14	5.3
Education		
College Graduate	143	53.8
Some College	66	24.8
High School Graduate	23	8.7
Less than High School Graduate	< 5	< 1.0

Item Analysis. We began item analysis with 53 items as developed in our item generation processes. A complete report of the results from item analysis can be found in Appendix H. From Item Response Theory (IRT), we found that the Graded Response Model best fit the data for each sub-dimension (see Appendix H). Based on the GRM item discrimination scores, item-total correlations, inter-item correlations, and alpha value if the item was removed, we removed six

items across the six sub-dimensions (see Appendix H). We tested the remaining 47 items in factor analysis.

Factor Analysis. We used confirmatory factor analysis to test three competing measurement models for the BMSCI: six-factor, modified six-factor, and hierarchical models. Table 4.2 reports the fit indices for each of the BMSCI models.

Table 4.2

Fit Indices for the BMSCI Alternative Models (N = 265)

Model	χ^2	df	*CFI*	*TLI*	*RMSEA*	*SRMR*
Null[a]	3812.887	528				
Six-Factor	867.852*	480	.882	.870	.055	.065
Modified Six-Factor	710.527*	477	.929	.921	.043	.063
Hierarchical	717.521*	481	.928	.921	.043	.066

[a] The null model is based on the 33-item BMSCI specified after item reduction.

*$p < .05$

Six-Factor Model. We tested an initial six-factor model where we specified the six sub-dimensions of the BMSCM (i.e., centrality, exploration, private regard, public regard, advocacy self-efficacy, and role beliefs). We did not find evidence from the six-factor model to suggest a good model fit (CFI = .777, TLI = .764, RMSEA = .061, SRMR = .079). However, we identified 14 items that did not at least moderately load on their targeted sub-dimensions ($\lambda < .50$). We re-specified the model with the 14 low-loading items removed; the 33-item, six-factor model did not provide evidence to suggest a good model fit (CFI = .882, TLI = .870, RMSEA = .055, SRMR = .065).

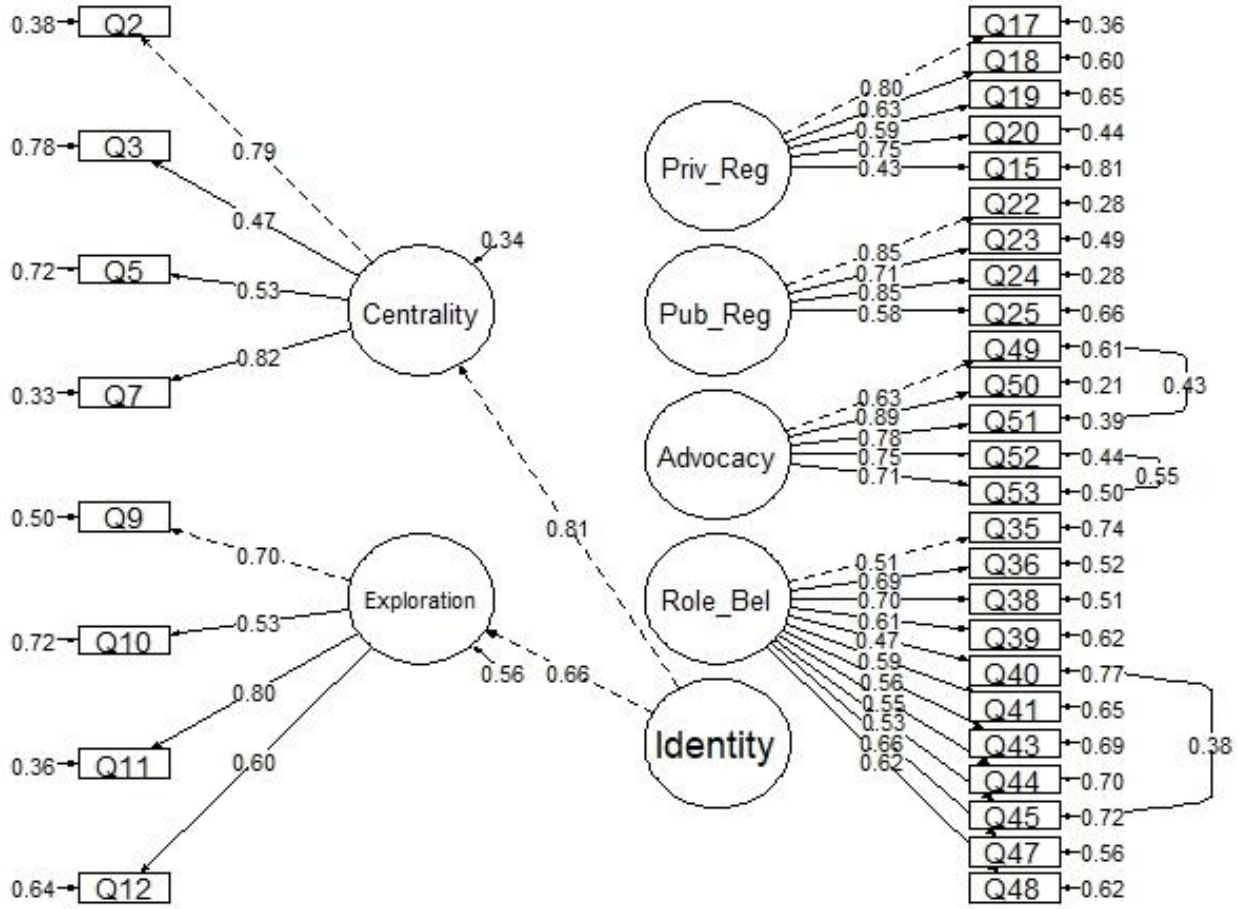
Modified Six-Factor Model. Based on recommendations for model modification (MacCallum, 1986; MacCallum et al., 1992; Sorbom, 1989), we used modification indices to conduct post hoc model modification on the six-factor model. We specified three additional

associations to account for covariance between three sets of items (Figure 4.2). These modifications were supported based on theoretical assumptions of the BMSCM and the understanding that items targeting the same sub-dimension could plausibly have covariance between the error variances. After making post hoc model modifications, we found evidence that a first-order six-factor model with 33 items has a good model fit (CFI = .929, TLI = .921, RMSEA = .043, SRMR = .063).

Hierarchical Factor Model. Our modified six-factor model provided evidence of a moderate association between the centrality and exploration sub-dimensions (ψ_{76} = .536). In the BMSCM, we posit that centrality and exploration comprise the identity dimension for the Black maternal self-concept (Figure 4.1). The evidence from our modified model suggests the need for a hierarchical second-order factor model where covariance between centrality and exploration is predicted by identity. We specified the hierarchical model and found that centrality and exploration were strongly predicted by identity (β_{37} = .815 and β_{38} = .661, respectively). Figure 4.2 represents the path model for our modified hierarchical model; the covariance estimates between factors can be found in Table 4.2. The final hierarchical model includes 33 items across six first-order factors (centrality, exploration, private regard, public regard, advocacy self-efficacy, and role beliefs) and one hierarchical dimension (identity). The hierarchical model does not provide evidence to suggest the specification of additional second-order factors. The associations between factors (Table 4.2) are all moderately low (ψ < .50), which suggests there are no additional hierarchical factors that significantly predict the relationship between the sub-dimensions of the BMSCM.

Figure 4.2

BMSCI Hierarchical Measurement Model



Note. Model fit indices: CFI = .928, TLI = .921, RMSEA = .043, SRMR = .066. All included estimates are standardized. Dashed lines represent fixed parameters. Indicator numbers correspond with item labels which can be found in Appendix F.

Table 4.3

Factor Covariance Estimates for BMSCI Hierarchical Model

	Unstandardized Estimate (*SE*)	Standardized Estimate
Private Regard ~~		
Public Regard	.053 (.033)	.118
Advocacy Self-Efficacy	.125 (.028)	.374
Role Beliefs	-.014 (.014)	-.072
Identity	.123 (.026)	.447
Public Regard ~~		

Advocacy Self-Efficacy	.163 (.046)	.272
Role Beliefs	.121 (.029)	.349
Identity	.029 (.041)	.060
Advocacy Self-Efficacy		
Role Beliefs	.031 (.019)	.119
Identity	.084 (.032)	.227
Role Beliefs		
Identity	-.079 (.021)	-.369

Note. Double tilde (~~) represents covariance in the lavaan package for R software.

General Discussion

We described the process for developing the Black Maternal Self-Concept Model (BMSCM) and the Black Maternal Self-Concept Inventory (BMSCI). We outlined a multidimensional Black maternal self-concept model that comprises three dimensions (identity, identity beliefs, and ability beliefs) and eight sub-dimensions (centrality, exploration, private regard, public regard, self-esteem, advocacy self-efficacy, role beliefs, and resilience) (see Figure 4.1). Based on the BMSCM, we developed a preliminary version of the BMSCI to provide evidence for a scale of Black maternal self-concept. After item and factor analysis, we produced a 33-item inventory that comprises six dimensions of Black maternal self-concept (Black maternal centrality, exploration, private regard, public regard, advocacy self-efficacy, and role beliefs). Evidence from the BMSCI measurement model suggests that centrality and exploration are sub-dimensions of identity, the proposed BMSCM supports. However, we did not find evidence to support identity beliefs and ability beliefs as hierarchical dimensions within the BMSCM.

Implications of Findings

Our identification of Black maternal identity as a hierarchical dimension is consistent with previous identity research, including evidence from the Multidimensional Model of Racial

Identity, the Multigroup Ethnic Identity Measure, and the Ethnic Identity Scale (Phinney, 1992; Sellers et al., 1998; Umaña-Taylor et al., 2014). However, examination of Black maternal identity as a distinct construct under the structure of Black maternal self-concept has not been well demonstrated.

A rich literature supports Black motherhood as a social role and some conceptualizations that demonstrate Black motherhood is an identity (Corley et al., 2022; Handyside, 2021; Rousseau, 2013; Sewell, 2013). Plenty of evidence suggests that Black maternity is a unique and complex experience inclusive of behavioral expectations for Black women (Handyside, 2021; Rosenthal & Lobel, 2016; Rousseau, 2013). Additionally, other studies clearly outline the mammy schema within the stereotypic role beliefs for Black women (Rosenthal & Lobel, 2016; Thomas et al., 2004). Undoubtedly, psychosocial interactions greatly affect Black maternal identity development. In our formative research aimed at determining the meaning of Black maternity, we found that Black maternity extends beyond a social role and should be classified as an identity (Study 2). For Black women who give birth, it is essential that assessments of Black maternal identity address beliefs and self perceptions within Black maternity. It is not enough to measure stereotypic perceptions or perceived behavioral norms; we must also understand the development of Black maternal identity beyond the specification of a social role.

Based on evidence from previous studies (Studies 1 and 2), we developed the BMSCI to assess identity as a more stable conceptualization for Black women who give birth. Social psychology research and identity development theories support identity as a relatively stable aspect of self-conceptualization (Kroger et al., 2010; Sellers et al., 1997). However, Black women who give birth experience maternity at an intersection between Blackness, motherhood, and womanhood, making it essential for construct development to address the uniqueness of

Black women's maternal identity development. The BMSCM and the BMSCI provide preliminary evidence of a unique Black maternal identity construct with implications for understanding the comprehensive Black maternal self-concept.

Unlike existing identity-exclusive models, we did not classify private and public regard or internalized oppressive beliefs as sub-dimensions of Black maternal identity. The evidence from our hierarchical measurement model does not suggest that private or public regard is highly associated with identity (ψ_{82} = .447 and ψ_{85} =.060, respectively). Additionally, our model does not provide evidence to support that private and public regard comprise a separate dimension for identity beliefs within the BMSCM. Specifically, private and public regard were not highly associated in our final measurement model (ψ_{79} = .118), suggesting no hierarchical factor accounts for their relationship. These findings are similar to other examinations demonstrating that private and public regard are not always highly correlated (Perkins et al., 2014; Willis & Neblett, 2020). Personal perceptions about group membership are not entirely dependent on how others view group membership. However, private and public regard are both associated with psychosocial health and well-being (Ho & Sidanius, 2009; Perkins et al., 2014; Volpe et al., 2019; Willis & Neblett, 2020). Furthermore, public regard is also associated with stereotype threat and the modification of behavior according to behavioral expectations and social norms (Ho & Sidanius, 2009; Thames et al., 2013); this is especially true for Black women (Donovan & West, 2015; Rosenthal & Lobel, 2016). Therefore, both dimensions are essential to understanding the comprehensive Black maternal self-concept and must be included when assessing psychosocial self and maternal health, especially behavioral outcomes.

Additionally, our proposed ability beliefs dimension was not supported by evidence in our final proposed hierarchical model. Specifically, the dimensions of advocacy self-efficacy and

maternal role beliefs were not highly associated (ψ_{86} = .119). However, there was an association between role beliefs and public regard (ψ_{84} = .349). These relationships suggest that the ability beliefs dimension should include sub-dimensions for perceived behavioral norms. For example, evidence under health behavior theories suggests that perceived social norms influence behavioral intentions (Fishbein, 2008; Montano & Kasprzyk, 2015). While perceived social norms are typically classified under behavior-specific perceptions, the evidence from our analysis suggests that perceived roles and expectations may influence behavior more than self-conceptualization. We recommend specifying additional dimensions for behavioral beliefs within the ability beliefs dimensions of the BMSCM. This addition to the model may predict other aspects of Black maternal health, specifically behavioral outcomes like maternity care utilization and treatment adherence.

Our analyses provide foundational evidence of the Black maternal self-concept as a comprehensive construct for assessing Black maternal psychosocial well-being. The associations between our specified dimensions and sub-dimensions require further examination to confirm the BMSCM structure and to modify and validate a reliable version of the BMSCI.

Limitations and Future Directions

The current analysis is the first study to design a model of the Black maternal self-concept as a novel social psychology construct. The multistep, mixed-methods process we used to develop the Black Maternal Self-Concept Model expands available evidence for the fluidity of self-concept through identity transition and social role shifts. Through our assessment of the BMSCI, we found evidence to partially support the Black maternal self-concept as a hierarchical, multidimensional construct. However, more evidence is needed to confirm the structure of the BMSCM and to evaluate the BMSCI for its use in assessing Black maternal self-concept.

After reducing the number of items, evidence from our initial six-factor model did not indicate a good model fit (CFI = .882, TLI = .870, RMSEA = .055, SRMR = .065). Problematically, poor model fit is often due to misspecification and exclusion of relevant relationships (MacCallum, 1986). Therefore, we used modification indices to identify potential misspecifications in our six-factor model. There are several limitations to using modification indices. Perhaps most importantly, model modification based on data increases the risk of over-specifying the model to the sample and not to a theoretical hypothesis (MacCallum et al., 1992; Sorbom, 1989). Using modification indices to improve model fit is exploratory and requires a clear theoretical rationale before incorporating new specifications (MacCallum et al., 1992).

In the modification indices for our sample, we found three sets of items with probable residual covariance (Figure 4.1). These modifications were theoretically supported because of the likely covariance between items assessing the same dimension. We assume that a level of residual covariance is due to the model itself and the shared relationship between indicators of single dimensions. The items incorporated in the BMSCI came from theoretical evidence of their utility in assessing each dimension and sub-dimension of the BMSCM. Therefore, these modifications were supported by theory and the sample data. However, additional analysis is necessary to confirm the generalizability of these modifications beyond our initial sample.

Cross-validation is an acceptable method for confirming model modifications and dimensionality (MacCallum et al., 1992; Sorbom, 1989). However, our initial sample was relatively small (n = 265) and could not be split for a cross-validation assessment with the current dataset (Christopher Westland, 2010; MacCallum et al., 2001). We suggest additional model testing with a large independent sample to validate the modified model. Despite these limitations, we have support from the theory-driven development of the BMSCM, which

suggests the modified model will be confirmed with independent samples during validation testing.

Additionally, while our sample was adequate for primary factor analysis, we could not conduct multidimensional Item Response Theory modeling to assess the relationship between the items across the sub-dimensions. Multidimensional item response analysis is relatively new, and evidence is still emerging to support its utility in assessing measurement models. However, evidence from multidimensional modeling like the Multidimensional Graded Response Model can improve the precision of scale score assessments (De Ayala, 1994; Jiang et al., 2016). Recommendations suggest obtaining at least 500 participants to adequately conduct multidimensional response modeling with scales comprising multiple subscales and several factors (Jiang et al., 2016). However, many studies use unidimensional models to assess multidimensional data by examining each dimension independently (De Ayala, 1994; Jiang et al., 2016). Without conducting multidimensional modeling, we accept the limitations of fitting each subscale individually and acknowledge the limited precision of scale score assessments.

Lastly, available evidence for the Black maternal self-concept is limited; our current analyses aimed to increase the available evidence to support developing a comprehensive Black maternal self-concept structure. The initial model using items from the BMSCI did not fully support our proposed BMSCM. Specifically, we did not identify evidence to support hierarchical factors for the ability beliefs and identity beliefs dimensions (Table 4.3). However, we assessed each sub-dimension and found evidence that all six sub-dimensions are assessed within the BMSCI. Improvements must be made to the BMSCI and the BMSCM to support content and construct validity in future evaluations. We still find the theoretical evidence compelling and assert a need for additional studies that adequately define the dimensions of the BMSCM. With

ongoing assessments and a greater triangulation of evidence, we can identify better functioning items for testing this relationship and more definitively define the dimensions and sub-dimensions of the BMSCM.

Conclusions

There is evidence that the BMSCI assesses a hierarchical, multidimensional model that comprises Black maternal identity, public and private regard, advocacy self-efficacy, and role beliefs. Our preliminary assessment of the BMSCM supports continued assessments of Black maternal self-concept as a novel psychosocial construct. We suggest additional testing for both the BMSCM and the BMSCI to improve their structure and to identify evidence of their validity and reliability in assessing Black maternal self-concept. The analyses presented here provide a solid foundation for developing a comprehensive assessment of Black maternal psychosocial well-being.

References

Abrams, J. A., Hill, A., & Maxwell, M. (2019). Underneath the mask of the strong Black woman schema: Disentangling influences of strength and self-silencing on depressive symptoms among U.S. Black women. *Sex Roles, 80*(9-10), 517-526. https://doi.org/10.1007/s11199-018-0956-y

Agency for Healthcare Research and Quality. (2019). *2018 national healthcare quality & disparities report*.

