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The Exploration of Perceptions of Patient-Clinician Communication in Black Mothers Diagnosed with an Acute Post-Partum Hypertensive Crisis

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Abstract

For Black American mothers, postpartum stressors are magnified as about half of this population are single mothers, and many suffer from inadequate social and healthcare needs. Expected postpartum stressors, coupled with social stressors that Black American mothers face, can mask or influence patient reporting of early postpartum hypertensive crisis symptoms. Patients diagnosed with preeclampsia risk developing even more severe complications, such as cardiovascular disease, which is the leading cause of pregnancy-related deaths in the United States. Black American women face the challenge of inadequate communication with their healthcare providers, medical mistrust, and perceived discrimination when accessing health care. Pregnant women, in general, report informational needs and relationships as highlighted factors when exploring patient-clinician communication. Therefore, this dissertation research aimed to understand Black American mothers' perceptions of care and communication with their clinicians after being diagnosed with an acute hypertensive crisis and the findings will provide knowledge that will improve maternal outcomes for this population. Three projects were conducted: a manuscript consisting of a literature review, a methods manuscript, and a convergent mixed-methods study. The first manuscript consisting of the literature review revealed that early detection of acute hypertensive crisis among the postpartum mother’s interdisciplinary care team improves maternal neonatal outcomes. This manuscript proposes an example protocol for facilitating emergency care to those. symptomatic postpartum mothers who are visiting their neonate in the neonatal intensive care unit (NICU). Also in this manuscript, a literature review was conducted on the etiology, pathophysiology and treatment recommendations for acute hypertensive crisis. The findings of this review led to the importance of investigating those diagnosed with acute hypertensive crisis, specifically those who were most at risk- Black Postpartum Mothers. The next project, a methods paper on qualitative interview techniques, was written to inform qualitative researchers on how to amplify the voices of Black postpartum mothers diagnosed with an acute hypertensive crisis during qualitative interviews. Techniques were shared based on lessons learned during qualitative data collection. The third project, a convergent mixed-methods study, was conducted to explore the perceptions of care and patient-clinician communication from Black postpartum mothers diagnosed with an acute hypertensive crisis in the Mississippi Delta region of the United States. Findings from this study revealed that most participants rated higher satisfaction with their doctor-patient communication during their outpatient prenatal visits and hospital stay, but still voiced repeated experiences of being dismissed and their symptoms being minimized by their obstetric clinicians. To meet the needs of Black postpartum mothers who experience high risk disorders such as acute hypertensive crises, obstetric clinicians must understand their experiences with patient-clinician communication and the adjustive communicative behaviors they adopt to navigate healthcare spaces. Obstetric clinicians must be intentional about providing detailed information early in pregnancy and establish a trusting relationship in order to improve their perceptions of care and patient-clinician communication.

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The Exploration of Perceptions of Patient-Clinician Communication in Black Mothers Diagnosed with an Acute Post-Partum Hypertensive Crisis

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DEDICATION

This is dedicated to my late mentor, Dr. Melody Waller.
I also dedicate this to my late friend and former colleague, Ellen Wade, RN,
who lost her life to preeclampsia/eclampsia August 2018.

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I would like to thank God for keeping me throughout this entire process. Without him, I wouldn't be able to overcome all of the challenges I've experienced. I would like to thank the thirty-eight Black mothers who participated in this study. With caring for a newborn coupled with the COVID pandemic, I value each and every one of them for participating and contributing to this project, which will help so many Black women.

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PREFACE

The body of this dissertation is organized in a way that first introduces readers to our rationale for choosing the research topic, purpose, and aims—as well as to present an overview of the literature. A discussion of the materials and methods used then leads to a presentation of the research and final analysis with a discussion of our findings. A concluding chapter relates all research elements back to our final thoughts about the findings and their significance.

For readers to have immediate access to the full presentation of our previously published research studies as well as those that are under review, the articles are presented in the appendices. This mode of presentation allows for Chapters 2 through 4, which use them as their basis, to focus more narrowly on a summary and discussion of those articles in Appendices A through C and to show specifically how they relate to the dissertation's larger goals. References in the chapters to relevant sections, tables, or figures look like the following example. The Chapter 1 callout to **Figure C-1** refers to Figure 1 in **Appendix C.** The blue highlight links to the figure.

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ABSTRACT

For Black American mothers, postpartum stressors are magnified as about half of this population are single mothers, and many suffer from inadequate social and healthcare needs. Expected postpartum stressors, coupled with social stressors that Black American mothers face, can mask or influence patient reporting of early postpartum hypertensive crisis symptoms. Patients diagnosed with preeclampsia risk developing even more severe complications, such as cardiovascular disease, which is the leading cause of pregnancy-related deaths in the United States. Black American women face the challenge of inadequate communication with their healthcare providers, medical mistrust, and perceived discrimination when accessing health care. Pregnant women, in general, report informational needs and relationships as highlighted factors when exploring patient-clinician communication. Therefore, this dissertation research aimed to understand Black American mothers' perceptions of care and communication with their clinicians after being diagnosed with an acute hypertensive crisis and the findings will provide knowledge that will improve maternal outcomes for this population.

Three projects were conducted: a manuscript consisting of a literature review, a methods manuscript, and a convergent mixed-methods study. The first manuscript consisting of the literature review revealed that early detection of acute hypertensive crisis among the postpartum mother's interdisciplinary care team improves maternal neonatal outcomes. This manuscript proposes an example protocol for facilitating emergency care to those. symptomatic postpartum mothers who are visiting their neonate in the neonatal intensive care unit (NICU). Also in this manuscript, a literature review was conducted on the etiology, pathophysiology and treatment recommendations for acute hypertensive crisis. The findings of this review led to the importance of investigating those diagnosed with acute hypertensive crisis, specifically those who were most at risk- Black Postpartum Mothers. The next project, a methods paper on qualitative interview techniques, was written to inform qualitative researchers on how to amplify the voices of Black postpartum mothers diagnosed with an acute hypertensive crisis during qualitative interviews. Techniques were shared based on lessons learned during qualitative data collection. The third project, a convergent mixed-methods study, was conducted to explore the perceptions of care and patient-clinician communication from Black postpartum mothers diagnosed with an acute hypertensive crisis in the Mississippi Delta region of the United States. Findings from this study revealed that most participants rated higher satisfaction with their doctor-patient communication during their outpatient prenatal visits and hospital stay, but still voiced repeated experiences of being dismissed and their symptoms being minimized by their obstetric clinicians. To meet the needs of Black postpartum mothers who experience high risk disorders such as acute hypertensive crises, obstetric clinicians must understand their experiences with patient-clinician communication and the adjustive communicative behaviors they adopt to navigate healthcare spaces. Obstetric clinicians must be intentional about providing detailed information early in pregnancy and establish a trusting relationship in order to improve their perceptions of care and patient-clinician communication.

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LIST OF ABBREVIATIONS

CAT	Communication Accommodation Theory
DPCQ	Doctor Patient Communication Questionnaire
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HELLP	Hemolysis, Elevated Liver Enzymes, and Low Platelet Count
IMCHB	Interaction Model of Client Health Behavior
L&D	Labor & Delivery unit
NICU	Neonatal Intensive Care Unit
OBGYN	Obstetrician Gynecologist

CHAPTER 1. INTRODUCTION

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Overview

In the United States, Black mothers are nearly four times more likely to experience a pregnancy-related death (Hardeman et al., 2022). Specifically, in the Mississippi Delta states, the odds for maternal death are 1.39 times higher than non-Mississippi Delta states (Smith, Sandlin, Bird, Steelman, & Magann, 2014). With 52% of maternal deaths occurring during postpartum, this period is critical for prioritizing the mother's health and well-being (Tikkanen, 2020). Pregnancy-related hypertension affects about 10% of pregnancies in the United States and make up the majority of postpartum readmissions (Hoppe et al., 2020). Hypertensive disorders of pregnancies can significantly increase the risk for cardiovascular diseases, such as heart failure, especially among Black American mothers(Carter et al., 2017; Williamson, 2020).

Up to 60% of hypertension-related maternal deaths are potentially preventable (Hoppe et al., 2020). In the US, deaths from preeclampsia and eclampsia are often avoidable with standard interventions, including initiation of magnesium therapy, administration of antihypertensives, immediate delivery, and close monitoring (ACOG, ; Collier & Martin, 2018). However, delays in treatment occur for multiple reasons, with the primary reasons being clinicians' implicit bias and poor patient-clinician communication (Altman et al., 2019; Slaughter-Acey et al., 2019). Forty to sixty percent of women of all races reported communication problems during childbirth (Attanasio & Kozhimannil, 2015). Black mothers have higher odds of perceived discrimination due to race/ethnicity (Altman et al., 2019; Berk et al., 2023).