Alexander, A. C., Hébert, E. T., Businelle, M. S., & Kendzor, D. E. (2019). Everyday discrimination indirectly influences smoking cessation through post-quit self-efficacy. *Drug and alcohol dependence, 198*, 63-69. https://doi.org/10.1016/j.drugalcdep.2019.01.033

Arghavanian, F. E., Roudsari, R. L., Heydari, A., & Bahmani, M. N. D. (2020). Pregnant women's experiences of social roles: An ethnophenomenological study. *Iran J Nurs Midwifery Res*, *25*(1), 31-39. https://doi.org/10.4103/ijnmr.IJNMR_54_19

Arnold-Baker, C. (2019). The process of becoming: Maternal identity in the transition to motherhood. *Existential Analysis*, *30*(2), 260.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education and Behavior*, *31*(2), 143-164. https://doi.org/10.1177/1090198104263660

Bowleg, L. (2012). The problem with the phrase women and minorities: Intersectionality-an important theoretical framework for public health. *Am J Public Health*, *102*(7), 1267-1273. https://doi.org/10.2105/AJPH.2012.300750

Brittian, A. S., Kim, S. Y., Armenta, B. E., Lee, R. M., Umaña-Taylor, A. J., Schwartz, S. J., Villalta, I. K., Zamboanga, B. L., Weisskirch, R. S., Juang, L. P., Castillo, L. G., &

Hudson, M. L. (2015). Do dimensions of ethnic identity mediate the association between perceived ethnic group discrimination and depressive symptoms? *Cultural diversity & ethnic minority psychology, 21*(1), 41-53. https://doi.org/10.1037/a0037531

Brown, C. C., Adams, C. E., George, K. E., & Moore, J. E. (2020). Associations between comorbidities and severe maternal morbidity. *Obstet Gynecol*, *136*(5), 892-901. https://doi.org/10.1097/AOG.0000000000004057

Brown, D. L., & Tylka, T. L. (2010). Racial discrimination and resilience in African American young adults: Examining racial socialization as a moderator. *Journal of Black Psychology*, *37*(3), 259-285. https://doi.org/10.1177/0095798410390689

Brunton, R., Simpson, N., & Dryer, R. (2020). Pregnancy-related anxiety, perceived parental self-efficacy and the influence of parity and age. *International Journal of Environmental Research and Public Health, 17*(18), 6709. https://doi.org/10.3390/ijerph17186709

Bryant, C. M., Anderson, L. A., & Notice, M. R. (2022). Revisioning the concept of resilience: Its manifestation and impact on Black Americans. *Contemporary Family Therapy*, *44*(1), 16-28. https://doi.org/10.1007/s10591-021-09621-6

Cano, M. Á., Castro, Y., de Dios, M. A., Schwartz, S. J., Lorenzo-Blanco, E. I., Roncancio, A. M., Martinez, M. J., Sheehan, D. M., Auf, R., Piña-Watson, B., Huynh, Q.-L., & Zamboanga, B. L. (2016). Associations of ethnic discrimination with symptoms of anxiety and depression among Hispanic emerging adults: A moderated mediation model. *Anxiety, stress, and coping*, *29*(6), 699-707. https://doi.org/10.1080/10615806.2016.1157170

Carter, R. T., Johnson, V. E., Kirkinis, K., Roberson, K., Muchow, C., & Galgay, C. (2019). A meta-analytic review of racial discrimination: Relationships to health and culture. *Race*

and Social Problems, *11*(1), 15-32. https://doi.org/https://doi.org/10.1007/s12552-018-9256-y

Chin, S., Carlin, R., Mathews, A., & Moon, R. (2021). Infant safe sleep practices as portrayed on Instagram: Observational study. *JMIR pediatrics and parenting*, *4*(4), e27297-e27297. https://doi.org/10.2196/27297

Christopher Westland, J. (2010). Lower bounds on sample size in structural equation modeling. *Electronic Commerce Research and Applications*, *9*(6), 476-487. https://doi.org/10.1016/j.elerap.2010.07.003

Clifton, R. L., Rowe, A. T., Banks, D. E., Ashburn-Nardo, L., & Zapolski, T. C. B. (2021). Examining the effects of implicit and explicit racial identity on psychological distress and substance use among Black young adults. *Experimental and clinical psychopharmacology*, *29*(5), 479-486. https://doi.org/10.1037/pha0000489

Corley, N. A., Pitts, B., & Kirby, A. (2022). Black m/otherhood: A content analysis exploring how Black mothers are represented in social work literature. *Affilia*, *37*(4), 545-564. https://doi.org/10.1177/08861099221110890

De Ayala, R. J. (1994). The influence of multidimensionality on the graded response model. *Applied Psychological Measurement*, *18*(2), 155-170. https://doi.org/10.1177/014662169401800205

Dominguez, T. P. (2011). Adverse birth outcomes in African American women: The social context of persistent reproductive disadvantage. *Social Work in Public Health*, *26*(1), 3-16. https://doi.org/10.1080/10911350902986880

Donovan, R. A., & West, L. M. (2015). Stress and mental health: Moderating role of the strong Black woman stereotype. *Journal of Black Psychology*, *41*(4), 384-396. https://doi.org/10.1177/0095798414543014

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, *92*(6), 1087-1101. https://doi.org/10.1037/0022-3514.92.6.1087

Erikson, E. H. (1968). *Identity : youth and crisis* (1st ed.). W.W. Norton.

Farrow, C., & Blissett, J. (2007). The development of maternal self-esteem. *Infant Mental Health Journal*, *28*(5), 517-535. https://doi.org/10.1002/imhj.20151

Finch, W. H., & French, B. F. (2019). Item response theory (IRT). In *Educational and Psychological Measurement* (1st ed.). Routledge.

Fishbein, M. (2008). A reasoned action approach to health promotion. *Med Decis Making*, *28*(6), 834-844. https://doi.org/10.1177/0272989x08326092

Graham, J. R., West, L. M., Martinez, J., & Roemer, L. (2016). The mediating role of internalized racism in the relationship between racist experiences and anxiety symptoms in a Black American sample. *Cultural diversity & ethnic minority psychology*, *22*(3), 369-376. https://doi.org/10.1037/cdp0000073

Hall, W. J., Chapman, M. V., Lee, K. M., Merino, Y. M., Thomas, T. W., Payne, B. K., Eng, E., Day, S. H., & Coyne-Beasley, T. (2015). Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: A systematic review. *Am J Public Health*, *105*(12), e60-76. https://doi.org/10.2105/AJPH.2015.302903

Handyside, F. (2021). It's all about the poise: Meghan Markle, Doria Ragland, and Black motherhood(s). *Women's studies in communication*, *44*(2), 198-214. https://doi.org/10.1080/07491409.2021.1912507

Hernandez, N. D., Francis, S., Allen, M., Bellamy, E., Sims, O. T., Oh, H., Guillaume, D., Parker, A., & Chandler, R. (2022). Prevalence and predictors of symptoms of perinatal mood and anxiety disorders among a sample of urban Black women in the south. *Maternal and Child Health Journal*, *26*(4), 770-777. https://doi.org/10.1007/s10995-022-03425-2

Ho, A. K., & Sidanius, J. (2009). Preserving positive identities: Public and private regard for one's ingroup and susceptibility to stereotype threat. *Group Processes & Intergroup Relations*, *13*(1), 55-67. https://doi.org/10.1177/1368430209340910

Howell, E. A., Egorova, N. N., Balbierz, A., Zeitlin, J., & Hebert, P. L. (2016). Site of delivery contribution to black-white severe maternal morbidity disparity. *Am J Obstet Gynecol*, *215*(2), 143-152. https://doi.org/10.1016/j.ajog.2016.05.007

Hoyert, D. (2022). *Maternal mortality rates in the United States, 2020* (NCHS Health E-Stats, Issue.

Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Hughes, M., Kiecolt, K. J., Keith, V. M., & Demo, D. H. (2015). Racial identity and well-being among African Americans. *Social Psychology Quarterly*, *78*(1), 25-48. https://doi.org/10.1177/0190272514554043

Hutchinson, A. D., Charters, M., Prichard, I., Fletcher, C., & Wilson, C. (2017). Understanding maternal dietary choices during pregnancy: The role of social norms and mindful eating. *Appetite*, *112*, 227-234. https://doi.org/10.1016/j.appet.2017.02.004

Jiang, S., Wang, C., & Weiss, D. J. (2016). Sample size requirements for estimation of item parameters in the multidimensional graded response model. *Front Psychol*, *7*, 109. https://doi.org/10.3389/fpsyg.2016.00109

Kroger, J., Martinussen, M., & Marcia, J. E. (2010). Identity status change during adolescence and young adulthood: A meta-analysis. *Journal of adolescence (London, England.)*, *33*(5), 683-698. https://doi.org/10.1016/j.adolescence.2009.11.002

Liao, K. Y.-H., Wei, M., & Yin, M. (2020). The misunderstood schema of the strong Black woman: Exploring its mental health consequences and coping responses among African American women. *Psychology of women quarterly*, *44*(1), 84-104. https://doi.org/10.1177/0361684319883198

Liese, K. L., Mogos, M., Abboud, S., Decocker, K., Koch, A. R., & Geller, S. E. (2019). Racial and ethnic disparities in severe maternal morbidity in the United States. *J Racial Ethn Health Disparities*, *6*(4), 790-798. https://doi.org/10.1007/s40615-019-00577-w

MacCallum, R. (1986). Specification searches in covariance structure modeling. *Psychological Bulletin*, *100*(1), 107-120. https://doi.org/10.1037/0033-2909.100.1.107

MacCallum, R. C., Roznowski, M., & Necowitz, L. B. (1992). Model modifications in covariance structure analysis: The problem of capitalization on chance. *Psychological Bulletin*, *111*(3), 490-504. https://doi.org/10.1037/0033-2909.111.3.490

MacCallum, R. C., Widaman, K. F., Preacher, K. J., & Hong, S. (2001). Sample size in factor analysis: The role of model error. *Multivariate Behav Res, 36*(4), 611-637. https://doi.org/10.1207/S15327906MBR3604_06

Maly, R. C., Frank, J. C., Marshall, G. N., DiMatteo, M. R., & Reuben, D. B. (1998). Perceived efficacy in patient-physician interactions (PEPPI): Validation of an instrument in older persons. *Journal of the American Geriatrics Society, 46*(7), 889-894. https://doi.org/doi:10.1111/j.1532-5415.1998.tb02725.x

Markus, H., & Kunda, Z. (1986). Stability and malleability of the self-concept. *Journal of Personality and Social Psychology, 51*(4), 858-866. https://doi.org/10.1037//0022-3514.51.4.858

Markus, H., & Nurius, P. (1986). Possible selves. *The American Psychologist, 41*(9), 954-969. https://doi.org/10.1037/0003-066X.41.9.954

Marsh, H. W., & Shavelson, R. (1985). Self-concept: Its multifaceted, hierarchical structure. *Educational Psychologist, 20*(3), 107-123.

McGuire, W. J., & Padawer-Singer, A. (1976). Trait salience in the spontaneous self-concept. *Journal of Personality and Social Psychology, 33*(6), 743-754. https://doi.org/10.1037/0022-3514.33.6.743

Mereish, E. H., N'Cho H, S., Green, C. E., Jernigan, M. M., & Helms, J. E. (2016). Discrimination and depressive symptoms among Black American men: Moderated-mediation effects of ethnicity and self-esteem. *Behav Med, 42*(3), 190-196. https://doi.org/10.1080/08964289.2016.1150804

Montano, D. E., & Kasprzyk, D. (2015). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior: Theory, Research, and Practice* (5th ed., pp. 95-124). Jossey-Bass.

Onorato, R. S., & Turner, J. C. (2004). Fluidity in the self-concept: The shift from personal to social identity. *European Journal of Social Psychology*, *34*(3), 257-278. https://doi.org/10.1002/ejsp.195

Ouch, S., & Moradi, B. (2019). Cognitive and affective expectation of stigma, coping efficacy, and psychological distress among sexual minority people of color. *Journal of counseling psychology*, *66*(4), 424-436. https://doi.org/10.1037/cou0000360

Perkins, K., Wiley, S., & Deaux, K. (2014). Through which looking glass? Distinct sources of public regard and self-esteem among first- and second-generation immigrants of color. *Cultural diversity & ethnic minority psychology*, *20*(2), 213-219. https://doi.org/10.1037/a0035435

Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, *7*(2), 156-176. https://doi.org/10.1177/074355489272003

R Core Team. (2022). *R: A language and environment for statistical computing*. In R Foundation for Statistical Computing. https://www.R-project.org/

Roberts, R. E., Phinney, J. S., Masse, L. C., Chen, Y. R., Roberts, C. R., & Romero, A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. *The Journal of Early Adolescence*, *19*(3), 301-322. https://doi.org/10.1177/0272431699019003001

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.

Rosenthal, L., & Lobel, M. (2016). Stereotypes of Black American women related to sexuality and motherhood. *Psychology of women quarterly*, *40*(3), 414-427. https://doi.org/10.1177/0361684315627459

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*(2), 1-36. https://doi.org/10.18637/jss.v048.i02

Rousseau, N. (2013). Social rhetoric and the construction of Black motherhood. *Journal of Black Studies*, *44*(5), 451-471. https://doi.org/10.1177/0021934713488786

Rubin, R. (1984). *Maternal identity and the maternal experience*. Springer Pub. Co.

Sanchez, D. T. (2010). How do forced-choice dilemmas affect multiracial people? The role of identity autonomy and public regard in depressive symptoms. *Journal of Applied Social Psychology*, *40*(7), 1657-1677. https://doi.org/10.1111/j.1559-1816.2010.00634.x

Sellers, R. M., Copeland-Linder, N., Martin, P. P., & Lewis, R. L. H. (2006). Racial identity matters: The relationship between racial discrimination and psychological functioning in African American adolescents. *Journal of Research on Adolescence*, *16*(2), 187-216. https://doi.org/10.1111/j.1532-7795.2006.00128.x

Sellers, R. M., Rowley, S. A. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional inventory of Black identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology*, *73*(4), 805-815. https://doi.org/10.1037/0022-3514.73.4.805

Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. A. J., & Chavous, T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review*, *2*(1), 18-39. https://doi.org/10.1207/s15327957pspr0201_2

Sewell, C. J. P. (2013). Mammies and matriarchs: Tracing images of the Black female in popular culture 1950s to present. *Journal of African American studies (New Brunswick, N.J.)*, *17*(3), 308-326. https://doi.org/10.1007/s12111-012-9238-x

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, *46*(3), 407-441.

Singh, G. K. (2021). Trends and social inequalities in maternal mortality in the United States, 1969-2018. *Int J MCH AIDS*, *10*(1), 29-42. https://doi.org/10.21106/ijma.444

Skinner, C. S., Tiro, J., & Champion, V. L. (2015). The Health Belief Model. In K. Glanz, B. K. Rimer, & K. VIswanath (Eds.), *Health Behavior: Theory, Reasearch, and Practice* (5th ed.). Jossey-Bass.

Slaughter-Acey, J. C., Sneed, D., Parker, L., Keith, V. M., Lee, N. L., & Misra, D. P. (2019). Skin tone matters: Racial microaggressions and delayed prenatal care. *Am J Prev Med*, *57*(3), 321-329. https://doi.org/10.1016/j.amepre.2019.04.014

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The Brief Resilience Scale: Assessing the ability to bounce back. *International journal of behavioral medicine*, *15*, 194-200. https://doi.org/DOI: 10.1080/10705500802222972

Sorbom, D. (1989). Model modification. *Psychometrika*, *54*(3), 371-384. https://doi.org/10.1007/BF02294623

Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*, *139*(1), 213-240. https://doi.org/10.1037/a0028931

Syed, M., Walker, L. H. M., Lee, R. M., Umaña-Taylor, A. J., Zamboanga, B. L., Schwartz, S. J., Armenta, B. E., & Huynh, Q.-L. (2013). A two-factor model of ethnic identity

exploration: Implications for identity coherence and well-being. *Cultural diversity & ethnic minority psychology*, *19*(2), 143-154. https://doi.org/10.1037/a0030564

Szymanski, D. M., & Lewis, J. A. (2016). Gendered racism, coping, identity centrality, and African American college women's psychological distress. *Psychology of women quarterly*, *40*(2), 229-243. https://doi.org/10.1177/0361684315616113

Taylor, J. K. (2020). Structural racism and maternal health among Black women. *J Law Med Ethics*, *48*(3), 506-517. https://doi.org/10.1177/1073110520958875

Thames, A. D., Hinkin, C. H., Byrd, D. A., Bilder, R. M., Duff, K. J., Mindt, M. R., Arentoft, A., & Streiff, V. (2013). Effects of stereotype threat, perceived discrimination, and examiner race on neuropsychological performance: Simple as black and white? *Journal of the international neuropsychological society*, *19*(5), 583-593. https://doi.org/10.1017/s1355617713000076

Thomas, A. J., Witherspoon, K. M., & Speight, S. L. (2004). Toward the development of the stereotypic roles for Black women scale. *Journal of Black Psychology*, *30*(3), 426-442. https://doi.org/10.1177/0095798404266061

Trost, S. L., Beauregard, J., Chandra, G., Njie, F., Berry, J., Harvey, A., & Goodman, D. A. (2022). *Pregnancy-related deaths: Data from maternal mortality review committees in 36 US states, 2017-2019*. https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc.html

Turner, J. C., & Onorato, R. S. (1999). Social identity, personality, and the self-concept: A self-categorization persepctive. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), *The psychology of the social self* (pp. 11-46). Lawrence Erlbaum.

Umaña-Taylor, A. J., Quintana, S. M., Lee, R. M., Cross Jr, W. E., Rivas-Drake, D., Schwartz, S. J., Syed, M., Yip, T., & Seaton, E. (2014). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child development*, *85*(1), 21-39. https://doi.org/10.1111/cdev.12196

Velez, B. L., Cox, R., Polihronakis, C. J., & Moradi, B. (2018). Discrimination, work outcomes, and mental health among women of color: The protective role of womanist attitudes. *Journal of counseling psychology*, *65*(2), 178-193. https://doi.org/10.1037/cou0000274

Velez, B. L., Moradi, B., & DeBlaere, C. (2015). Multiple oppressions and the mental health of sexual minority Latina/o individuals. *The Counseling Psychologist*, *43*(1), 7-38. https://doi.org/10.1177/0011000014542836

Villalobos, A. V. K., Davis, C., Turner, M. M., Long, S., Hull, S., & Lapinski, M. K. (2021). Breastfeeding in context: African American women's normative referents, salient identities, and perceived social norms. *Health education & behavior*, *48*(4), 496-506. https://doi.org/10.1177/10901981211014445

Volpe, V. V., Lee, D. B., Hoggard, L. S., & Rahal, D. (2019). Racial discrimination and acute physiological responses among Black young adults: The role of racial identity. *Journal of adolescent health*, *64*(2), 179-185. https://doi.org/10.1016/j.jadohealth.2018.09.004

Watson, L. B., DeBlaere, C., Langrehr, K. J., Zelaya, D. G., & Flores, M. J. (2016). The influence of multiple oppressions on women of color's experiences with insidious trauma. *Journal of counseling psychology*, *63*(6), 656-667. https://doi.org/10.1037/cou0000165

Willis, H. A., & Neblett, E. W. (2020). Racial identity and changes in psychological distress using the multidimensional model of racial identity. *Cultural diversity & ethnic minority psychology*, *26*(4), 509-519. https://doi.org/10.1037/cdp0000314

Wonch Hill, P., Cacciatore, J., Shreffler, K. M., & Pritchard, K. M. (2017). The loss of self: The effect of miscarriage, stillbirth, and child death on maternal self-esteem. *Death Stud, 41*(4), 226-235. https://doi.org/10.1080/07481187.2016.1261204

Worrell, F. C., Vandiver, B. J., Cross, W. E., & Fhagen-Smith, P. E. (2004). Reliability and structural validity of Cross racial identity scale scores in a sample of African American adults. *Journal of Black Psychology*, *30*(4), 489-505. https://doi.org/10.1177/0095798404268281

Yearby, R., Clark, B., & Figueroa, J. F. (2022). Structural racism in historical and modern U.S. health care policy. *Health Affairs*, *41*(2), 187-194. https://doi.org/10.1377/hlthaff.2021.01466

Zhang, S., Ding, Z., Liu, H., Chen, Z., Wu, J., Zhang, Y., & Yu, Y. (2013). Association between mental stress and gestational hypertension/preeclampsia: A meta-analysis. *Obstetrical & gynecological survey*, *68*(12), 825-834. https://doi.org/10.1097/OGX.0000000000000009

Zuckerwise, L. C., & Lipkind, H. S. (2017). Maternal early warning systems—Towards reducing preventable maternal mortality and severe maternal morbidity through improved clinical surveillance and responsiveness. *Seminars in Perinatology*, *41*(3), 161-165. https://doi.org/10.1053/j.semperi.2017.03.005

CHAPTER 5

GENERAL DISCUSSION

Across three papers, this dissertation implemented a technology-based, mixed methods design to define the Black maternal self-concept. Chapter 2: Paper 1 examined the general use of self-concept in adult health and racism research and developed a conceptual taxonomy for the general self-concept. Chapter 3: Paper 2 implemented a transcendental phenomenological assessment of Black women's maternity experiences to develop a textural description of the Black maternal self-concept. Chapter 4: Paper 3 synthesized evidence from Papers 1 and 2 to develop the hierarchical, multidimensional Black Maternal Self-Concept Model (BMSCM). Eight sub-dimensions (Black maternal identity centrality, identity exploration, private regard, public regard, advocacy self-efficacy, role beliefs, and trait-level self-esteem and resilience) were defined across three primary dimensions of the BMSCM (Black maternal identity, identity beliefs, and ability beliefs).

Furthermore, the Black Maternal Self-Concept Inventory (BMSCI) was specified as a preliminary scale measuring the Black maternal self-concept. Evidence from factor analysis demonstrated that a 33-item BMSCI measures six sub-dimensions of the BMSCM (Black maternal identity centrality, identity exploration, private regard, public regard, advocacy self-efficacy, and role beliefs). Furthermore, evidence was found for a hierarchical identity dimension that predicts identity centrality and exploration. However, no evidence was found to support the specification of identity beliefs and ability beliefs as additional hierarchical dimensions. Therefore, evidence from the final BMSCI supports measuring six sub-dimensions and one primary dimension of the BMSCM. This dissertation provides evidence that the Black maternal

self-concept is a distinct hierarchical, multidimensional construct contributing to the comprehensive understanding of Black maternal psychosocial well-being.