With Black American women facing challenges with communicating within more dominant societal structures (e.g., physicians and practitioners), communication could be a significant contributing factor that leads to missed opportunities to connect with their patients and provide high-value care, resulting in negative outcomes (Wardlaw & Shambley-Ebron, 2019). According to previous studies, pregnant mothers reported having supportive relationships with their clinician as well as receiving adequate information about their care as effective communication that promoted feelings of self-empowerment and self-advocacy (Altman et al., 2019; Berk et al., 2023; McLemore et al., 2018; Nicoloro-SantaBarbara et al., 2017). Further research is needed to understand whether there are inadequate communicative practices among Black postpartum mothers with high-risk disorders such as acute hypertensive crisis. Understanding Black American mothers' perceptions of how and why they choose to communicate with their obstetric team and understanding what they perceive about their treatment for a hypertensive crisis can provide clinicians awareness of how their implicit and explicit bias impacts the

communication interaction, thus improving maternal outcomes. Therefore, there is a critical need to explore the Black American mother's perception of care given by her obstetrician to treat her postpartum hypertensive crisis.

An acute hypertensive crisis is a global term used for several diagnoses (Wautlet & Hoffman, 2022). Each of the hypertensive disorders consists of elevated blood pressures that requires immediate intervention and can occur during pregnancy and postpartum. For the sake of this study, the terminology of Acute Hypertensive Crisis will be used. The following is a list of diagnoses that are considered an acute hypertensive crisis:

- Gestational Hypertension
- Preeclampsia
- Severe Preeclampsia
- HELLP syndrome
- Eclampsia
- Preeclampsia superimposed on pre-existing hypertension
- Chronic Hypertension

Purpose

Studies examining patient-clinician communication with Black mothers and their obstetric clinicians are increasing, but there are minimal studies that explore these interactions among Black postpartum mothers diagnosed with an acute hypertensive crisis (Altman et al., 2019; Berk et al., 2023; McLemore et al., 2018). With the current state of healthcare along with the increasing maternal mortality rate, Black American mothers are at higher risks for negative outcomes, especially when communication challenges pose a barrier to effective care (Altman et al., 2019; Berk et al., 2023; McLemore et al., 2018). The purpose of this mixed-methods study is to explore perceptions of care and patient-clinician communication of Black American postpartum mothers diagnosed with and treated for an acute hypertensive crisis.

Specific Aims and Research Questions

The following specific aims were developed to examine the perceptions of care and patient-clinician communication of Black American postpartum mothers diagnosed with an Acute Hypertensive Crisis.

Central Research Question

What are the perceptions of care and patient-clinician communication among Black American mothers who are diagnosed with and treated for an acute hypertensive crisis?

Specific Aim One

The first specific aim was to measure Black American postpartum mothers' perception of their patient-clinician communication with their obstetric clinician from the start of pregnancy through childbirth, and after delivery, specifically those diagnosed with an acute hypertensive crisis.

The following research questions pertain to the first specific aim:

- Research Question: What are the characteristics of Black American mothers who were diagnosed with an acute hypertensive crisis at delivery or after delivery in the Mississippi Delta region of the United States?

- Research Question: How do Black American mothers rate the quality of their patient-clinician communication throughout pregnancy and delivery?

Specific Aim Two

The second specific aim was to further explore Black American postpartum mothers' perceptions of care and communication with their obstetric clinician from the start of pregnancy through childbirth and after delivery, specifically those diagnosed with an acute hypertensive crisis.

- Research Question: What themes on perceptions of care and patient-clinician communication among Black American mothers diagnosed with an Acute Hypertensive Crisis emerged during interviews?

- Research Question: What experiences do Black American mothers share about being diagnosed with an acute hypertensive crisis?

Specific Aim Three

The third specific aim compares and contrasts the quantitative and qualitative results in the data analysis.

- Research Question: How does the interview and survey converge to better inform about Black American mother's perceptions of care and patient-clinician communication?

- Research Question: How does the interview results and their survey scores contrast?