Implications of Findings

Implications for Social Psychology

Previous adult health research supports the eight sub-dimensions identified in the BMSCM and the six sub-dimensions measured in the BMSCI. Specifically, each sub-dimension was informed by the scoping review in Chapter 2: Paper 1 and further supported by themes identified in the thematic analysis from Chapter 3: Paper 2. However, our specification of each primary dimension (identity, identity beliefs, and ability beliefs) was novel.

Our conceptualization of identity is strongly supported in the existing social psychology literature. Specifically, the centrality and exploration sub-dimensions are supported in the Multidimensional Model of Racial Identity (Sellers et al., 1998). Sellers et al. also conceptualize regard as a dimension of overall racial identity (Sellers et al., 1997; Sellers et al., 1998). However, in our development of the BMSCM, we specify private and public regard as sub-dimensions of identity beliefs. This conceptualization was based on the definitions of regard provided in Chapter 2: Paper 1 and the thematic analysis of regard provided in Chapter 3: Paper 2. We did not find evidence in Chapter 4: Paper 3 to support private and public regard as sub-dimensions of identity. There was evidence of a weak to moderate association between private regard and identity, but there was no association between public regard and identity. Unlike the model presented by Sellers et al., we offer evidence that the perceptions about group membership (identity beliefs) are not dependent on overall closeness or perceived importance of group membership (identity).

Furthermore, our conceptualization of ability beliefs is not thoroughly supported in the BMSCI. Specifically, our model shows that role beliefs and advocacy self-efficacy are not associated; therefore, we did not find evidence suggesting the hierarchical specification of the ability beliefs dimension (Chapter 4: Paper 3). However, the role beliefs dimension was weakly associated with the hierarchical identity dimension. Behavioral theories such as the Integrated Behavior Model, the Theory of Reasoned Action, and the Social Cognitive Theory assert that perceived behavioral norms and self-efficacy are predictors of behavioral intention (Ajzen, 2002; Bandura, 2004; Fishbein, 2008; Montano & Kasprzyk, 2015). Therefore, our conceptualization of ability beliefs may predict behavioral intentions and engagement with maternal health behaviors. However, this dissertation's evidence is insufficient to support understanding the relationship between these sub-dimensions and behavioral outcomes. Additional models must assess the applicability of the proposed dimensions toward predicting health behaviors and outcomes. Based on the theoretical evidence provided across the three papers in this dissertation, role beliefs and advocacy self-efficacy are key dimensions in Black maternal self-conceptualization though their function within the overarching model warrants further investigation.

The weak to moderate relationship between role beliefs and the hierarchical identity dimension is consistent with research that shows a link between psychosocial role perceptions and well-being. Namely, high levels of stereotypical role beliefs for Black women are associated with poorer life satisfaction, greater depression and anxiety symptoms, and poor self-esteem (Abrams et al., 2019; Allen et al., 2019; Donovan & West, 2015; Liao et al., 2020; Thomas et al., 2004). While the presented BMSCM is limited in its predictive ability, there is early evidence to suggest that the sub-dimensions of the BMSCM can comprehensively predict behavioral

intentions and psychosocial well-being. The novel inclusion of role beliefs/perceptions with assessments of identity and identity beliefs provides formative evidence for a comprehensive assessment of the predictors of psychosocial well-being and maternal health disparities.

Additionally, the BMSCM is multidimensional and hierarchical. Previous general self-concept models present a similar structure; specifically, Shavelson et al. share a hierarchical, multidimensional structure for self-concept (Marsh & Shavelson, 1985; Shavelson et al., 1976). However, this model divides the general self-concept into academic and non-academic classifications (Marsh & Shavelson, 1985; Shavelson et al., 1976). The binary conceptualization of self-concept as academic and non-academic would require the Black maternal self-concept to be classified across physical, social, and emotional dimensions. While such a model includes the many influences that determine the Black maternal self-concept, it is still limited in its approach as a general construct. The specification of the Black maternal self-concept requires an understanding of the intersectionality of Black women's lived experiences and identity development. Broad classification of the Black maternal self-concept across social, emotional, and physical self-concept dimensions does not offer the specificity necessary to understand Black maternal identity, identity beliefs, and ability beliefs. It is unclear where factors like Black maternal private regard, self-esteem, and resilience fit within the Shavelson et al. model.

Shavelson and Marsh (1985) primarily explore academic self-concept and provide evidence of non-academic self-concept in children and adolescents. They specify that self-concept is fluid and more dynamic in adulthood (Marsh & Shavelson, 1985). However, their provided model is limited in addressing specific identity transitions and social phenomena like pregnancy and childbirth. Therefore, this dissertation provides exploratory evidence for the BMSCM as a distinct sub-category of general self-concept. The BMSCM provides a clear and

specific conceptualization for Black maternity and addresses gaps in preexisting models. We affirm that the Black maternal self-concept must be explored to comprehensively understand Black women's psychosocial well-being in maternity.

Implications for Health Research

The need to understand the Black maternal self is driven by the current limitations in our understanding of Black maternal health disparities. There have been numerous calls to action for improvement to maternal health outcomes (Mehta et al., 2021; The White House Briefing Room, 2022; U.S. Department of Health and Human Services, 2020). However, not all health research addresses health disparities from a social justice, intersectionality framework. Rather than defining and describing maternal health disparities, studies must aim to understand the causal mechanisms of these disparities. Racism is perhaps the most critical determinant of health inequities in the U.S. (Paradies et al., 2015; Williams et al., 2019). However, without measuring racism and without actively addressing its presence, we will be ineffective at preventing and correcting current maternal health disparities.

We need to understand the intersectional nature of identity and identity development to adequately understand the implications of oppressive experiences on the Black maternal self. Partial examination of the Black maternal self-concept limits our understanding of psychosocial well-being. For example, there are mixed results for the relationship between psychosocial well-being, racism, and health. Specifically, in Chapter 2: Paper 1, we found evidence that self-esteem is a moderator of the relationship between racism and health (Allen et al., 2017; Atkins, 2015; Blodorn et al., 2016; Cano et al., 2016; Kong, 2016; Mereish et al., 2016; Velez et al., 2018); however, we also found evidence to negate this relationship (Bamishigbin et al., 2017; James, 2016). Lack of consensus regarding the relationship between the self-concept sub-dimensions,

racism, and health may be due to operationalization inconsistencies and non-comprehensive assessments. Developing the Black Maternal Self Concept Model provides emerging evidence for a comprehensive operationalization and measure for assessing psychosocial well-being in Black maternal health research.

Implications for Research Methods

This project utilized technology-based, mixed methods to assess the determinants of maternal health disparities. These innovative approaches are necessary for developing and disseminating person-centered knowledge. The current state of the science offers extensive opportunities for exploring unique psychosocial interactions and their impact on health outcomes, especially among underserved and marginalized racial/ethnic maternal populations. This project is necessary for understanding the mechanistic pathways by which social experiences, including racism and discrimination, disproportionately affect Black women's maternal health outcomes.

We examined Black women's experiences with maternity and racism and discrimination to develop the BMSCM. This approach was informed by epistemological, theoretical, and ontological research foundations. The final BMSCI scale cannot effectively measure psychosocial well-being without accounting for the uniqueness of Black maternal lived experiences. For example, we identified the meaning of Black maternity through in-depth interviews with Black women who gave birth. We also pilot-tested preliminary items for the BMSCI with a sample of Black women who recently gave birth. Furthermore, we used technology-based recruitment and data collection methods to reach a more generalizable U.S. sample.

The methods implemented in this project aided in developing a robust evidence base to support the definitions and structural development of the BMSCM. Research examining health inequities should continue to implement person-centered and community-engaged approaches to best support community-identified needs. Improving maternal health extends beyond disease elimination to include measures of psychosocial well-being, such as life satisfaction, happiness, and positive self-conceptualization (Borrell-Carrió et al., 2004; Clark et al., 1999; Dunkel-Schetter, 2011). Therefore, implementing community-engaged and person-centered approaches can help develop greater health equity by establishing a robust understanding of lived psychosocial experiences.

Strengths and Limitations

Measurement development and construct discovery are iterative, rigorous processes that often require several rounds of modification and testing (Hasson & Keeney, 2011; VanderWeele et al., 2020). However, this dissertation offers a strong theoretical and empirical introduction to understanding the Black maternal self-concept, which can be used to build future studies. Through a triangulation of findings across three papers, we found evidence that supports the structure and function of the Black maternal self-concept in Black women's overall psychosocial well-being. Therefore, the foundational evidence for the development of the BMSCM was supported by existing self-concept research, in-depth assessments with Black women, and partially through quantitative data with Black women who recently gave birth. This project addresses key gaps in our understanding of the Black maternal self-concept regarding changes in social identity and social experiences.

We discuss limitations across the three papers in detail; however, some limitations warrant further discussion.

Technology-Based Recruitment

Technology-based methods, like the strategies implemented in this dissertation, limit the generalizability of research findings. Participants in this dissertation were limited to individuals who use and have access to social media or Amazon Mechanical Turk (MTurk) and were interested in participating. While evidence shows that most adults 18 to 49 years of age use Instagram (47 to 67%) or Facebook (79%) (Pew Research Center, 2019), the reach of social media is still limited to those with regular use of their accounts. However, social media can reach a larger, more representative sample than other convenience sampling strategies (Arcia, 2014; Gelinas et al., 2017; Russomanno et al., 2019). Social media and MTurk can also improve recruitment of hard-to-reach and marginalized populations or groups with specific lived experiences, such as pregnancy and parenthood (Arcia, 2014; Burnham et al., 2018; Casler et al., 2013; Dworkin et al., 2016; Russomanno et al., 2019; Shieh et al., 2020). Furthermore, social media and MTurk recruitment methods demonstrate cost-effectiveness in recruiting large representative samples (Arcia, 2014; Kim & Hancock, 2016). However, more evidence is needed to understand the cost-effectiveness and strength of these recruitment strategies for reaching specific samples, including Black women who give birth.

Project Scope and Generalizability

The findings from this dissertation are not generalizable. Chapter 3: Paper 2 did not aim to generalize findings to the population but to identify meaning from a specific population sample. Based on the findings in Chapter 3: Paper 2, we built the BMSCI, which can be tested for external reliability with other samples in future studies. Furthermore, post hoc modifications to the BMSCI measurement model in Chapter 4: Paper 3 cannot be generalized beyond the sample. Cross-validation and dimensionality testing with independent samples can confirm the

BMSCI model (MacCallum et al., 1992; Sorbom, 1989). However, we do not provide evidence from such studies in this dissertation.

We provide a preliminary foundation for understanding Black maternal self-concept through the steps conducted in this project, but we do not conduct tests of reliability and validity. Additionally, the findings from this dissertation are specific to Black, cis-gender women. Other populations can give birth; however, the present analysis aimed to understand the intersectional experiences of Blackness, womanhood, and maternity. Our epistemological foundations in the Standpoint Theory support conducting research with experts (Harding, 1992); therefore, Black women who give birth are best able to discuss Black maternal self-concept development. However, future studies should examine the relationship between Black maternal self-concept and the unique experiences of non-binary and transgender Black birthing persons.

Future Research and Recommendations

The studies conducted in this dissertation are exploratory, providing emerging evidence to support the assessment of the Black maternal self-concept. Based on the evidence provided in this dissertation, additional studies are recommended to examine the effectiveness of the BMSCI as a measure of Black maternal self-concept. While Chapter 4: Paper 3 provides evidence for the relationship between the BMSCM identity, identity beliefs, and ability beliefs dimensions, more evidence is needed to finalize the BMSCI and to confirm the structure of the BMSCM. It is recommended that the BMSCI be reviewed with additional samples of Black women who have given birth and be assessed for validity and reliability with large representative samples.

As noted in Chapter 3: Paper 2, many lived social experiences are pertinent to understanding Black maternity fully. It is recommended that additional studies review the effects of social experiences on the development of Black maternal identity and self-conceptualization.

This dissertation provided a triangulation of evidence to suggest that the Black maternal self-concept comprises identity, identity beliefs, and ability beliefs and is affected by social experiences. Notably, the Black women who participated in this dissertation reported several intrinsic stereotypical role beliefs and perceptions about Black maternity. More research is needed to understand the unique effect of stereotypical roles in Black maternity and Black maternal identity development.

Lastly, a full-bodied scientific discovery affirms that metrics of psychosocial wellness are associated with physical and mental health outcomes (Bassi et al., 2017; Borrell-Carrió et al., 2004; Paradies et al., 2015; Sowislo & Orth, 2013; Stokes, 2020; VanderWeele et al., 2020). Therefore, it is essential that studies address psychosocial well-being and maternal physical and mental health outcomes. Improvement to maternal psychosocial well-being can subsequently improve maternal physical and mental health. This dissertation supports the development of a comprehensive psychosocial maternal health construct; however research must continue to examine the dynamic biopsychosocial model of maternal health.

Conclusions

This dissertation is novel in its development of the Black maternal self-concept. It provides preliminary evidence for a Black Maternal Self-Concept Model and a Black Maternal Self-Concept Inventory. This dissertation provides emerging evidence to support a multidimensional, hierarchical Black maternal self-concept structure. However, continued research should further define the dimensions of the BMSCM and identify additional items for assessing each dimension within a modified BMSCI. With improvements to the BMSCM and the BMSCI, studies will be able to examine the relationship between the maternal psychosocial self, social lived experiences with racism and discrimination, and maternal health outcomes. These comprehensive

assessments will aid in understanding the psychosocial determinants of maternal health disparities and will support the development of effective interventions to improve maternal health equity.

References

Abrams, J. A., Hill, A., & Maxwell, M. (2019). Underneath the mask of the strong Black woman schema: Disentangling influences of strength and self-silencing on depressive symptoms among U.S. Black women. *Sex Roles, 80*(9-10), 517-526. https://doi.org/10.1007/s11199-018-0956-y

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, *32*(4), 665-683. https://doi.org/https://doi.org/10.1111/j.1559-1816.2002.tb00236.x

Allen, A. M., Wang, Y., Chae, D. H., Price, M. M., Powell, W., Steed, T. C., Rose Black, A., Dhabhar, F. S., Marquez-Magaña, L., & Woods-Giscombe, C. L. (2019). Racial discrimination, the superwoman schema, and allostatic load: exploring an integrative stress-coping model among African American women. *Annals of the New York Academy of Sciences*, *1457*(1), 104-127. https://doi.org/10.1111/nyas.14188

Allen, G. E. K., Conklin, H. a., & Kane, D. K. (2017). Racial discrimination and psychological health among Polynesians in the U.S. *Cultural diversity & ethnic minority psychology*, *23*(3), 416-424. https://doi.org/10.1037/cdp0000133

Arcia, A. (2014). Facebook advertisements for inexpensive participant recruitment among women in early pregnancy. *Health Educ Behav*, *41*(3), 237-241. https://doi.org/10.1177/1090198113504414

Atkins, R. (2015). Depression in Black single mothers: A test of a theoretical model. *Western journal of nursing research*, *37*(6), 812-830. https://doi.org/10.1177/0193945914528289

Bamishigbin, O. N., Dunkel Schetter, C., Guardino, C. M., Stanton, A. L., Schafer, P., Shalowitz, M., Lanzi, R. G., Thorp, J., & Raju, T. (2017). Risk, resilience, and depressive

symptoms in low-income African American fathers. *Cultural diversity & ethnic minority psychology*, *23*(1), 70-80. https://doi.org/10.1037/cdp0000088

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education and Behavior*, *31*(2), 143-164. https://doi.org/10.1177/1090198104263660

Bassi, M., Delle Fave, A., Cetin, I., Melchiorri, E., Pozzo, M., Vescovelli, F., & Ruini, C. (2017). Psychological well-being and depression from pregnancy to postpartum among primiparous and multiparous women. *J Reprod Infant Psychol*, *35*(2), 183-195. https://doi.org/10.1080/02646838.2017.1290222

Blodorn, A., Major, B., & Kaiser, C. (2016). Perceived discrimination and poor health: Accounting for self-blame complicates a well-established relationship. *Social Science & Medicine*, *153*, 27-34. https://doi.org/10.1016/j.socscimed.2016.01.053

Borrell-Carrió, F., Suchman, A. L., & Epstein, R. M. (2004). The biopsychosocial model 25 years later: Principles, practice, and scientific inquiry. *Ann Fam Med*, *2*(6), 576-582. https://doi.org/10.1370/afm.245

Burnham, M. J., Le, Y. K., & Piedmont, R. L. (2018). Who is Mturk? Personal characteristics and sample consistency of these online workers. *Mental Health, Religion & Culture*, *21*(9-10), 934-944. https://doi.org/10.1080/13674676.2018.1486394

Cano, M. Á., Castro, Y., de Dios, M. A., Schwartz, S. J., Lorenzo-Blanco, E. I., Roncancio, A. M., Martinez, M. J., Sheehan, D. M., Auf, R., Piña-Watson, B., Huynh, Q.-L., & Zamboanga, B. L. (2016). Associations of ethnic discrimination with symptoms of anxiety and depression among Hispanic emerging adults: A moderated mediation model. *Anxiety, stress, and coping*, *29*(6), 699-707. https://doi.org/10.1080/10615806.2016.1157170

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, *29*(6), 2156-2160. https://doi.org/https://doi.org/10.1016/j.chb.2013.05.009

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, *54*(10), 805-816.

Donovan, R. A., & West, L. M. (2015). Stress and mental health: Moderating role of the strong Black woman stereotype. *Journal of Black Psychology*, *41*(4), 384-396. https://doi.org/10.1177/0095798414543014

Dunkel-Schetter, C. (2011). Psychological science on pregnancy: Stress processes, biopsychosocial models, and emerging research issues. *Annual Review of Psychology*, *62*, 531-558. https://doi.org/10.1146/annurev.psych.031809.130727

Dworkin, J., Hessel, H., Gliske, K., & Rudi, J. H. (2016). A comparison of three online recruitment strategies for engaging parents [https://doi.org/10.1111/fare.12206]. *Family Relations*, *65*(4), 550-561. https://doi.org/https://doi.org/10.1111/fare.12206

Fishbein, M. (2008). A reasoned action approach to health promotion. *Med Decis Making*, *28*(6), 834-844. https://doi.org/10.1177/0272989x08326092

Gelinas, L., Pierce, R., Winkler, S., Cohen, I. G., Lynch, H. F., & Bierer, B. E. (2017). Using social media as a research recruitment tool: Ethical issues and recommendations. *The American Journal of Bioethics*, *17*(3), 3-14. https://doi.org/10.1080/15265161.2016.1276644

Harding, S. (1992). Rethinking standpoint epistemology: What is "strong objectivity?". *The Centennial Review*, *36*(3), 437-470.

Hasson, F., & Keeney, S. (2011). Enhancing rigour in the Delphi technique research. *Technological Forecasting and Social Change, 78*(9), 1695-1704. https://doi.org/10.1016/j.techfore.2011.04.005

James, D. (2016). Internalized racism and past-year major depressive disorder among African-Americans: The role of ethnic identity and self-esteem. *Journal of Racial and Ethnic Health Disparities*, *4*(4), 659-670. https://doi.org/10.1007/s40615-016-0269-1

Kim, S. J., & Hancock, J. T. (2016). How advertorials deactivate advertising schema: MTurk-based experiments to examine persuasion tactics and outcomes in health advertisements. *Communication Research*, *44*(7), 1019-1045. https://doi.org/10.1177/0093650216644017

Kong, D. T. (2016). Ethnic minorities' paranoia and self-preservative work behaviors in response to perceived ethnic discrimination, with collective self-esteem as a buffer. *Journal of Occupational Health Psychology*, *21*(3), 334-351. https://doi.org/10.1037/ocp0000013

Liao, K. Y.-H., Wei, M., & Yin, M. (2020). The misunderstood schema of the strong Black woman: Exploring its mental health consequences and coping responses among African American women. *Psychology of women quarterly*, *44*(1), 84-104. https://doi.org/10.1177/0361684319883198

MacCallum, R. C., Roznowski, M., & Necowitz, L. B. (1992). Model modifications in covariance structure analysis: The problem of capitalization on chance. *Psychological Bulletin*, *111*(3), 490-504. https://doi.org/10.1037/0033-2909.111.3.490

Marsh, H. W., & Shavelson, R. (1985). Self-concept: Its multifaceted, hierarchical structure. *Educational Psychologist*, *20*(3), 107-123.

Mehta, L. S., Sharma, G., Creanga, A. A., Hameed, A. B., Hollier, L. M., Johnson, J. C., Leffert, L., McCullough, L. D., Mujahid, M. S., Watson, K., & White, C. J. (2021). Call to action:

Maternal health and saving mothers: A policy statement from the American Heart Association. *Circulation, 144*(15). https://doi.org/10.1161/cir.0000000000001000

Mereish, E. H., N'Cho H, S., Green, C. E., Jernigan, M. M., & Helms, J. E. (2016). Discrimination and depressive symptoms among Black American men: Moderated-mediation effects of ethnicity and self-esteem. *Behav Med, 42*(3), 190-196. https://doi.org/10.1080/08964289.2016.1150804

Montano, D. E., & Kasprzyk, D. (2015). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior: Theory, Research, and Practice* (5th ed., pp. 95-124). Jossey-Bass.

Paradies, Y., Ben, J., Denson, N., Elias, A., Priest, N., Pieterse, A., Gupta, A., Kelaher, M., & Gee, G. (2015). Racism as a determinant of health: A systematic review and meta-analysis. *PLoS One, 10*(9), e0138511. https://doi.org/10.1371/journal.pone.0138511

Pew Research Center (2019). Social media fact sheet. In.

Russomanno, J., Patterson, J. G., & Jabson Tree, J. M. (2019). Social media recruitment of marginalized, hard-to-reach populations: Development of recruitment and monitoring guidelines. *JMIR Public Health Surveill*, *5*(4), e14886. https://doi.org/10.2196/14886

Sellers, R. M., Rowley, S. A. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional inventory of Black identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology, 73*(4), 805-815. https://doi.org/10.1037/0022-3514.73.4.805

Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. A. J., & Chavous, T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American

racial identity. *Personality and Social Psychology Review*, *2*(1), 18-39. https://doi.org/10.1207/s15327957pspr0201_2

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, *46*(3), 407-441.

Shieh, C., Khan, I., & Umoren, R. (2020). Engagement design in studies on pregnancy and infant health using social media: Systematic review. *Preventive Medicine Reports*, *19*, 101113. https://doi.org/https://doi.org/10.1016/j.pmedr.2020.101113

Sorbom, D. (1989). Model modification. *Psychometrika*, *54*(3), 371-384. https://doi.org/10.1007/BF02294623

Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*, *139*(1), 213-240. https://doi.org/10.1037/a0028931

Stokes, J. E. (2020). Social integration, daily discrimination, and biological markers of health in mid- and later life: Does self-esteem play an intermediary role? *Innov Aging*, *4*(4). https://doi.org/10.1093/geroni/igaa026

The White House, Briefing Room. (2022). *Fact sheet: Biden-Harris administration announces additional actions in response to Vice President Harris's call to action on maternal health* https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/13/fact-sheet-biden-harris-administration-announces-additional-actions-in-response-to-vice-president-harriss-call-to-action-on-maternal-health/

Thomas, A. J., Witherspoon, K. M., & Speight, S. L. (2004). Toward the development of the stereotypic roles for Black women scale. *Journal of Black Psychology*, *30*(3), 426-442. https://doi.org/10.1177/0095798404266061

U.S. Department of Health and Human Services, Office of the Surgeon General (2020). *The surgeon general's call to action to improve maternal health*. https://www.hhs.gov/sites/default/files/call-to-action-maternal-health.pdf

VanderWeele, T. J., Trudel-Fitzgerald, C., Allin, P., Farrelly, C., Fletcher, G., Frederick, D. E., Hall, J., Helliwell, J. F., Kim, E. S., Lauinger, W. A., Lee, M. T., Lyubomirsky, S., Margolis, S., McNeely, E., Messer, N., Tay, L., Viswanath, V., Weziak-Bialowolska, D., & Kubzansky, L. D. (2020). Current recommendations on the selection of measures for well-being. *Prev Med, 133*, 106004. https://doi.org/10.1016/j.ypmed.2020.106004

Velez, B. L., Cox, R., Polihronakis, C. J., & Moradi, B. (2018). Discrimination, work outcomes, and mental health among women of color: The protective role of womanist attitudes. *Journal of counseling psychology, 65*(2), 178-193. https://doi.org/10.1037/cou0000274

Williams, D. R., Lawrence, J. A., Davis, B. A., & Vu, C. (2019). Understanding how discrimination can affect health. *Health Services Research, 54*(S2), 1374-1388. https://doi.org/http://dx.doi.org/10.1111/1475-6773.13222

APPENDICES

Appendix A

Overview of Self-Concept Scoping Review Database Search Structure

Table A1

Database search results and search key words.

Databases	Results
Embase	636
Medline	687
Cochrane	31
PsycINFO	817
ERIC	1,049
Subtotal	3,220
Duplicates	676
Final Total	**2,544**

Key Words

Self-Concept	Racism
Self-concept Self esteem Self concept clarity Self theory	Race Racial Racism Bias Discrimination Prejudice Stereotyping

Note. The key words listed in this table were searched in every database; database-specific controlled vocabulary was also used for each search and is presented in the following tables.

Table A2

Medline database search structure and results.

Database	**Data of Search**
Medline	21 April, 2022
Controlled Vocabulary	
Self-Concept	**Racism**
"Self Concept"[Mesh] "Self psychology"[Mesh]	"Racism"[Mesh] "Ethnic and racial minorities"[Mesh] "Race Factors"[Mesh] "Social Segregation"[Mesh] "Race relations"[Mesh] "Discrimination, Psychology"[Mesh] "Social Discrimination"[Mesh] "Perceived Discrimination"[Mesh] "Stereotyping"[Mesh] "Prejudice"[Mesh]

Medline Search	**Search Structure**	**Results**
1	"self-concept"[tiab] OR "self esteem"[tiab] OR "self concept clarity"[tiab] OR "self theory"[tiab] OR "self concept"[MeSH Terms] OR "self psychology"[MeSH Terms]	131,855
2	(race[tiab] OR racial[tiab] OR "ethnic and racial minorities"[MeSH Terms] OR "race factors"[MeSH Terms] OR "race relations"[MeSH Terms]) AND (discrimination[tiab] OR bias[tiab] OR prejudice[tiab] OR stereotyping[tiab] OR "social segregation"[MeSH Terms] OR "discrimination, psychological"[MeSH Terms] OR "social discrimination"[MeSH Terms] OR "perceived discrimination"[MeSH Terms] OR "stereotyping"[MeSH Terms] OR "prejudice"[MeSH Terms])	19,295
3	1 and 2	687

Table A3

Embase database search structure and results.

Database		**Data of Search**
Embase		27 April, 2022
Controlled Vocabulary		
Self-Concept		**Racism**
Self Concept/ Self Esteem/ Self Psychology/ Self Actualization/ "Sense of self"/ Social Comparison/		exp Racism/ Prejudice/ Stereotyping/ Social discrimination/ Racial segregation/
Medline Search	**Search Structure**	**Results**
1	("self-concept" or "self esteem" or "self concept clarity" or "self theory").ab. or ("self-concept" or "self esteem" or "self concept clarity" or "self theory" or "theory, self").ti. or self concept/ or self actualization/ or self esteem/ or "sense of self"/ or social comparison/ or self psychology/	129,545
2	((("race" or "racial").ti. or ("race" or "racial").ab. or exp race/) and (("bias" or "discrimination" or "prejudice" or "stereotyping").ti. or ("bias" or "discrimination" or "prejudice" or "stereotyping").ab. or prejudice/ or stereotyping/ or social discrimination/ or racial segregation/)) or "racism".ti. or "racism".ab. or exp racism/	21,309
3	1 and 2	636

Table A4

Cochrane database search structure and results.

Database	**Data of Search**
Cochrane	21 April, 2022
Controlled Vocabulary	
Self-Concept	**Racism**
MeSH Descriptor [Self Concept] explode all trees MeSH descriptor: [Self psychology] this term only	MeSH descriptor: [Race Factors] this term only MeSH descriptor: [Race relations] this term only MeSH descriptor: [Ethnic and racial minorities] this term only MeSH descriptor: [Racism] explode all trees MeSH descriptor: [Prejudice] this term only MeSH descriptor: [Stereotyping] this term only MeSH descriptor: [Social Segregation] explode all trees MeSH descriptor: [Discrimination, Psychology] explode all trees MeSH descriptor: [Social Discrimination] explode all trees MeSH: [Perceived Discrimination] explode all trees

Medline Search	**Search Structure**	**Results**
1	(self-concept OR self esteem OR self concept clarity OR self theory):ti,ab	7,973
2	MeSH descriptor: [Self Concept] this term only	2,478
3	MeSH descriptor: [Self psychology] this term only	12
4	#1 OR #2 OR #3	9,474
5	MeSH descriptor: [Race Factors] this term only	14
6	MeSH descriptor: [Race relations] this term only	21
7	MeSH descriptor: [Ethnic and racial minorities] this term only	9
8	MeSH descriptor: [Racism] explode all trees	47
9	MeSH descriptor: [Prejudice] this term only	299

10	MeSH descriptor: [Stereotyping] explode all trees	372
11	MeSH descriptor: [Social Segregation] explode all trees	67
12	MeSH descriptor: [Discrimination, Psychology] explode all trees	651
13	MeSH descriptor: [Social Discrimination] explode all trees	113
14	MeSH: [Perceived Discrimination] explode all trees	0
15	(race OR racial):ti,ab OR #4 OR #5 OR #6	11,946
16	(discrimination OR bias OR prejudice):ti,ab OR #9 OR #10 OR #11 OR #12 OR #13 OR #14	22,896
17	(#15 AND #16) OR (racism):ti,ab OR #8	596
18	#4 AND #17	31

Table A5

PsycINFO database search structure and results.

Database	**Data of Search**
PsycINFO	27 April, 2022
Controlled Vocabulary	
Self-Concept	**Racism**
"Self-Concept" "Self Psychology" "Self-Perception" "Self-Esteem" "Self-Congruence" "Self-Regard" "Self-Knowledge" "Self-Confidence"	"Racism" explode "Implicit Bias" "Prejudice" "Racial bias" "Race and Ethnic Discrimination" "Racial Trauma" "Stereotyped Attitudes" "Labeling" "Stigma"

Medline Search	**Search Structure**	**Results**
1	TI ("self-concept" OR "self esteem" OR "self concept clarity" OR "self theory") OR AB ("self-concept" OR "self esteem" OR "self concept clarity" OR "self theory") OR DE ("Self-Concept" OR "Self-Congruence" OR "Self-Regard" OR "Self-Worth" OR "Belonging" OR "Self-Efficacy" OR "Self-Knowledge" OR "Self-Confidence" OR "Self-Esteem" OR "Self-Perception" OR "Self Psychology")	151,289
2	((TI (race OR racial) OR AB (race OR racial)) AND (TI (discrimination OR bias OR prejudice OR stereotyping) OR AB (discrimination OR bias OR prejudice OR stereotyping) OR DE ("Prejudice" OR "Stereotyped Attitudes" OR "Labeling" OR "Stigma"))) OR TI (racism) OR AB (racism) OR DE ("Racism" OR "Internalized Racism" OR "Implicit Bias" OR "Racial Bias" OR "Race and Ethnic Discrimination" OR "Racial Trauma")	31,384
3	1 AND 2	1,492
Restrictions	Only show Academic Journals	817

Table A6

ERIC database search structure and results.

Database	**Data of Search**	
ERIC	27 April, 2022	
Controlled Vocabulary		
Self-concept	**Racism**	
Self-concept Self-concept measures	Racial Bias Racial Attitudes Racial Segregation Racial Discrimination Labeling (of Persons) Stereotypes Racism (1966 1980)	
Medline Search	**Search Structure**	**Results**
1	MAINSUBJECT.EXACT.EXPLODE("Self Concept Measures") OR MAINSUBJECT.EXACT("Self Concept") OR MAINSUBJECT.EXACT("Self Actualization") OR MAINSUBJECT.EXACT("Self Evaluation (Individuals)") OR MAINSUBJECT.EXACT("Reflection") OR ab(Self-concept OR Self-esteem OR self concept clarity OR Self theory) OR ti(Self-concept OR Self-esteem OR self concept clarity OR Self theory)	75,991
2	((ti(race OR racial) OR ab(race OR racial)) AND (ti(bias OR discrimination OR prejudice OR stereotyping) OR ab(bias OR discrimination OR prejudice OR stereotyping) OR MAINSUBJECT.EXACT("Labeling (of Persons)") OR MAINSUBJECT.EXACT("Stereotypes"))) OR ti(racism) OR ab(racism) OR MAINSUBJECT.EXACT("Racial Attitudes") OR MAINSUBJECT.EXACT("Racial Bias") OR MAINSUBJECT.EXACT("Racism (1966 1980)") OR MAINSUBJECT.EXACT("Racial Segregation") OR MAINSUBJECT.EXACT("Racial Discrimination")	23,918
3	1 AND 2	1,804
Restrictions	Only show Peer Reviewed and Scholarly Journals	1,049

Appendix B

Additional Data Extracted During Scoping Review

Appendix B

Additional Data Extracted During Scoping Review

Source	Subjects and Design		Variables			
Author(s) (year)	**Other Notable Socio-demographic Characteristics**	**Year(s) of Data Collection**	**Racism Measures**	**Self-Concept Measures**	**Self-Concept Psychometric Data**	**Other Notable Outcome and Predictor Variables**
Ai et al. (2015)	100% Male	2002 to 2003	9-item scale measuring daily perception of perceived discrimination	3-items measuring perceived closeness to the respondent's ethnic group	α = 0.749	Acculturative stress, Religious involvement, Social support, Negative family interactions, Family cohesiveness
Alexander et al. (2019)	58.9% Female	2011 to 2013	*Everyday Discrimination Scale (EDS)* - 9-item self-report measure that assesses minor but chronic or episodic events of discrimination or maltreatment	*Self-Efficacy Scale/Confidence (SESC)* - 9-item scale reflecting an individual's belief in their ability to cope with high-risk situations without smoking	α = .94	N/A
Allen et al. (2017)	60% Female	N/A	*Daily Life Experience subscale of the Racism and Life Experience Scale* - 18-item scale measuring experiences with racial discrimination related to microaggressions through frequency of experiences in the past year	*Rosenberg Self-Esteem Scale (RSES)*	α = .84	Anger; Life satisfaction
Arnold et al. (2016)	Transracial adoptees (n = 87) 64% Female	N/A	*General Ethnic Discrimination Scale (GEDS)* - 18-item measure that assesses the frequency of perceived ethnic discrimination and the consequent stress related to these events	*Rosenberg Self-Esteem Scale (RSES)*	α = .94	Ethnic socialization

Atkins (2015)	100% Single mothers	N/A	*Perceived Ethnic Discrimination Questionnaire Community Version-Brief (PEDQ-CV-B)* - 17-items that measure experiences with racism/ discrimination	*Rosenberg Self-Esteem Scale (RSES)*	<u>Content validity</u> two-factor positive and negative structure; highly correlated factors <u>Concurrent validity</u> correlated negatively with measures of depressive symptoms and negative thinking <u>Reliability</u> α = 0.87	Perceived stress, Anger
Bamishigbin et al. (2017)	100% Fathers Mean Income = $13, 821 (*SD* = $16,515)	N/A	*10-item Everyday Discrimination Scale (EDS)*	*Rosenberg Self-Esteem Scale (RSES)*	Cronbach's α = .76	Perceived stress, Major life events, Avoidant coping, Social support, Collective efficacy, Approach-oriented coping
Bernard et al. (2017)	100% College Students 68.2% Female	2013	*Daily Life Experience subscale of the Racism and Life Experience Scale* - 18-items measuring frequency of and bother associated with microaggressions individuals have experienced as a result of their race in the last year	*Clance's Impostor Phenomenon Scale (CIPS)* - 20-item measure that assesses the extent to which individuals experience impostor feelings or worries	α = .93	N/A
Blodorn et al. (2016)	Study 1 100% College students 66.3% Female	Study 1 2009	Study 1 *Single item*	Study 1 <u>Self-Blame</u>	Study 1 *Rosenberg Self-Esteem Scale*	N/A

			- "Racial/ethnic discrimination held me back from something I wanted to do" Study 2 *5 adapted items from the* *Everyday Discrimination Scale (EDS)* - Items assess frequency with which participants perceived themselves as targets of ethnic/racial discrimination	- Single item measuring frequency with which participants generally engage in self-blame in their day-to-day lives - "My own faults held me back from something I wanted to do" <u>Self-esteem</u> *Rosenberg Self-esteem Scale* Study 2 <u>Self-Blame</u> *5 items from the Everyday Discrimination Scale (EDS)* - Items assess frequency with which participants perceived events had happened because of something about them personally	- α = .91 and .88 for white and ethnic minority participants, respectively Study 2 *5 items from the Everyday Discrimination Scale (EDS)* - α = .75 and .83 for white and ethnic minority participants, respectively *Rosenberg Self-Esteem Scale* - α = .90 and .89 for white and ethnic minority participants, respectively	
	Study 2 43.8% Female	Study 2 2014				
Brittian et al. (2015)	College students 76% Female	2008 to 2009	*Perceived Discrimination subscale of the Scale of Ethnic Experience (SEE)* - 7 items that assess participants' perceptions of public regard (e.g., perceptions of criticism of and respect for one's ethnic group) and treatment of their ethnic group in America (e.g., perceived barriers to opportunity)	*Ethnic Identity Scale (EIS)* - 17-items that assess three dimensions of ethnic identity	α = .83 to .89 for Black participants α = .85 to .90 for Latino participants	N/A
Cano et al. (2016)	College students	N/A	*9-item subscale from the Scale of Ethnic Experience (SEE)*	*Rosenberg Self-Esteem Scale*	α = .89	N/A

Cheng et al. (2016)	College students 71% Female	N/A	*18-item General Ethnic Discrimination Scale (GED)*	*Revised Multigroup Ethnic Identity Measure (MEIM)* - 12-items measuring two subscales: (a) Affirmation, Belonging, and Commitment and (b) Search and Exploration of, and Involvement in, Ethnic Group Identity	*Commitment subscale* α = .91 *Search subscale* α = .71	Acculturative stress, Familism
Cheng et al. (2017)	Female college students	N/A	<u>Perceived racial discrimination</u> *8-item Subtle and Blatant Racism Scale for Asian American college students* <u>Perpetual foreigner racism</u> *7-item perpetual foreigner subscale of the Asian American Racism-Related Stress Inventory* <u>Racial/ethnic teasing</u> *7-item subscale of Lifetime Frequency of Teasing from the Measure of Ethnic Teasing (MET)*	<u>Media internalization</u> *9-item Internalization-General subscale of the Sociocultural Attitudes Toward Appearance Scale-3* <u>Body surveillance / self-objectification</u> *8-item body surveillance subscale of the Objectified Body Consciousness Scale (OBC)* <u>Body shame</u> *8 items of the body shame subscale of the OBC*	<u>Media internalization</u> - α = .95 - Convergent validity through positive associations with body dissatisfaction and disordered eating <u>Body surveillance / Self objectification</u> - α = .82 <u>Body shame</u> - α = .83 - Convergent validity through a positive association with internalization of cultural standards of beauty among undergraduate women	N/A

Clifton et al. (2021)	81.7% Female	N/A	*Daily Life Experiences (DLE) subscale of the Racism and Life Experience Scale* - 18 items that measure perceived daily experiences of racism in the past year	<u>Implicit Racial Identity</u> *Modified Implicit Association Test* - Computerized categorization task that measures reaction times <u>Explicit Racial Identity</u> *Centrality subscale of the Multidimensional Inventory of Black Identity (MIBI)* - 8 items that assess the importance of race to one's definition of self	*Modified Implicit Association Test* - No specific data given *Centrality subscale of the Multidimensional Inventory of Black Identity (MIBI)* - α = .83	N/A
Cokley et al. (2017)	College students 70% Female	N/A	*Perceived Discrimination Scale (PDS)* - 10 items that assess the frequency of everyday discrimination experiences	*Clance's Impostor Phenomenon Scale (CIPS)* - 20-item scale that measures feelings of being a fraud or an intellectual phony	α = .93	N/A
Foynes et al. (2015)	36.5% White men 39.1% White women 10.6% Racial/ ethnic minority men 13.8% Racial/ ethnic minority women	1997 to 2008	*Workplace Discrimination Inventory (WPDI)* - 15 items assessing perceived discrimination in the workplace	*Rosenberg Self-Esteem Scale (RSES)*	Cited studies for scale's item-convergent and discriminant validity and test-retest reliability. Cronbach α = .87 (T2) and .92 (T5)	Sex-based discrimination, Perceived social support, Social adjustment