Significance

It is essential to listen to Black mothers due to the increasing maternal morbidity and mortality rates and the large inequities when compared to White mothers. Many interventions have been tried to improve maternal health rates, but rates in the Mississippi River Delta continue to worsen (Smith et al., 2014). In particular, the research that focuses on Black mothers' experiences with postpartum hypertensive disorders is scarce. Because one of the most common causes of readmission after birth is cardiovascular complications (Aziz et al., 2019), it is important to specifically talk with mothers who have had an acute hypertensive crisis. Other recent studies have explored perceptions of care from Black Americans but are not specific to Black American postpartum mothers with acute hypertensive crisis (Altman et al., 2019; Attanasio & Kozhimannil, 2015; Berk et al., 2023; Cuevas et al., 2016; McLemore et al., 2018)). One study was conducted with Black mothers experience with severe maternal morbidity (Canty, 2022), but no study primarily focuses on those with acute hypertensive crisis. The lack of literature reveals gaps in patient perception of care or patient and clinician communication among this population, concerning a diagnosis that has no conclusive cause.

Definitions of Major Concepts

Postpartum. Postpartum is defined as the period after childbirth when maternal physiological and anatomical changes return to the nonpregnant state (Chauhan & Tadi, 2023). This period starts at the expulsion of the placenta up until 6 months.

Acute Hypertensive Crisis. An acute hypertensive crisis involves a severe increase in blood pressure that can lead to a stroke or organ damage and can also embody several diagnoses (Bernstein et al., 2017). Types of acute hypertensive crises, such as pre-eclampsia, severe pre-eclampsia, and eclampsia can be diagnosed up to 6 weeks after childbirth (ACOG, 2020). Symptoms include headache, visual disturbances, swelling, nausea and vomiting, dizziness, and/or abdominal pain, and clinicians use these symptoms in addition to laboratory results to determine a diagnosis (ACOG, 2020).

Perceptions of Care. The mother's perceptions of care is the way care is envisioned and experienced from their point of view (Al-Jabri et al., 2021).

Perceptions of Patient-Clinician Communication. The mother's viewpoint and experience of the communication interaction with the obstetric clinician.

Obstetric Clinician. Obstetricians and midwives who have expertise in caring for pregnant and postpartum mothers.

Communication Accommodation. This is defined as how people adjust the way they communicate with one another based on intergroup perspectives (Thompson & Schulz, 2021).

Conceptual and Theoretical Framework

There are two theories supporting this study: The Communication Accommodation Theory (CAT) and the Co-Cultural Theory of Communication. The CAT explains how people adjust the way they communicate with one another based on intergroup perspectives. CAT seeks to describe the communicative behavior of individuals but also to explain the motivations underlying individuals' behavior (Jones, 2007). The theory recognizes that sometimes it is the speech of a person's identity group (e.g. professional role or social membership) that can be more salient to another person than the personal attributes of that speech partner (Thompson & Schulz, 2021). CAT proposes that speakers within a communication interaction are motivated to use different communication strategies that allow them to develop or maintain their personal or social identities (Jones, 2007).

According to the CAT, patients express their health anxieties and concerns, while the clinician responds when appropriate with understanding and reassurance (Baker, Watson, Jamieson, & Jamieson, 2021). Even though reassurance needs, health concerns, mood and anxiety levels will vary among patients, CAT states that a successful emotional expression occurs when the patient's individual needs are met (Baker et al., 2021). This means the patient's perceptions of the interaction will likely override the clinician's intentions (Baker et al., 2021).

The Co-Cultural Theory of Communication seeks to explain the behaviors of individuals from traditionally marginalized groups (minorities) while interacting with dominant societal structures, in efforts to understand their motivations and behavior (Rosenberg, Richard, Lussier, & Abdool, 2006). Orbe explains the theory within the context of major institutions within the United States of America such as the healthcare system, where white heterosexual middle- or upper-class males are considered a dominant societal structure (Wardlaw & Shambley-Ebron, 2019). As a result, these marginalized groups make decisions on how to communicate when engaging with dominant societal structures (Wardlaw & Shambley-Ebron, 2019). Both the CAT and Co-Cultural Theory of Communication combined explains adjustments that Black American mothers makes when communicating with their clinicians.