Gayman et al. (2018)	100% Male 32.66% had a physical disability	2000 - 2001	*9-item Everyday Discrimination Scale (EDS)*	*Rosenberg Self-Esteem Scale (RSES)*	α = 0.69	Perceived social support, Mastery, Chronic stressors, Recent life events
Graham et al. (2016)	81.5% Female	N/A	*Past Year Subscale of the Schedule of Racist Events (SRE)* - 18-item measure that assesses the frequency and perceived stressfulness of perceived racial discrimination in the past year and lifetime	*Self-Hatred Subscale for the Cross Racial Identity Scale (CRISSH)* - 40-item measure of racial identity development and internalization of racism - Developed specifically for Black population	Internal consistency coefficient = 0.92	N/A
Hughes et al. (2015)	N/A	2001 to 2003	Everyday Discrimination Scale	<u>Self-Esteem</u> *Rosenberg Self-Esteem Scale* <u>Mastery</u> *The Mastery Scale* - 7-item scale assessing mastery <u>Racial Identity</u> *Closeness to African Americans Index* - 9-item index of closeness *Evaluation of African Americans as a Group* - 6-item scale of positive and negative stereotypes held of African Americans	*Rosenberg Self-Esteem Scale* α = 0.76 *The Mastery Scale* α = 0.72 *Closeness to African Americans Index* α = 0.87 *Evaluation of African Americans Scale* α = 0.62	Family support, Family strain, Closeness to church members, Friend support
James (2016)	55.97% Male	2001 to 2003	9-item Everyday Discrimination Scale (EDS)	<u>Ethnic Identity</u> *Single item* - assessing participant's closeness to the Black racial group <u>Self-Esteem</u>	*Ethnic Identity Item* No data given *Rosenberg Self-Esteem Scale* α = 0.77 *Internalized*	N/A

				Rosenberg Self-Esteem Scale <u>Internalized Racism</u> 6 items assessing extent to which participants believed each statement about Black people as a group	*Racism Items* α = 0.65	
Kong (2016)	100% Employees 24% Female Lived in the U.S. average 28.86 years (*SD* = 11.77)	N/A	*Perceived Ethnic Discrimination and Acceptance adapted scale* - Items measuring the extent to which respondents felt that other non-Hispanic colleagues at work treated them	4 items adapted from measure of private collective self-esteem	α = .67	Voice, Workplace withdrawal, Social desirability, Psychological needs satisfaction (PNS), Neuroticism
Meanley et al. (2020)	Single, men who have sex with men and who use online dating and mobile applications	2016 to 2017	*8 items of the Everyday Discrimination Scale (EDS)* - Common discriminatory events in lifetime; items were modified to experiences when seeking partners online	*Rosenberg's Society and the Adolescent Self-Image scale (i.e., Rosenberg Self-Esteem Scale)*	α = .90	N/A
Mereish et al. (2016)	100% Male	2001 to 2003	*Everyday Discrimination Scale*	*Rosenberg Self-Esteem Scale*	African American Participants: α = .75 Afro-Caribbean Participants: α = .76	Nativity Status

Miller and Orsillo (2020)	Graduate students 73.8% Female	N/A	*Revised 28-item Racial and Ethnic Microaggressions Scale (REMS28)* - 28-item scale that captures frequency of exposure to racial microaggressions *Schedule of Racist Events (SRE)* - 18-item measure assessing exposure to, and appraisal of, racist events; items were adapted to pertain to graduate school	*Campus Connectedness Scale (CCS)* - 14-item measure assessing how connected or disconnected a student feels from the campus community; items were adapted to assess student's sense of belongingness in their doctoral program	α = .94	Acceptance, Values
Mossakowski et al. (2019)	Foreign-born (n = 230) U.S.-born (n = 214)	2011	*Everyday Discrimination Scale*	*Multigroup Ethnic Identity Measure (MEIM)* - 8 items that measure ethnic identity commitment and search	α = .82	N/A
Odafe et al. (2017)	53.5% Male	N/A	*Index of Race Related Stress (IRRS-B)* - 22-item index with three subscales that measure race-related stress	*Interpersonal Support Evaluation List (ISEL)* - 40-item scale that measures belonging-, self-esteem-, and appraisal-based social support	*Self-esteem subscale* α = .75	N/A
Ogbenna et al. (2021)	52.9% Female 72.7% Foreign-born	2012 to 2013	*Experiences of Discrimination (EOD) Scale* - 6-item scale evaluating experiences of unfair treatment attributed to race or ethnicity	*Ethnic Identity Scale (EIS)*	α = .90	Nativity
Ouch and Moradi (2019)	Sexual minority population (e.g., lesbian, gay, bisexual, queer, questioning) 46% Female 27% Non-binary	N/A	*Discrimination Scale for Sexual Minority People of Color (items adapted from the Schedule of Racist Events and the Schedule of Sexist Events)* - 20-item scale measuring frequency of perceived discrimination experiences within the past year	*Coping Self-Efficacy Scale* - 14 items measuring ability to use problem-focused, emotion-focused and socially based coping self-efficacy items	<u>Problem-Focused Coping Self-Efficacy</u> α = .91 <u>Emotion-Focused Coping Self-Efficacy</u> α = .94	Cognitive expectation of stigma, Affective expectation of stigma

					Socially-Focused Coping Self-Efficacy α = .85	
Parra and Hastings (2020)	43.1% Cis-gender female Sexually diverse populations (bisexual/pansexual, gay, lesbian, and queer)	N/A	*Brief Perceived Ethnic Discrimination Questionnaire -- Community Version* - 17-item scale assessing racist discrimination	*Conflicts in Allegiances (CIA) Questionnaire* - 6 items measuring unique forms of social stress experienced by sexually diverse people of color; captures the degree to which people who hold memberships and allegiances to multiple marginalized social groups experience challenges to integrating their sexual and ethnic/ racial identities	α = .82	Heterosexist discrimination, Outness
Perry et al. (2015)	Medical students	2010 to 2011	*Everyday Discrimination Scale (EDS)* - 9-item measure of the extent to which participants experience discrimination and unfair treatment throughout their daily lives	*Global State Self-Esteem Scale* - 11 items assess individual's self-esteem at a given point in time *Centrality subscale of the Multidimensional Inventory for Black Identity (MIBI)* - Measures the extent to which being African American is central to the respondents' definition of themselves	*Global State Self-Esteem scale* α = .83 *Centrality Subscale of the Multidimensional Inventory for Black Identity* α = .79	Acceptance
Peterson et al. (2020)	54.4% college students	N/A	2 items assessing if Cyberball manipulation resulted in feelings of perceived discrimination	*Perceived Control Scale from Cyberball Manipulation Post Survey* - 5-items assessing how in control participants felt during the game	α = .82	Negative affect

Szymanski and Lewis (2016)	Female college students	N/A	*Buchanan's Racialized Sexual Harassment Scale* - 7-item scale assessing experiences of oppressive behaviors that focus simultaneously on one's race and gender	*Centrality subscale of the In-Group Identification Scale* - 3 items modified to ask participants, based on their identity as an African American woman, how much they agree with statements about identity centrality	α = 0.76	Coping with discrimination
Thibeault et al. (2018)	Immigrant-origin first- and second-generation college students	2012 2014	*Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale (SAFE)* - Measures stress attribution	*Affirmation and Belonging Subscale of the Multigroup Ethnic Identity Measure (MEIM)* - 5 items assessing the extent to which one endorses feelings of belonging and attachment toward one's ethnic group, as well as a sense of ethnic pride and being happy about one's ethnic group membership	α = 0.84	Other-group orientation, Acculturative stress
Velez et al. (2018)	Employees	N/A	*Racial Ethnic Harassment Scale (REHS)* - 14-item assessment of participants' experiences of workplace discrimination because of their racial or ethnic minority status in the last year	*Rosenberg Self-Esteem Scale (RSES)*	α = .94	Person-organization fit, Perceived organizational support, Womanist attitudes, Job-related burnout, Turnover intentions
Velez et al. (2015)	Lesbian, gay, bisexual, and other sexual minorities 47% Male	N/A	*Recent subscale of the General Ethnic Discrimination Scale (GEDS-Recent)* - 18 items assessing frequency of perceived racist discrimination in the past year	*Private subscale of the Collective Self-Esteem Scale (CSES)* - 4 items used to assess evaluations and affective judgement of one's racial/ethnic group *Rosenberg Self-Esteem Scale (RSES)*	*Private subscale of the Collective Self-Esteem scale* α = .81 *Rosenberg Self-Esteem Scale* α = .87	Heterosexist discrimination, Internalized Heterosexism, Life satisfaction

Volpe et al. (2019)	76.5% Female	N/A	*Racism and Life Experiences Scale from the Daily Life Experiences Scale (DLE)* - 18 items that assess the frequency with which participants experiences racial hassles in the past year	*3 subscales of the Multidimensional Inventory of Black Identity (MIBI)* *Private regard subscale* - 6 items measuring participants' feelings about being Black and Black people *Public regard subscale* - 6 items measuring participants' feelings about how others view Black people *Centrality subscale* - 8 items measuring the degree to which participants define themselves in terms of their race	*Private Regard Subscale* α = .79 *Public Regard Subscale* α = .85 *Centrality Subscale* α = .82	N/A
Watson et al. (2016)	Undergraduate students	N/A	*General Ethnic Discrimination Scale (GEDS)* - 18 items assessing perceived ethnic discrimination as frequency of racial events across the lifetime and participants' appraisal of such experiences	*Rosenberg Self-Esteem Scale (RSES)* *Multigroup Ethnic Identity Measure (MEIM)* - 12 items assessing ethnic identity exploration, commitment, belonging, and affirmation	*Rosenberg Self-Esteem Scale* α = .88 *Multigroup Ethnic Identity Measure* α = .91	Perceived sexist and sexual objectification experiences
Wheeler et al. (2021)	Two-parent families with a child in the 7th grade	2002 to 2010	*Institutional Discrimination and Interpersonal Prejudice Scales* - 5 and 7 item subscales that were specified to Mexicans/ Mexican Americans to measure workplace perceived discrimination	*Rosenberg Self-Esteem Scale (RSES)*	<u>Mothers</u> α = .91 <u>Fathers</u> α = .84	Familism, Family conflict

Yoon et al. (2019)	67.8% Female	N/A	*Lifetime Discrimination Scale* - 4 items assessing the way other people have treated the participants *Everyday Discrimination Scale*	*Self-Acceptance subscale of the Psychological Well-Being (PWB) instrument* - 7 items assessing endorsement of better well-being	α = .576	Purpose in life

Appendix C

Project Recruitment Advertisements

Presented below are examples of the recruitment announcements disseminated for recruiting participants for the virtual interviews conducted in Chapter 3: Paper 2 and the two online surveys conducted in Chapter 4: Paper 3. Recruitment announcements were posted to project social media pages (i.e., Facebook and Instagram accounts) and were boosted with ad services through the Meta Business Suite. All images and graphics courtesy of Creative Commons Licensing with Adobe Express Design.

In-depth Interview Social Media Recruitment Posts

All recruitment posts used the same caption and included a link to the interest form for potential participants to leave their contact information. Captions read as such:

> Are you a Black woman between 18 and 35 years old? Have you given birth in the last six months? You may be eligible to participate in a VCU research study looking at Black women's experiences with racism and discrimination in maternity care settings. We want to hear from you! Eligible participants will be asked to complete a virtual interview using Zoom. Compensation is available for interview participants. Interested? Click the image above or use this link (*external link to interest form inserted here*) to provide your contact information and a member of the research team will reach out to you with more information. For questions or more information, contact Hannah Ming, minghm@vcu.edu. Your pregnancy story matters!

Example Interview Recruitment Post Images


Your Pregnancy Story Matters
The Putting
Moms First Study


The Putting
Moms First
Study


BLACK MOMS| YOUR PREGNANCY
Putting
Moms First

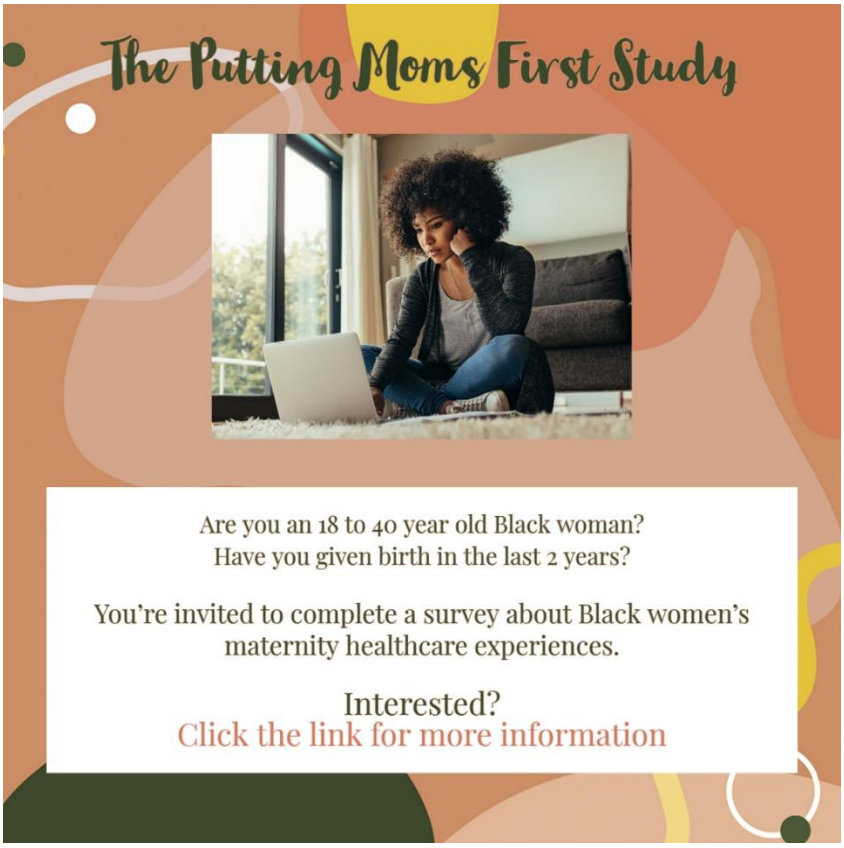

Your Pregnancy Story Matters
Are you a Black woman that is 18 to 35 years old?
Have you given birth in the last six months?
You're invited to participate in an online interview about your maternity healthcare experiences!
Interested?
Click here for more information.
Questions?
Contact Hannah Ming
(minghm@vcu.edu)
The Putting Moms First Study
@puttingmomsfirst

Survey Social Media Recruitment Posts

As mentioned in Methods in Chapter 4: Paper 3, two surveys were conducted. The first survey included cognitive testing of potential self-concept items and the second survey included a more extensive breadth of items and measures for measurement testing. Both surveys used the same recruitment posts and caption and included a link to the appropriate survey. Captions read as such:

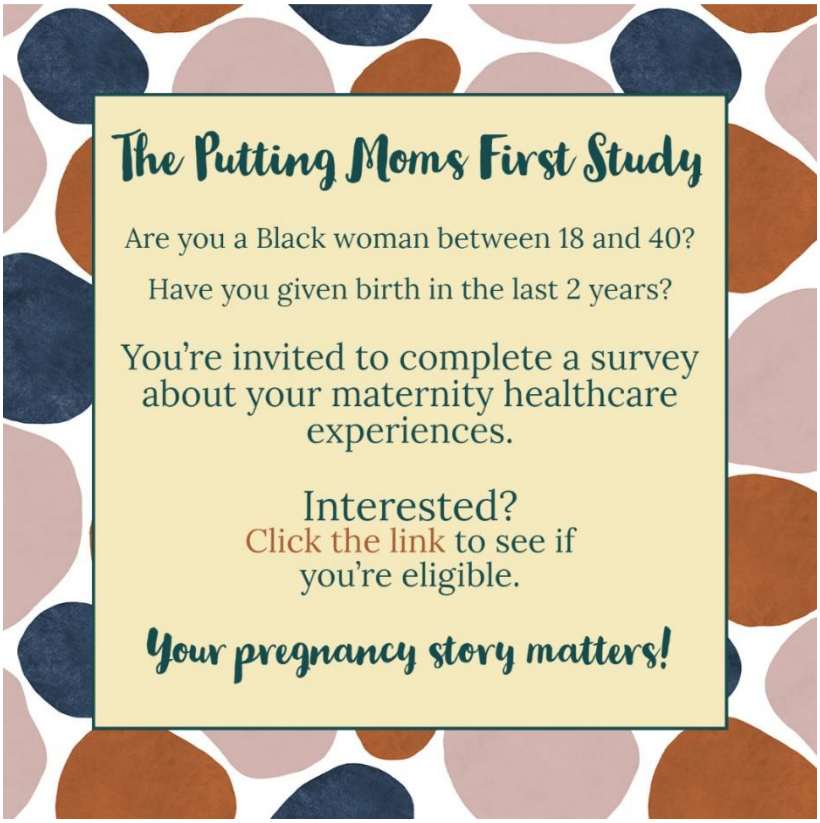
> Are you a Black woman between 18 and 40 years old? Have you given birth in the last 2 years? You may be eligible to participate in a Virginia Commonwealth University research study looking at Black women's experiences with racism and discrimination in maternity care settings. We want to hear from you! Eligible participants will be asked to complete an online survey. Compensation may be available for eligible participants. Interested? Use this link (*external link to survey inserted here*) to find out more information. For questions, contact Hannah Ming, minghm@vcu.edu. Your pregnancy story matters!

Example Survey Recruitment Post Images




THE
Putting Moms First
STUDY
Are you a Black woman who has given birth in the last 2 years?
You're invited to complete a survey about your maternity healthcare experiences.
Interested?
Click the link to find out more.
Your pregnancy story matters!
@puttingmomsfirst


You're invited to participate in
The Putting Moms First Study
Click the link to learn more!


The Putting Moms First Study
Are you a Black woman between 18 and 40?
Have you given birth in the last 2 years?
You're invited to complete a survey about your maternity healthcare experiences.
Interested?
Click the link to see if you're eligible.
Your pregnancy story matters!

Appendix D

In-Depth Interview Guide and Information Sheet

This appendix provides the interview guide used to facilitate in-depth interviews with participants in the Chapter 3: Paper 2 phenomenological analysis. Note that there are additional probes below each question asked; however, some potential probes are not included in this guide but were asked dependent on each interview. For example, participants may have been asked to clarify specific terms or language or to elaborate on their statements. Regardless of additional probes or clarifying questions, all participants were asked the same core questions provided in this guide. We also provide the information sheet provided to participants below. The information sheet was shared with participants prior to the interview session and was also shown to participants using the shared screen feature on Zoom at the start of each interview session.

RESEARCH PARTICIPANT INFORMATION SHEET

STUDY TITLE: A qualitative examination of the psychosocial determinants of maternal health disparities: The Putting Moms First Project

VCU INVESTIGATOR: Hannah M. Ming, Doctoral Degree Candidate

You are invited to participate in a research study about Black women's experiences with racism and discrimination in maternity care. Your participation is voluntary.

Why is this study being done?

The purpose of this research study is to find out about Black women's experiences with racism and discrimination in maternity care. The results of this study will be used to inform the development of measures for Black women's mental and emotional health after giving birth.

What will happen if I participate?

In this study, you will be asked to attend a virtual, individual interview using the Zoom online platform. This interview will last approximately 90 minutes. In this interview, you will be asked to talk about your experiences with racism and discrimination in maternity care, your mental and emotional health throughout and after your pregnancy, and your interactions with and use of maternal health resources. This interview will be recorded* to help us get your full ideas. We ask you to limit your use of names during the interview so that they will not be on the recording. A total of approximately 25 to 30 individuals will participate in this study.

*Note that Zoom collects both audio and visual content when recording an interview. Once the recording has stopped, we will immediately delete all visual recordings and will only keep audio recordings.

What are the risks and benefits of participating?

There are both risks and benefits of participating in research studies.

Risks and Discomforts	Benefits to You and Others
• Participation in research might involve some loss of privacy. There is a small risk that someone outside the research study could see and misuse information about you. • The study interview asks questions that are sensitive and personal in nature and may make you feel uncomfortable.	You are not expected to receive any direct benefit from your participation in the study, but the information we learn from people in this study may help us better understand Black women's pregnancy and birthing experiences.

Will I be paid to participate in the study?

You will receive a $20.00 payment in the form of an e-gift card. Compensation will be emailed to you after you complete the interview.

How will information about me be protected?

VCU and the VCU Health System have established secure research databases and computer systems to store information and to help with monitoring and oversight of research. Your information, including your interview responses, may be kept in these databases but are only accessible to individuals working on this study or authorized individuals who have access for specific research related tasks.

What we find from this study may be presented at meetings or published in papers, but your name will never be used in these presentations or papers. The information and samples collected as part of this study will not be used or distributed for future research studies, even if identifiers are removed.

Whom should I contact if I have questions about the study?

If you have any questions, concerns, or complaints about this study now or in the future, please contact:

Hannah Ming (Primary)
Email: minghm@vcu.edu
Phone: 804-919-3326

Sunny Jung Kim, PhD (Dissertation Committee Chair)
Email: sun.jung.kim@vcuhealth.org

If you have general questions about your rights as a participant in this or any other research, or if you wish to discuss problems, concerns or questions, to obtain information, or to offer input about research, you may contact:

Virginia Commonwealth University Office of Research

800 East Leigh Street, Suite 3000, Box 980568, Richmond, VA 23298

(804) 827-2157; https://research.vcu.edu/human-research/

INTERVIEW GUIDE

Date: _____

Start time: _____

End time: _____

Participant ID: _____

Interviewer/Researcher: _____

Introduction

Hi [state participants name], my name is Hannah Ming and I am a graduate student at Virginia Commonwealth University and the lead researcher for the Putting Moms First study which focuses on Black women's pregnancy and birthing experiences. Is now still a good time for us to meet? [If no, ask to reschedule and provide available time slots for a session]. [If yes…] Great! Thank you again for agreeing to meet with me today; your time is valuable so I appreciate you taking the time to complete this interview. Today I am going to ask you about your pregnancy and birthing experiences and how these experiences have impacted you. I will start by going over a copy of the information sheet, which I have already sent to you through email [select "share screen" to show copy of information sheet to participant]. I am going to go over this form with you; please follow along with me. [Go through information sheet]. Do you have any additional questions for me about the purpose of this interview or about anything we just went over? [Answer any questions].

If you have no further questions, I am going to begin the interview. Interviews usually last no longer than 90 minutes. During this time, I am going to ask you several questions about your experiences with pregnancy, maternity care, and giving birth. There are no right or wrong responses and your responses will be kept confidential; please be honest and share your true thoughts. As mentioned in the information sheet, I would like to record this conversation today. Is this still okay with you? Please limit your use of names during the interview so that they will not be on the recording. This is to keep everyone as unidentified as possible. Remember that, although Zoom records both your audio and visual content, we will only keep the audio recording. We will not keep video recordings of this interview. Do you have any other questions before we begin? [Answer questions]. If you don't have any other questions, I will start recording now. [Begin the Zoom recording]. We are now recording.

Questions

I would like to start by asking you a few questions that are specific about being a Black woman who has given birth.

1) What does it mean to you to be a Black woman?
2) Now think back to the period when you were pregnant. How did pregnancy influence how you viewed yourself?
    a. How is this different from how you previously viewed yourself?
3) What does motherhood mean to you?
    a. Probe: What does it mean to you to be a Black woman who has given birth?

b. Probe: What influenced this understanding?
    i. Which individuals or groups influenced this understanding?
    ii. How did they influence your understanding?

In these next questions, I am going ask about your maternity healthcare experiences.

4) What was it like receiving healthcare during your pregnancy?
    a. Describe your experience delivering your baby.

5) When I say racism, I am referring to events, situations, or experiences that you perceived as negative, unjust, or undignified and that solely occurred due to your race. When I say discrimination, I am referring to your perception of being treated unfairly or with prejudice solely because of characteristics such as your race or gender. With these definitions in mind, can you describe the time(s) throughout your pregnancy and delivery where you felt you were treated unfairly because you are Black?
    a. Probe: What was it about those experiences that made you feel like you were being treated unfairly?
    b. Probe: How did those experiences make you feel *at that time*?

6) How did your physical health change after the racist and discriminatory healthcare experiences?
    a. How did your mental and emotional health change after having these experiences?

7) How did you do to deal with racist and discriminatory healthcare experiences?
    a. Who did you talk to about these experiences?
        i. Why did you talk to these specific people?

Next, I want to talk about how you view yourself and your use of healthcare services.

8) We talked about what it *means* to be a Black woman who has given birth, but how do you *currently feel* about being a Black woman who has given birth?
    a. How did your maternity experiences affect the way you think about yourself?
    b. How did your maternity experience affect your thoughts on what you are capable of doing?

9) How do you think healthcare providers view pregnant Black women and Black women who have given birth?

10) How have your overall experiences with pregnancy and birth affected the way you view yourself?
    a. Probe: do you feel as though your experience affected the way you view yourself?

11) How have your experiences with racism and discrimination in maternity healthcare impacted your general healthcare use?

12) How can healthcare providers better support Black women throughout their pregnancy and birthing experiences?

b. Probe: What do you wish was different about your maternity healthcare experiences?

c. Probe: What are things that you liked about your maternity healthcare experiences?

Lastly, I would like to ask you a few specific questions about your pregnancy and birth experiences. These questions have answer choices that I will read aloud. Please listen to the answer choices and select which choice best describes your experience.

13) How did you deliver your baby?

Vaginally ☐

Cesarean delivery (C-section) ☐

14) Did you ever see a healthcare provider for prenatal care during your pregnancy?

Yes ☐ [If yes, see 16a]

No ☐ [If no, see 17]

a. What kind of provider did you see for your prenatal care; for example, a doctor, nurse, midwife, etc.?

Click here to enter text.

15) Did you use a doula at all during your pregnancy or delivery?

Yes ☐

No ☐

16) What kind of provider or providers gave you healthcare while delivering your baby?

Click here to enter text.

17) During the month before you got pregnant with your new baby, what kind of health insurance did you have? (Check ALL that apply).

A plan purchased through an employer or union (including plans purchased through another person's employer) ☐

A plan that you or another family member buys on your own ☐

Medicare ☐

Medicaid or other state program such as SCHIP/CHIP ☐

TRICARE or other military health care ☐

Alaska Native, Indian Health Services, or Tribal Health Services ☐

Some other source. ☐

I did not have any health insurance during the month before I got pregnant ☐

18) What kind of health insurance do you have now? (Check ALL that apply).

A plan purchased through an employer or union (including plans purchased through another person's employer) ☐

A plan that you or another family member buys on your own ☐

Medicare ☐

Medicaid or other state program such as SCHIP/CHIP ☐

TRICARE or other military health care ☐

Alaska Native, Indian Health Services, or Tribal Health Services ☐

Some other source. ☐

I do not have any health insurance *now* ☐

19) Since your new baby was born, have you had a postpartum checkup for yourself? (A postpartum checkup is the regular checkup a woman has about 4-6 weeks after she gives birth).

Yes ☐

No ☐

20) Has your baby had a well-baby checkup? (A well-baby checkup is a regular health visit for your baby usually at 1, 2, 4, and 6 months of age).

Yes ☐

No ☐

21) Since your new baby was born, has a doctor, nurse, or other health care worker told you that you had depression?

Yes ☐

No ☐

22) How would you describe the time during your most recent pregnancy? (Check ONE answer)

One of the happiest times of my life ☐

A happy time with few problems ☐

A moderately hard time ☐

A very hard time ☐

One of the worst times of my life ☐

Closing

This brings us to the end of our conversation today. Do you have any final thoughts or questions you would like to share? [Answer questions].

At this time I am going to stop the recording. [Stop the Zoom recording].

Thank you again for your time. Your thoughts are valuable and will help to build an understanding of what Black women experience when pregnant and giving birth.

You are welcome to reach me by email and/or phone if you have any other questions or concerns. My contact information is on the sheet you've been provided and in the emails I've exchanged with you so far. As a reminder, I will email you a $20 e-gift card/gift code as a thank-you for your time and participation today. Please confirm your email address so that I can send your compensation. [Document email address for compensation].

If you have no further questions, I will end the meeting now. Have a great day! [Select 'End Meeting for All Participants' button on Zoom call].

Appendix E

Pilot Testing Survey Instrument

SCREENING ITEMS

Q1. What is your age? _____

Skip To: End of Survey If Q1 Is Less Than 18 Or Greater Than 35.

Q2. Which one or more of the following would you say is your race? (Select ALL that apply)

1 -- White

2 -- Black or African American
3 -- American Indian or Alaska Native
4 -- Asian
5 -- Native Hawaiian or Pacific Islander
6 -- Other, please specify: _____

Skip To: End of Survey If Q2 2 is Not Selected

Q3. What is your gender?

1 -- Male

2 -- Female

3 -- Non-binary / third gender

4 -- Other, please specify: _____

Skip To: End of Survey If Q3 Does Not =2

Q4. Have you ever given birth?

1 -- Yes

0 -- No

Skip To: End of Survey If Q4 = 0

Q5. How many months ago did your last pregnancy end?

1 -- 1 to 6 months ago

2 -- 7 to 11 months ago

3 -- 1 to 2 years ago

4 -- Greater than 2 years ago

Skip To: End of Survey If Q5 = 4

Q6. Did your last pregnancy end in a stillbirth, miscarriage, or an abortion?

1 -- Yes

0 -- No

Skip To: End of Survey If Q6 = 1

Q7. In your last pregnancy, did you give birth to a child that was born alive but later died?

1 -- Yes

0 -- No

Skip To: End of Survey If Q7 = 1

Q8. During your last pregnancy, in which country did you primarily live?

United States (1) … Zimbabwe (196)

Skip To: End of Survey If Q8 Does Not = 1

Q9. In which country did you most recently give birth?

United States (1) … Zimbabwe (196)

Skip To: End of Survey If Q9 Does Not = 1

COGNITIVE SURVEY INFORMATION SHEET

VCU IRB Protocol Number: HM20025015

Research Participant Information Sheet: This research project titled, "Putting Moms First: Quantifying the psychosocial determinants of maternal health inequities" is being conducted by Hannah M. Ming, Doctoral Degree Candidate in the School of Medicine at Virginia Commonwealth University. It is a study to understand Black women's experiences with racism and discrimination in maternity care.

Please read this form carefully and ask any questions you may have before taking part in this study.

Why is this study being done?

You are being asked to take part in a research study about Black women's maternity care experiences because you clicked on our recruitment ads posted on social media platforms. We are interested in your thoughts about Black women's maternity care experiences. To understand these experiences, our survey questions include a wide range of topics, including your experiences with racism and discrimination in maternity care and everyday life, your mental and emotional health and well-being throughout and after your pregnancy, and your interactions with and use of maternal health resources. You will also be asked to provide your feedback on the survey questions by responding to several open-ended questions throughout the survey. Your feedback will help make the survey better for future participants.

What will happen if I participate?

Your participation is voluntary. Participation involves about 30 minutes of an online survey. You may choose to not answer any or all questions. The information collected will be maintained securely and confidentially and will be used for research only. A total of 15 individuals will participate in this survey.

What are the risks and benefits of participating?

We do not anticipate any risks greater than those encountered in day-to-day life from participating in this research study. The data collected will be maintained securely and confidentially. Please note that the survey is being conducted with the help of Qualtrics, and this software is not affiliated with Virginia Commonwealth University and has its own privacy and security policies that you can find on its website. There are no direct benefits to you.

Will I be paid to participate in the study?

At the end of the survey, you will receive an e-gift card worth $10. If you joined this study through social media ads or an email invitation and you provide your email address

at the end of the survey, you will be sent an e-gift card. Please note responders suspected of fraud may not be paid.

How will information about me be protected?

All records will be kept private and stored securely. All electronic files will be password-protected so that only our research team can see your responses. The data captured does not include any personally identifiable information about you and your answers to all questions will remain confidential. Published results will be in aggregate and will not identify individual participants or their responses. This study is not conducted by any social media companies and no individual responses will be shared back to social media platforms. Identifying information will not be used in any presentation or paper written about this project; your role will be referred to in a generic manner, such as "participants." All digital data will be destroyed when their use is no longer needed but not before a minimum of five years after data collection

Whom should I contact if I have questions about the study?

If you have any questions, concerns, or complaints about this study now or in the future, please contact:

Hannah Ming (Primary)

Email: minghm@vcu.edu

Sunny Jung Kim, PhD (Dissertation Committee Chair)

Email: sun.jung.kim@vcuhealth.org

If you have general questions about your rights as a participant in this or any other research, or if you wish to discuss problems, concerns or questions, to obtain information, or to offer input about research, you may contact:

Virginia Commonwealth University Office of Research
800 East Leigh Street, Suite 3000, Box 980568, Richmond, VA 23298
(804) 827-2157; https://research.vcu.edu/human-research/

You may print a copy of this form to keep for your records by clicking this link: Putting Moms First Survey Information Sheet.

Clicking "*Next*" will begin the survey and indicates your consent to take part in the study.

SELF-CONCEPT CATEGORIZATION ITEMS

Q14. We want to know how you would group the following statements. When we say **identity**, we mean a sense of attachment, belonging, and closeness to a group or culture. When we say **ability beliefs** we mean the confidence to perform tasks, fulfill responsibilities, and achieve goals. When we say **identity beliefs** we mean a views or perceptions about a group or cultural and membership to a group or culture. Based on these definitions, how would you label each of these statements? While some statements may apply to more than one category, try to select the option that you think ***most closely*** applies to each statement.

	Identity (1)	Ability Beliefs (3)	Identity Beliefs (2)
Black mothers are responsible for teaching their children about racism (1)	○	○	○
Black mothers are responsible for protecting their children from racism and discrimination (2)	○	○	○
Motherhood is harder for Black women than for other racial groups (3)	○	○	○
Motherhood is natural for Black women (4)	○	○	○
Black womanhood is the same as motherhood (5)	○	○	○
Black mothers have no choice but to carry on (6)	○	○	○
Black mothers are expected to persevere (7)	○	○	○
Black mothers are resilient (8)	○	○	○
Black motherhood is a community (9)	○	○	○
Overall, being a Black mother has very little to do with how I feel about myself (10)	○	○	○
In general, being a Black mother is an important part of my self-image (11)	○	○	○
My destiny is tied to the destiny of other Black mothers (12)	○	○	○
Being a Black mother is unimportant to my sense of what kind of person I am (13)	○	○	○
I am confident in my ability to get a maternity care provider to pay attention to what you have to say (14)	○	○	○

I am confident in my ability to know what questions to ask my maternity care provider (15)	○	○	○
I am confident in my ability to get a maternity care provider to answer all of my questions (16)	○	○	○
I am confident in my ability to ask a maternity care provider questions about my chief health concern (17)	○	○	○
I am confident in my ability to make the most of my visit with a maternity care provider (18)	○	○	○
Black mothers are strong (19)	○	○	○
Black mothers have an obligation to share resources with other Black women (20)	○	○	○
Black mothers have to be independent (21)	○	○	○
Black mothers can do anything they set their minds to (22)	○	○	○
Black mothers are the strongest people in the world (23)	○	○	○
Black mothers are more resilient than other people (24)	○	○	○
Black mothers must advocate for themselves in healthcare (25)	○	○	○
Black mothers have to maintain control in every situation (26)	○	○	○
I have a strong sense of belonging to Black motherhood (27)	○	○	○
I have a strong attachment to other Black mothers (28)	○	○	○
Being a Black mother is an important reflection of who I am (29)	○	○	○
Being a Black mother is not a major factor in my social relationships (30)	○	○	○
I am confident in my ability to get a maternity care provider to take my chief health concern seriously (31)	○	○	○

I am confident in my ability to understand what a maternity care provider tells me (32)	○	○	○
I am confident in my ability to get a maternity care provider to do something about my chief health concern (33)	○	○	○
I am confident in my ability to explain my chief health concern to a maternity care provider (34)	○	○	○
I am confident in my ability to ask a maternity care provider for more information if I don't understand what he or she said (35)	○	○	○

OPEN ENDED RESPONSE ITEMS

Display This Question: If Q14 Statement 1= 1

Q15. For the statement, "**Black mothers are responsible for teaching their children about racism**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 1= 3

Q16. For the statement "**Black mothers are responsible for teaching their children about racism**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 2 = 1

Q17. For the statement "**Black mothers are responsible for protecting their children from racism and discrimination**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 2 = 3

Q18. For the statement "**Black mothers are responsible for protecting their children from racism and discrimination**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 3 = 1

Q19. For the statement "**Motherhood is harder for Black women than for other racial groups**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 3= 3

Q20. For the statement "**Motherhood is harder for Black women than for other racial groups**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 4 = 1

Q21. For the statement "**Motherhood is natural for Black women**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 4= 3

Q22. For the statement "**Motherhood is natural for Black women**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 5 = 1

Q23. For the statement "**Black womanhood is the same as motherhood**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 5 = 3

Q24. For the statement "**Black womanhood is the same as motherhood**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 6 = 1

Q25. For the statement "**Black mothers have no choice but to carry on**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 6 = 3

Q26. For the statement "**Black mothers have no choice but to carry on**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 7 = 1

Q27. For the statement "**Black mothers are expected to persevere**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 7 = 3

Q28. For the statement "**Black mothers are expected to persevere**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 8 = 1

Q29. For the statement "**Black mothers are resilient**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 8 = 3

Q30. For the statement "**Black mothers are resilient**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 9 = 1

Q31. For the statement "**Black motherhood is a community**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 9 = 3

Q32. For the statement "**Black motherhood is a community**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 10 = 2

Q33. For the statement "**Overall, being a Black mother has very little to do with how I feel about myself**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 10 = 3

Q34. For the statement "**Overall, being a Black mother has very little to do with how I feel about myself**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 11 = 2

Q35. For the statement "**In general, being a Black mother is an important part of my self-image**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 11 = 3

Q36. For the statement "**In general, being a Black mother is an important part of my self-image**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 12 = 2

Q37. For the statement "**My destiny is tied to the destiny of other Black mothers**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 12 = 3

Q38. For the statement "**My destiny is tied to the destiny of other Black mothers**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 13 = 2

Q39. For the statement "**Being a Black mother is unimportant to my sense of what kind of person I am**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 13 = 3

Q40. For the statement "**Being a Black mother is unimportant to my sense of what kind of person I am**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 14 = 1

Q41. For the statement "**I am confident in my ability to get a maternity care provider to pay attention to what you have to say**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 14 = 2

Q42. For the statement "**I am confident in my ability to get a maternity care provider to**

pay attention to what you have to say," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 15 = 1

Q43. For the statement "**I am confident in my ability to know what questions to ask my maternity care provider**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 15 = 2

Q44. For the statement "**I am confident in my ability to know what questions to ask my maternity care provider**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 16 = 1

Q45. For the statement "**I am confident in my ability to get a maternity care provider to answer all of my questions**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 16 = 2

Q46. For the statement "**I am confident in my ability to get a maternity care provider to answer all of my questions**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 17 = 1

Q47. For the statement "**I am confident in my ability to ask a maternity care provider questions about my chief health concern**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 17 = 2

Q48. For the statement "**I am confident in my ability to ask a maternity care provider questions about my chief health concern**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 18= 1

Q49. For the statement "**I am confident in my ability to make the most of my visit with a maternity care provider**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 18 = 2

Q50. For the statement "**I am confident in my ability to make the most of my visit with a maternity care provider**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 19 = 1

Q51. For the statement "**Black mothers are strong**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 19 = 3

Q52. For the statement "**Black mothers are strong**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q21 Statement 20 = 1

Q53. For the statement "**Black mothers have an obligation to share resources with other Black women**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 20 = 3

Q54. For the statement "**Black mothers have an obligation to share resources with other Black women**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 21 = 1

Q55. For the statement "**Black mothers have to be independent**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 21 = 3

Q56. For the statement "**Black mothers have to be independent**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 22 = 1

Q57. For the statement "**Black mothers can do anything they set their minds to**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 22 = 3

Q58. For the statement "**Black mothers can do anything they set their minds to**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 23 = 1

Q59. For the statement "**Black mothers are the strongest people in the world**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 23 = 3

Q60. For the statement "**Black mothers are the strongest people in the world**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 24 = 1

Q61. For the statement "**Black mothers are more resilient than other people**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 24 = 3

Q62. For the statement "**Black mothers are more resilient than other people**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 25 = 1

Q63. For the statement "**Black mothers must advocate for themselves in healthcare**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 25 = 3

Q64. For the statement "**Black mothers must advocate for themselves in healthcare**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 26 = 1

Q65. For the statement "**Black mothers have to maintain control in every situation**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 26 = 3

Q66. For the statement "**Black mothers have to maintain control in every situation**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 27 = 2

Q67. For the statement "**I have a strong sense of belonging to Black motherhood**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 27 = 3

Q68. For the statement "**I have a strong sense of belonging to Black motherhood**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 28 = 2

Q69. For the statement "**I have a strong attachment to other Black mothers**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 28 = 3

Q70. For the statement "**I have a strong attachment to other Black mothers**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 29 = 2

Q71. For the statement "**Being a Black mother is an important reflection of who I am**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 29 = 3

Q72. For the statement "**Being a Black mother is an important reflection of who I am**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 30 = 2

Q73. For the statement "**Being a Black mother is not a major factor in my social relationships**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 30 = 3

Q74. For the statement "**Being a Black mother is not a major factor in my social relationships**," you selected **ability beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 31 = 1

Q75. For the statement "**I am confident in my ability to get a maternity care provider to take my chief health concern seriously**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 31 = 2

Q76. For the statement "**I am confident in my ability to get a maternity care provider to take my chief health concern seriously**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 32 = 1

Q77. For the statement "**I am confident in my ability to understand what a maternity care provider tells me**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 32 = 2

Q78. For the statement "**I am confident in my ability to understand what a maternity care provider tells me**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 33 = 1

Q79. For the statement "**I am confident in my ability to get a maternity care provider to do something about my chief health concern**," you selected **identity**. Please explain why

you chose this classification.

_____

Display This Question: If Q14 Statement 33 = 2

Q80. For the statement "**I am confident in my ability to get a maternity care provider to do something about my chief health concern**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 34 = 1

Q81. For the statement "**I am confident in my ability to explain my chief health concern to a maternity care provider**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 34 = 2

Q82. For the statement "**I am confident in my ability to explain my chief health concern to a maternity care provider**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 35 = 1

Q83. For the statement "**I am confident in my ability to ask a maternity care provider for more information if I don't understand what he or she said**," you selected **identity**. Please explain why you chose this classification.

_____

Display This Question: If Q14 Statement 35 = 2

Q84. For the statement "**I am confident in my ability to ask a maternity care provider for more information if I don't understand what he or she said**," you selected **identity beliefs**. Please explain why you chose this classification.

_____

Q85. Please use this space to share any other thoughts you have about the statements you reviewed in this survey.

_____

Appendix F

Black Maternal Self-Concept Inventory (BMSCI) Items

No.	Item	Source
1	Overall, being a Black mother has very little to do with how I feel about myself. (R)	Adapted from the Centrality subscale of the Multidimensional Inventory of Black Identity (Sellers et al., 1997)
2	In general, being a Black mother is an important part of my self-image.	
3	My destiny is tied to the destiny of other Black mothers.	
4	Being a Black mother is unimportant to my sense of what kind of person I am. (R)	
5	I have a strong sense of belonging to Black mothers.	
6	I have a strong attachment to other Black mothers.	
7	Being a Black mother is an important reflection of who I am.	
8	Being a Black mother is not a major factor in my social relationships. (R)	
9	I have spent time trying to find out more about Black motherhood, such as its history, traditions, and customs.	Adapted from the Exploration subscale of the Multigroup Ethnic Identity Measure (Roberts et al., 1999)
10	I am active in organizations or social groups that include mostly Black mothers.	
11	To learn more about my cultural background, I have often talked to other people about Black motherhood.	
12	I participate in cultural practices of Black motherhood, such as special food, music, or customs.	
13	Privately, I sometimes have negative feelings about being a Black mother. (R)	Adapted from the Self-Hatred subscale of the Cross Racial Identity Scale (Worrell et al, 2004)
14	I go through periods when I am down on myself because I am a Black mother. (R)	
15	When I look in the mirror at my image as a Black mother, sometimes I do not feel good about what I see. (R)	
16	I feel that Black mothers have made major accomplishments and advancements.	Adapted from the Private Regard subscale of the Multidimensional Inventory of Black Identity (Sellers et al., 1997)
17	I am happy that I am a Black mother.	
18	I feel good about Black mothers.	
19	I often regret that I am a Black mother. (R)	
20	I am proud to be a Black mother.	

21	I feel that the community of Black mothers has made valuable contributions to this society.	
22	Overall, Black mothers are considered good by others.	Adapted from the Public Regard subscale of the Multidimensional Inventory of Black Identity (Sellers et al., 1997)
23	In general, others respect Black mothers.	
24	Most people consider Black mothers, on average, to be more ineffective than other racial and gender groups. (R)	
25	Black mothers are not respected by the broader society. (R)	
26	In general, other groups view Black mothers in a positive manner.	
27	Society views Black mothers as an asset.	
28	Healthcare providers do not care about Black mothers. (R)	Developed based on thematic analysis of interviews with Black women who recently gave birth (see Chapter 3: Paper 2)
29	Black mothers are expected to share resources with other Black women. (R)	
30	Black mothers are expected to advocate for themselves in healthcare. (R)	
31	Black mothers are expected to maintain control of their thoughts and emotions in every situation. (R)	
32	Black mothers are responsible for teaching their children about racism. (R)	
33	Black womanhood is the same as motherhood. (R)	
34	Black mothers have no choice but to carry on. (R)	
35	Black mothers have to be strong to survive. (R)	Adapted from the Mammy and Superwoman subscales of the Stereotypic Roles of Black Women Scale (Thomas et al. 2004)
36	Black mothers are often expected to take care of family members. (R)	
37	If Black mothers fall apart, they will be failures. (R)	
38	Black mothers often put aside their own needs to help others. (R)	
39	Black mothers often feel ignored by others. (R)	
40	Black mothers find it difficult to ask others for help. (R)	
41	Black mothers feel guilty when they put their own needs before others. (R)	
42	Black mothers do not want others to know if they experience a problem. (R)	
43	People often expect Black mothers to take care of them. (R)	
44	Black mothers tell others that they are fine when they are depressed or down. (R)	

45	It is difficult for Black mothers to share their problems with others. (R)	
46	Black mothers should not expect nurturing from others. (R)	
47	Black mothers are overworked, overwhelmed, and/or underappreciated. (R)	
48	Black mothers are always helping someone else. (R)	
49	I am confident in my ability to know what questions to ask a maternity care provider.	Adapted from the Perceived Efficacy in Patient-Physician Interactions Questionnaire (Maly et al., 1998)
50	I am confident in my ability to get a maternity care provider to answer all of my questions.	
51	I am confident in my ability to make the most of my visit with a maternity care provider.	
52	I am confident in my ability to get a maternity care provider to take my chief health concern seriously.	
53	I am confident in my ability to get a maternity care provider to do something about my chief health concern.	

Note. List includes all items (n = 53) tested in the initial measurement model for the BMSCI. All items have responses on a five-point Likert scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Higher scores indicate greater or more positive perceptions. (R) indicated items are reverse coded so that *Strongly disagree* = 5 and *Strongly agree* = 1.

<u>33-Items BMSCI Scales</u>

Centrality (4 items): 2, 3, 5, 7
Exploration (4 items): 9, 10, 11, 12
Private Regard (5 items): 15, 17, 18, 19, 20
Public Regard (4 items): 22, 23, 24, 25
Role Beliefs (11 items): 35, 36, 38, 39, 40, 41, 43, 44, 45, 47, 48
Advocacy Self-Efficacy (5 items): 49, 50, 51, 52, 53

Appendix G

Full Online Survey Items

SCREENING ITEMS

Q1. What is your age? _____

Skip To: End of Survey If Q1 Is Less Than 18 Or Greater Than 40

Q2. Which one or more of the following would you say is your race? (Select ALL that apply)

1 -- White
2 -- Black or African American
3 -- American Indian or Alaska Native
4 -- Asian
5 -- Native Hawaiian or Pacific Islander
6 -- Other, please specify:_____

Skip To: End of Survey If Q2 2 Is Not Selected

Q3. What is your gender?

1 -- Male
2 -- Female
3 -- Non-binary / third gender
4 -- Other, please specify:_____

Skip To: End of Survey If Q3 Does Not = 2

Q4. Have you ever given birth?

1 -- Yes
0 -- No

Skip To: End of Survey If Q4 = 0

Q5. How many months ago did your last pregnancy end?

1 -- 1 to 6 months ago
2 -- 7 to 11 months ago
3 -- 1 to 2 years ago
4 -- Greater than 2 years ago

Skip To: End of Survey If Q5 = 4

Q6. Did your last pregnancy end in a stillbirth, miscarriage, or an abortion?

1 -- Yes
0 -- No

Skip To: End of Survey If Q6 = 1

Q7. In your last pregnancy, did you give birth to a child that was born alive but later died?

1 -- Yes
0 -- No

Skip To: End of Survey If Q7 = 1

Q8. During your last pregnancy, in which country did you primarily live?

United States (1) … Zimbabwe (196)

Skip To: End of Survey If Q8 Does Not = 1

Q9. In which country did you most recently give birth?

United States (1) … Zimbabwe (196)

Skip To: End of Survey If Q9 Does Not = 1

Q10. To your knowledge, are you **currently** pregnant?

1 -- Yes
0 -- No
0 -- Don't know

Skip To: End of Survey If Q10 = 1

FULL ONLINE SURVEY INFORMATION SHEET

VCU IRB Protocol Number: HM20025015

Research Participant Information Sheet: This research project titled, "Putting Moms First: Quantifying the psychosocial determinants of maternal health inequities" is being conducted by Hannah M. Ming, Doctoral Degree Candidate in the School of Medicine at Virginia Commonwealth University. It is a study to understand Black women's experiences in maternity care.

Please read this form carefully and ask any questions you may have before taking part in this study.

Why is this study being done?

You are being asked to take part in a research study about Black women's maternity care experiences because you clicked on our recruitment ads posted on social media platforms. We are interested in your thoughts about Black women's maternity care experiences. To understand these experiences, our survey questions include a wide range of topics, including your experiences with racism and discrimination in maternity care,

your mental and emotional health throughout and after your pregnancy, and your interactions with and use of maternal health resources.

What will happen if I participate?

Your participation is voluntary. Participation involves about 45 minutes of an online survey. You may choose to not answer any or all questions. The information collected will be maintained securely and confidentially and will be used for research only. A total of approximately 1,000 individuals will complete this survey.

What are the risks and benefits of participating?

We do not anticipate any risks greater than those encountered in day-to-day life from participating in this research study. The data collected will be maintained securely and confidentially. Please note that the survey is being conducted with the help of Qualtrics, and this software is not affiliated with Virginia Commonwealth University and has its own privacy and security policies that you can find on its website. There are no direct benefits to you.

Will I be paid to participate in the study?

At the end of the survey, you may enter a pool to win an e-gift card worth $10. If you provide your email address at the end of the survey, you will be entered into a prize drawing to win an e-gift card. Please note responders suspected of fraud may not be paid.

How will information about me be protected?

All records will be kept private and stored securely. All electronic files will be password-protected so that only our research team can see your responses. The data captured does not include any personally identifiable information about you and your answers to all questions will remain confidential. Published results will be in aggregate and will not identify individual participants or their responses. This study is not conducted by any social media companies and no individual responses will be shared back to social media platforms. Identifying information will not be used in any presentation or paper written about this project; your role will be referred to in a generic manner, such as "participants." All digital data will be destroyed when their use is no longer needed but not before a minimum of five years after data collection.

Whom should I contact if I have questions about the study?

If you have any questions, concerns, or complaints about this study now or in the future, please contact:

Hannah Ming (Primary)

Email: minghm@vcu.edu

Sunny Jung Kim, PhD (Dissertation Committee Chair)

Email: sun.jung.kim@vcuhealth.org

If you have general questions about your rights as a participant in this or any other research, or if you wish to discuss problems, concerns or questions, to obtain information, or to offer input about research, you may contact:

Virginia Commonwealth University Office of Research

800 East Leigh Street, Suite 3000, Box 980568, Richmond, VA 23298

(804) 827-2157; https://research.vcu.edu/human-research/

You may print a copy of this form to keep for your records by clicking this link: Putting Moms First Survey Information Sheet.

Clicking "Next" will begin the survey and indicates your consent to take part in the study.

SELF-CONCEPT ITEMS

Q11. Please indicate how strongly you agree or disagree with each statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
Overall, being a Black mother has very little to do with how I feel about myself. (1)	○	○	○	○	○
In general, being a Black mother is an important part of my self-image. (2)	○	○	○	○	○
My destiny is tied to the destiny of other Black mothers. (3)	○	○	○	○	○
Being a Black mother is unimportant to my sense of what kind of person I am. (4)	○	○	○	○	○
I have a strong sense of belonging to Black motherhood. (5)	○	○	○	○	○
I have a strong attachment to other Black mothers. (6)	○	○	○	○	○

Being a Black mother is an important reflection of who I am. (7)	○	○	○	○	○
Being a Black mother is not a major factor in my social relationships. (8)	○	○	○	○	○

Q12. Please indicate how strongly you agree or disagree with each statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I have spent time trying to find out more about Black motherhood, such as its history, traditions, and customs. (1)	○	○	○	○	○
I am active in organizations or social groups that include mostly Black mothers. (2)	○	○	○	○	○
To learn more about my cultural background, I have often talked to other people about Black motherhood. (3)	○	○	○	○	○
I participate in cultural practices of Black motherhood, such as special food, music, or customs. (4)	○	○	○	○	○

Q13. Below is a list of statements dealing with your thoughts about Black mothers. Please indicate how strongly you agree or disagree with each statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I feel that Black mothers have made major accomplishments and advancements. (1)	○	○	○	○	○
I am happy that I am a Black mother. (2)	○	○	○	○	○

I feel good about Black mothers. (3)	○	○	○	○	○
I often regret that I am a Black mother. (4)	○	○	○	○	○
I am proud to be a Black mother. (5)	○	○	○	○	○
I feel that the community of Black mothers has made valuable contributions to this society. (6)	○	○	○	○	○
Black mothers are expected to share resources with other Black women. (7)	○	○	○	○	○
Black mothers are expected to advocate for themselves in healthcare. (8)	○	○	○	○	○
Black mothers are expected to maintain control of their thoughts and emotions in every situation. (9)	○	○	○	○	○
Black mothers are responsible for teaching their children about racism. (10)	○	○	○	○	○
Black womanhood is the same as motherhood. (11)	○	○	○	○	○
Black mothers have no choice but to carry on. (12)	○	○	○	○	○
Privately, I sometimes have negative feelings about being a Black mother. (13)	○	○	○	○	○
I go through periods when I am down on myself because I am a Black mother. (14)	○	○	○	○	○
When I look in the mirror at my image as a Black mother, sometimes I do not feel good about what I see. (16)	○	○	○	○	○

Q14. Please indicate how strongly you agree or disagree with each statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Overall, Black mothers are considered good by others. (1)	○	○	○	○	○
In general, others respect Black mothers. (2)	○	○	○	○	○
Most people consider Black mothers, on average, to be more ineffective than other racial and gender groups. (3)	○	○	○	○	○
Black mothers are not respected by the broader society. (4)	○	○	○	○	○
In general, other groups view Black mothers in a positive manner. (5)	○	○	○	○	○
Society views Black mothers as an asset. (6)	○	○	○	○	○
Healthcare providers do not care about Black mothers. (7)	○	○	○	○	○

Q15. Please indicate how strongly you agree or disagree with each of the following statements:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Black mothers have to be strong to survive. (1)	○	○	○	○	○
Black mothers are often expected to take care of family members. (2)	○	○	○	○	○
If Black mothers fall apart, they will be failures. (3)	○	○	○	○	○
Black mothers often put aside their own needs to help others. (4)	○	○	○	○	○

Black mothers often feel ignored by others. (5)	○	○	○	○	○
Black mothers find it difficult to ask others for help. (6)	○	○	○	○	○
Black mothers feel guilty when they put their own needs before others. (7)	○	○	○	○	○
Black mothers do not want others to know if they experience a problem. (8)	○	○	○	○	○
People often expect Black mothers to take care of them. (9)	○	○	○	○	○
Black mothers tell others that they are fine when they are depressed or down. (10)	○	○	○	○	○
It is difficult for Black mothers to share their problems with others. (11)	○	○	○	○	○
Black mothers should not expect nurturing from others. (12)	○	○	○	○	○
Black mothers are overworked, overwhelmed, and/or underappreciated. (13)	○	○	○	○	○
Black mothers are always helping someone else. (14)	○	○	○	○	○

Q16. Please respond to each item by selecting the response that most closely matches the way you feel. **I am confident in my ability...**

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
... to know what questions to ask a maternity care provider. (1)	○	○	○	○	○
... to get a maternity care provider to answer all of my questions. (2)	○	○	○	○	○

... to make the most of my visit with a maternity care provider. (3)	○	○	○	○	○
... to get a maternity care provider to take my chief health concern seriously. (4)	○	○	○	○	○
... to get a maternity care provider to do something about my chief health concern. (5)	○	○	○	○	○

Q17. Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
On the whole, I am satisfied with myself. (1)	○	○	○	○	○
At times I think I am no good at all. (2)	○	○	○	○	○
I feel that I have a number of good qualities. (3)	○	○	○	○	○
I am able to do things as well as most other people. (4)	○	○	○	○	○
I feel I do not have much to be proud of. (5)	○	○	○	○	○
I certainly feel useless at times. (6)	○	○	○	○	○
I feel that I'm a person of worth, at least on an equal plane with others. (7)	○	○	○	○	○
I wish I could have more respect for myself. (8)	○	○	○	○	○
All in all, I am inclined to feel that I am a failure. (9)	○	○	○	○	○

I take a positive attitude toward myself. (10)	○	○	○	○	○

Q18. Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I tend to bounce back quickly after hard times. (1)	○	○	○	○	○
I have a hard time making it through stressful events. (2)	○	○	○	○	○
It does not take me long to recover from a stressful event. (3)	○	○	○	○	○
It is hard for me to snap back when something bad happens. (4)	○	○	○	○	○
I usually come through difficult times with little trouble. (5)	○	○	○	○	○
I tend to take a long time to get over set-backs in my life. (6)	○	○	○	○	○

PSYCHOSOCIAL AND PHYSICAL HEALTH

Q19. Since your **most recent** baby was born, has a doctor, nurse, or health care worker told you that you had depression?

1 -- Yes
0 -- No

Q20. How would you describe the time during your **most recent** pregnancy?

5 -- One of the happiest times of my life
4 -- A happy time with few problems
3 -- A moderately hard time
2 -- A very hard time
1 -- One of the worst times of my life

Q21. Since your **most recent** baby was born, has a doctor, nurse, or health care worker told

you that you had anxiety?

1 -- Yes
0 – No

Q22. Please indicate your agreement or disagreement with each of the following statements using the scale below:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
There are people who appreciate me as a person. (1)	○	○	○	○	○
I feel a sense of belonging in my community. (2)	○	○	○	○	○
In most activities I do, I feel energized. (3)	○	○	○	○	○
I am achieving most of my goals. (4)	○	○	○	○	○
I can succeed if I put my mind to it. (5)	○	○	○	○	○
What I do in life is valuable and worthwhile. (6)	○	○	○	○	○
My life has a clear sense of purpose. (7)	○	○	○	○	○
I am optimistic about my future. (8)	○	○	○	○	○
My life is going well. (9)	○	○	○	○	○
I feel good most of the time. (10)	○	○	○	○	○

Q23. As you have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today. **In the past 7 days**...

	Yes, most of the time (1)	Yes, quite often (2)	Not very often (3)	No, not at all (4)

... I have been so unhappy that I have been crying. (1)	○	○	○	○
... I have felt scared or panicky for no good reason. (2)	○	○	○	○
... I have felt sad or miserable. (3)	○	○	○	○
... I have been so unhappy that I have difficulty sleeping. (4)	○	○	○	○
… I have looked forward with enjoyment to things. (5)	○	○	○	○
… I have been anxious or worried for no good reason. (6)	○	○	○	○

Q24. In the **past 7 days**, I have been able to laugh and see the funny side of things.

1 -- As much as I always could

2 -- Not quite so much now
3 -- Definitely not so much now
4 -- Not at all

Q25. In the **past 7 days**, things have been getting on top of me.

1 -- Yes, most of the time I haven't been able to cope at all
2 -- Yes, sometimes I haven't been coping as well as usual
3 -- No, most of the time I have coped quite well
4 -- No, I have been coping as well as ever

Q26. During your **most recent** pregnancy and childbirth, did you have any of the following health conditions? For each one, check 'No' if you did not have the condition or 'Yes' if you did.

	Yes (1)	No (0)
Gestational diabetes (diabetes that started during the last pregnancy) (1)	○	○
High blood pressure (that started during the last pregnancy) (2)	○	○
Pre-eclampsia or eclampsia (3)	○	○

Asthma (4)	○	○
Anemia (poor blood, low iron) (5)	○	○
Heart problems (not include high blood pressure) (6)	○	○
Depression (7)	○	○
Epilepsy (seizures) (8)	○	○
Kidney problems (9)	○	○
Emergency hysterectomy (10)	○	○
Sepsis (11)	○	○
Thyroid problems (12)	○	○

RACISM AND DISCRIMINATION ITEMS

Q27. Thinking about the time or times you experienced discrimination or racism while receiving healthcare in your most recent pregnancy and delivery, please describe the extent to which you used each of the following to manage:

	Does not apply or did not use (1)	Used somewhat (2)	Used quite a bit (3)	Used a great deal (4)
To keep from thinking about the situation, I found other things to keep me busy (1)	○	○	○	○
Tried to convince myself that it wasn't that bad (2)	○	○	○	○
Hoped that things would get better with time (3)	○	○	○	○
Sought out people I thought would make me laugh (4)	○	○	○	○

Shared my feelings with a friend or family member (5)	○	○	○	○
Sought emotional support from family and friends (6)	○	○	○	○

Q28. Looking back at the healthcare you received during your **most recent** pregnancy and delivery, how often did you feel each of the following:

	Never (1)	Rarely (2)	Sometimes (3)	Most of the time (4)	Always (5)
You were treated with less courtesy than other people. (1)	○	○	○	○	○
You were treated with less respect than other people. (2)	○	○	○	○	○
You received poorer service than others. (3)	○	○	○	○	○
A doctor or nurse acted as if they thought you are not smart. (4)	○	○	○	○	○
A doctor or nurse acted as if they were afraid of you. (5)	○	○	○	○	○
A doctor or nurse acted as if they were better than you. (6)	○	○	○	○	○
You felt like a doctor or nurse was not listening to what you were saying. (7)	○	○	○	○	○

Display This Question: If Q28 Statement 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 = 3 OR 4 OR 5

Q29. What do you think is the **main reason** for these healthcare experiences?

1 -- Your ancestry or national origin

2 -- Your gender
3 -- Your race
4 -- Other, please specify:_____

Q30. During your **most recent** hospital stay when you had your baby, how often were you treated unfairly specifically because you were a Black woman?

1 -- Never

2 -- Sometimes
3 -- Usually
4 -- Always

MATERNAL HEALTHCARE HISTORY ITEMS

Q31. How was your **most recent** baby delivered?

1 -- Vaginally
2 -- Cesarean delivery (C-section)

Q32. In all, how many babies have you had **in your lifetime**?

_____

Q33. In your **most recent** birth, did you give birth to a single baby or more than one?

1 -- Single baby
2 -- More than one

Q34. During your **most recent** pregnancy, how many months pregnant were you when you had your first visit for prenatal care?

1 -- Less than 1 month
2 -- 1 to 3 months
3 -- 4 to 6 months
4 -- 7 to 9 months
0 -- I didn't go for prenatal care

Q35. Since your **most recent** baby was born, have you had a postpartum checkup for *yourself*? A postpartum checkup is the regular checkup a woman has about 4-6 weeks after she gives birth.

1 -- Yes
0 -- No

Q36. During your **most recent** pregnancy, were you on WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children)?

1 -- Yes
0 -- No

SOCIODEMOGRAPHIC CHARACTERISTIC ITEMS

Q37. Are you Hispanic, Latino/a or Spanish origin?

1 -- Yes
0 -- No

Q38. During the 12 months before your most recent baby was born, what was your yearly total household income before taxes? Include your income, your husband's or partner's income, and any other income you may have received.

1 -- $0 to $16,000
2 -- $16,001 to $20,000
3 -- $20,001 to $24,000
4 -- $24,001 to $28,000
5 -- $28,001 to $32,000
6 -- $32,001 to $40,000
7 -- $40,001 to $48,000
8 -- $48,001 to $57,000
9 -- $57,001 to $60,000
10 -- $60,001 to $73,000
11 -- $73,001 to $85,000
12 -- $85,001 or more

Q39. What kind of health insurance do you have *now*? Check ALL that apply.

1 -- A plan purchased through an employer or union (including plans purchased through another person's employer)
2 -- A plan that you or another family member buys on your own
3 -- Medicare
4 -- Medicaid or other state program such as SCHIP/CHIP
5 -- TRICARE or other military health care
6 -- Alaska Native, Indian Health Services, or Tribal Health Services
7 -- Some other source
0 -- I do not have any health insurance now

Q40. During your **most recent** pregnancy, what kind of health insurance did you have? Check ALL that apply.

1 -- A plan purchased through an employer or union (including plans purchased through another person's employer)
2 -- A plan that you or another family member buys on your own
3 -- Medicare
4 -- Medicaid or other state program such as SCHIP/CHIP
5 -- TRICARE or other military health care
6 -- Alaska Native, Indian Health Services, or Tribal Health Services
7 -- Some other source
0 -- I do not have any health insurance now

Q41. Which of the following best describes your relationship status?

1 -- Married
2 -- Divorced
3 -- Widowed
4 -- Separated
5 -- Never married
6 -- A member of an unmarried couple

Q42. What is the highest grade or year of school you completed?

0 -- Never attended school or only attended kindergarten
5 -- Grades 1 through 8 (Elementary)
4 -- Grades 9 through 11 (Some high school)
3 -- Grade 12 or GED (High school graduate)
2 -- College 1 year to 3 years (Some college or technical school)
1 -- College 4 years or more (College graduate)

Q43. Are you currently...?

1 -- Employed for wages
2 -- Self-employed
3 -- Out of work for 1 year or more
4 -- Out of work for less than 1 year
5 -- A Homemaker
6 -- A Student
7 -- Retired
8 -- Unable to work

Appendix H

Black Maternal Self-Concept Inventory (BMSCI) Item Analysis Results

Table H1

Item Response Theory Model Fit Statistics by Sub-Dimensions

Centrality Items

Model	Likelihood	*p*-value[a]	AIC	BIC
PCM	-2626.79		5317.59	5432.14
PCM 1PL	-2618.70	<0.001	5303.39	5421.52
GPCM	-2572.56	<0.001	5225.12	5368.31
GRM Con.	-2559.36		5184.71	5302.84
GRM	-2521.01	<0.001	5122.02	5265.21

Exploration Items

Model	Likelihood	*p*-value[a]	AIC	BIC
PCM	-1341.86		2715.71	2772.99
PCM 1PL	-1341.23	0.264	2716.47	2777.32
GPCM	-1327.13	<0.001	2694.26	2765.85
GRM Con.	-1323.59		2681.18	2742.04
GRM	-1311.80	<0.001	2663.59	2735.19

Private Regard Items

Model	Likelihood	*p*-value[a]	AIC	BIC
PCM	-2864.71		5805.43	5941.46
PCM 1PL	-2843.12	<0.001	5764.24	5903.85
GPCM[b]	--	--	--	--
GRM Con.	-2798.28		5674.57	5814.18
GRM	-2709.88	<0.001	5515.77	5687.60

Public Regard Items

Model	Likelihood	*p*-value[a]	AIC	BIC
PCM	-2255.91		4567.83	4668.06
PCM 1PL	-2255.46	0.341	4568.92	4672.73
GPCM	-2196.39	<0.001	4462.79	4588.08
GRM Con.	-2217.39		4492.79	4596.60
GRM	-2159.51	<0.001	4389.03	4514.32

Role Beliefs Items

Model	Likelihood	*p*-value[a]	AIC	BIC
PCM	-4860.76		9869.53	10134.43
PCM 1PL	-4852.44	<0.001	9854.88	10123.36
GPCM	-4703.32	<0.001	9592.64	9925.55
GRM Con.	-4737.10		9624.19	9892.67
GRM	-4634.86	<0.001	9455.73	9788.64

Advocacy Self-Efficacy Items

Model	Likelihood	*p*-value[a]	AIC	BIC
PCM	-1507.08		3054.15	3125.75
PCM 1PL	-1455.26	<0.001	2952.53	3027.70
GPCM	-1441.51	<0.001	2933.02	3022.52
GRM Con.	-1425.81		2893.62	2968.80
GRM	-1412.78	<0.001	2875.56	2965.06

[a]*p*-value for comparison of adjacent models

[b]GPCM for private regard resulted in non-convergence; the model does not fit the sample data.

Table H2

Item-Total Correlation and Discrimination Values by Sub-Dimension

Item	Correlation[a]	GRM Discrimination	α if Item Deleted	Decision[b]
Centrality Items (α = 0.73)				
1	0.639	0.772	0.71	Discard
2	0.766	3.569	0.68	
3	0.653	1.286	0.70	
4	0.585	0.905	0.72	
5	0.635	1.553	0.70	
6	0.578	1.266	0.72	
7	0.771	3.720	0.69	
8	0.660	1.075	0.70	
Exploration Items (α = 0.74)				
9	0.828	2.320	0.68	
10	0.781	1.170	0.74	
11	0.876	3.274	0.63	
12	0.810	1.696	0.69	
Private Regard Items (α = 0.73)				
16	0.579	1.076	0.71	
17	0.810	3.173	0.69	
18	0.679	1.807	0.69	
19	0.857	2.170	0.67	
20	0.815	2.649	0.70	
21	0.621	1.289	0.71	
33	0.173	-0.143	0.79	Discard
13	0.746	1.449	0.68	
14	0.736	1.095	0.68	
15	0.669	1.242	0.70	
Public Regard Items (α = 0.80)				
22	0.853	3.547	0.74	
23	0.807	2.447	0.76	
24	0.496	0.722	0.82	Discard
25	0.733	1.444	0.78	
26	0.861	3.661	0.75	
27	0.699	1.662	0.79	

28	0.657	1.019	0.79	
Role Beliefs Items (α = 0.83)				
Item	Correlation[a]	GRM Discrimination	α if Item Deleted	Decision[b]
29	0.400	0.623	0.83	Discard
30	0.542	1.187	0.83	
31	0.621	1.342	0.82	
32	0.456	0.825	0.83	
34	0.598	1.241	0.82	
35	0.661	1.563	0.82	
36	0.835	2.643	0.82	
37	0.447	0.597	0.84	Discard
38	0.767	2.429	0.82	
39	0.730	2.043	0.82	
40	0.715	1.556	0.82	
41	0.721	1.726	0.82	
42	0.595	1.169	0.82	
43	0.671	1.674	0.82	
44	0.653	1.724	0.82	
45	0.698	1.698	0.82	
46	0.348	0.2687	0.84	Discard
47	0.766	2.573	0.82	
48	0.689	1.923	0.82	
Advocacy Self-Efficacy Items (α = 0.88)				
Item	Correlation[a]	GRM Discrimination	α if Item Deleted	Decision[b]
49	0.808	1.951	0.88	
50	0.942	3.692	0.84	
51	0.931	3.357	0.85	
52	0.917	3.511	0.85	
53	0.885	3.123	0.86	

[a]Total score was calculated excluding the target item

[b]Discard decisions made with additional evidence from inter-item correlations.

Table H3

Centrality Sub-Dimension Inter-Item Correlations

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8
Item 1	1.00							
Item 2	**0.32**	1.00						
Item 3	0.20	**0.48**	1.00					
Item 4	**0.53**	**0.34**	0.12	1.00				
Item 5	0.10	**0.54**	**0.35**	0.26	1.00			
Item 6	0.13	**0.44**	**0.45**	0.06	**0.53**	1.00		
Item 7	0.30	**0.81**	**0.48**	**0.36**	**0.52**	**0.43**	1.00	
Item 8	**0.50**	0.29	**0.38**	**0.46**	0.22	0.17	**0.36**	1.00

Note. Bolded correlations are ≥ 0.30

Table H4

Exploration Sub-Dimension Inter-Item Correlations

	Item 9	Item 10	Item 11	Item 12
Item 9	1.00			
Item 10	**0.37**	1.00		
Item 11	**0.69**	**0.47**	1.00	
Item 12	**0.53**	**0.49**	**0.55**	1.00

Note. Bolded correlations are ≥ 0.30

Table H5

Private Regard Sub-Dimension Inter-Item Correlations

	Item 16	Item 17	Item 18	Item 19	Item 20	Item 21	Item 33	Item 13	Item 14	Item 15
Item 16	1.00									
Item 17	**0.47**	1.00								
Item 18	**0.55**	**0.66**	1.00							
Item 19	**0.41**	**0.65**	**0.40**	1.00						
Item 20	**0.39**	**0.76**	**0.64**	**0.63**	1.00					
Item 21	**0.60**	**0.45**	**0.57**	**0.48**	**0.48**	1.00				
Item 33	-0.04	-0.14	-0.16	-0.03	0.01	-0.05	1.00			
Item 13	0.19	**0.50**	**0.34**	**0.53**	**0.42**	0.24	-0.09	1.00		
Item 14	0.13	**0.34**	0.25	**0.48**	**0.37**	0.24	0.07	**0.58**	1.00	
Item 15	0.13	**0.48**	**0.41**	**0.49**	**0.39**	0.08	-0.13	**0.53**	**0.51**	1.00

Note. Bolded correlations are ≥ 0.30

Table H6

Public Regard Sub-Dimension Inter-Item Correlations

	Item 22	Item 23	Item 24	Item 25	Item 26	Item 27	Item 28
Item 22	1.00						
Item 23	**0.66**	1.00					
Item 24	0.27	0.22	1.00				
Item 25	**0.46**	**0.51**	**0.40**	1.00			
Item 26	**0.81**	**0.67**	0.27	**0.49**	1.00		
Item 27	**0.60**	**0.50**	0.14	**0.38**	**0.56**	1.00	
Item 28	**0.39**	**0.40**	**0.32**	**0.55**	**0.41**	0.27	1.00

Note. Bolded correlations are ≥ 0.30

Table H7

Role Beliefs Sub-Dimension Inter-Item Correlations

	Item 29	Item 30	Item 31	Item 32	Item 34	Item 35	Item 36	Item 37	Item 38	Item 39	Item 40	Item 41	Item 42	Item 43	Item 44	Item 45	Item 46	Item 47	Item 48
Item 29	1.00																		
Item 30	0.20	1.00																	
Item 31	**0.34**	**0.46**	1.00																
Item 32	**0.35**	**0.36**	**0.45**	1.00															
Item 34	0.26	**0.50**	**0.57**	**0.40**	1.00														
Item 35	0.18	**0.33**	**0.44**	0.29	**0.58**	1.00													
Item 36	0.25	**0.43**	**0.47**	**0.36**	**0.48**	**0.52**	1.00												
Item 37	0.10	-0.02	0.14	0.02	0.13	0.18	0.24	1.00											
Item 38	0.16	**0.44**	**0.43**	**0.34**	**0.42**	**0.52**	**0.68**	0.16	1.00										
Item 39	0.27	0.30	**0.39**	0.19	**0.40**	**0.39**	**0.55**	0.28	**0.51**	1.00									
Item 40	0.20	**0.34**	0.27	0.25	0.28	0.30	**0.44**	**0.38**	**0.33**	**0.56**	1.00								
Item 41	0.21	**0.33**	**0.40**	0.27	0.29	**0.40**	**0.53**	0.22	**0.55**	**0.53**	**0.54**	1.00							
Item 42	0.03	0.17	0.23	0.07	0.20	0.22	**0.31**	0.25	**0.31**	**0.44**	**0.54**	**0.50**	1.00						
Item 43	0.25	0.22	0.26	0.27	0.26	**0.40**	**0.60**	0.29	**0.51**	**0.53**	**0.42**	**0.39**	**0.38**	1.00					
Item 44	0.13	0.32	0.27	0.17	**0.33**	**0.47**	**0.51**	0.10	**0.47**	**0.47**	**0.42**	**0.49**	**0.45**	**0.47**	1.00				
Item 45	0.22	0.29	**0.31**	0.24	0.23	**0.35**	**0.43**	0.22	**0.41**	**0.54**	**0.63**	**0.44**	**0.52**	**0.51**	**0.53**	1.00			
Item 46	0.13	-0.12	-0.03	0.03	0.11	0.07	0.08	0.29	-0.01	0.08	0.15	0.07	0.24	0.08	0.11	0.17	1.00		
Item 47	0.14	**0.49**	**0.47**	**0.33**	**0.52**	**0.55**	**0.61**	0.16	**0.66**	**0.56**	**0.47**	**0.52**	**0.32**	**0.49**	**0.46**	**0.49**	-0.20	1.00	
Item 48	0.16	**0.42**	**0.33**	0.23	**0.35**	**0.41**	**0.63**	0.09	**0.65**	**0.47**	**0.33**	**0.37**	**0.35**	**0.58**	**0.57**	**0.49**	0.11	**0.52**	1.00

Note. Bolded correlations are ≥ 0.30

Table H8

Advocacy Self-Efficacy Sub-Dimension Inter-Item Correlations

	Item 49	Item 50	Item 51	Item 52	Item 53
Item 49	1.00				
Item 50	**0.70**	1.00			
Item 51	**0.77**	**0.79**	1.00		
Item 52	**0.52**	**0.75**	**0.70**	1.00	
Item 53	**0.50**	**0.73**	**0.65**	**0.87**	1.00

Note. Bolded correlations are ≥ 0.30

VITA

Hannah M. Ming was born on September 27, 1994 in Onslow County, North Carolina. She was primarily raised in Dinwiddie County, Virginia, where, in 2012, she graduated with Honors from Dinwiddie County High School. In 2016, Hannah obtained her Bachelor of Science degree in Health Sciences with a concentration in Public Health Education from James Madison University in Harrisonburg, Virginia. That spring, Hannah became a Certified Public Health Education Specialist (CHES®). In 2018, she obtained her Master of Public Health degree from Virginia Commonwealth University, where she stayed to start the Social and Behavioral Sciences doctoral program in the Department of Health Behavior and Policy. During her time in the program, Hannah collaborated on many research projects resulting in several accolades and awards, including the Honor Society of Phi Kappa Phi 2021 National Graduate Research Grant. From 2020 to 2022, Hannah also served as the Vice President of the Delta Eta chapter of the Delta Omega Honorary Society of Public Health. Hannah successfully defended her doctoral dissertation in November 2022. She is currently a post-doctoral fellow in the Department of African American Studies at Virginia Commonwealth University.

Scholarly Activity

Guidry, J. P. D., Vraga, E. K., Miller, C. A., Laestadius, L. I., Occa, A., Nan, X., Ming, H. M., Qin, Y., Fuemmeler, B. F., & Carlyle, K. E. (2020). HPV vaccine on Pinterest: Before and after Pinterest's actions to moderate content. *American Journal of Public Health*.

Clark, V., Ming, H. M., & Kim, S. J. (Under review). Location, age, and race matter: A path model of emotional distress in the U.S. during COVID-19.

Ming, H. M., Kim, S. J., Cyrus, J., Clark, V., Coston, B. E., Garcia, D. T., Bodnar-Deren, S., & Dahman, B. (In progress). Mapping the use of self-concept in adult health and racism research: A conceptual taxonomy and scoping review.

Ming, H. M., Kim, S. J., Coston, B. E., Garcia, D. T., & Bodnar-Deren, S. (In progress). "Being a Black woman means everything to me": A phenomenologcal assessment of healthcare-mediated racism and the Black maternal self-concept.

Ming, H. M., Kim, S. J., Coston, B. E., Garcia, D. T., Bodnar-Deren, S., & Dahman, B. (In progress). The Black maternal self-concept: Toward a coprehensive model of maternal psychosocial well-being.

Ming, H. M., Guidry, J. P. D., & Carlyle, K. E. (In progress). Tweeting #breastfeeding: Rights and controversies on Twitter.