The conceptual model for this study will be adopted from Cox's Interaction Model of Client Health Behavior (IMCHB) framework. The object of the model is to identify and suggest explanatory relationships between client singularity, the client-clinician relationship, and subsequent client health care behavior (Cox, 1982). Cox's IMCHB model, which is used to study health behaviors, depicts the roles and interactions of clients and professionals and was developed with the goal of devising the best interventions possible by focusing on their interrelationship (Kim et al., 2020). This middle range theory has led to useful result in nursing practice as it allows researchers to consider the sociocultural influences of human interactions that helps them understand a phenomena (Kim et al., 2020). The IMCHB model was modified to depict how it

interconnects with the CAT and the Co-Cultural Theory of Communication, as the arrow is pointing towards the Black American postpartum mother (**Figure C-1**). This is to display how people adjust the way that they communicate, especially Black women, when interacting with clinicians. The inclusion criteria are listed under the Black postpartum mother's circle and then the clinicians are obstetricians and midwives.

In between the Black American postpartum mother and the clinician, is the patient-clinician communication interaction. In the center of the patient- clinician communication interaction are three core components of patient-clinician communication that were chosen to explore in this study, as patient-clinician communication in general is comprised of many critical components. The circle to the right shows the outcomes which is the purpose of this study. The large gray arrow going from the patient-clinician interaction box towards the health outcome circle, indicates how that interaction can influence maternal outcomes. The large gray arrow pointing towards the Black American postpartum mother from the health outcomes circle, indicates how societal grouping influences the patient's decision on how she communicates with her obstetric care team.

Assumptions

1. The sample the researcher recruited were representative of the total population of Black American postpartum mothers diagnosed with high blood pressure in the Mississippi Delta region.
2. The study design will allow for the self-reported measure of their perceptions of their patient-clinician communication and care to be further explained in their individual interviews.
3. The constructs of the Modified Interaction Model of Client Health Behavior will be relevant to the perceptions of care and communication of Black American mothers diagnosed with an Acute Hypertensive Crisis.

Potential Limitations

1. The results may not be generalizable to other maternal high-risk events due to the sample size and participant characteristics, as this study will only be conducted on postpartum mothers who were diagnosed with acute hypertensive crisis. However, we aimed to provide a comprehensive description of our methodology that may encourage other studies to use similar methods with different study populations and other phenomena.
2. The participants in this study will be purposefully sampled, which may lead to bias and a non-representative sample.
3. There was a variation in the type of obstetric clinicians prior to treatment for their acute hypertensive crisis (i.e. OB/GYN, midwife, etc) which can pose a limitation to their shared experiences with patient-clinician communication.
4. There were participants from both rural and urban areas, which can impact where the participant received prenatal care and treatment for acute hypertensive crisis.

CHAPTER 2. RECOGNIZING EARLY WARNING SIGNS OF ACUTE HYPERTENSIVE CRISIS OF THE POSTPARTUM MOTHER: AN IMPORTANT ROLE FOR NEONATAL NURSES[1]

NOTE: This chapter refers frequently to content in **Appendix A**. When using Adobe Acrobat, after going there, return to the last viewed page using quick keys Alt/Ctrl+Left Arrow on PC or Command+Left Arrow on Mac. For the next page, use Alt/Ctrl or Command + Right Arrow. See **Preface** for further details.

Introduction

This chapter will summarize the first manuscript of this dissertation. Delayed detection of hypertensive crises in pregnancy and postpartum can result in negative health outcomes, such as maternal death and morbidity and neonatal death and morbidity. The postpartum period is a complex time for the mother that consists of prioritizing the needs of the neonate, which may result in neglect or the delay in the attention needed towards their maternal hypertensive symptoms. Rates of preterm delivery are as high as 62 to 70% in mothers with severe hypertension (Seely & Ecker, 2014). Therefore, the collaboration of obstetric clinicians, obstetric nurses, and neonatal nurses is needed in order to ensure that postpartum msothers with early warning signs of hypertensive crisis are identified in a timely manner. This manuscript aimed to explain the etiology and signs and symptoms of acute hypertensive crisis, the proper way to perform an adult manual blood pressure, and appropriate referral for mothers with related symptoms. We encourage neonatal intensive care units (NICU) to consider adopting a protocol for checking the blood pressure of new mothers at their neonate's bedside in the NICU who show early warning signs of a hypertensive crisis.

Summary

Acute hypertensive crises of the postpartum period includes preeclampsia, severe pre-eclampsia, or eclampsia (ACOG, 2022). Signs and symptoms include high blood pressure, severe headache, visual disturbances, swelling, dizziness, shortness of breath, abdominal pain, nausea and vomiting, and changes in laboratory findings (ACOG, 2022). Pre-eclampsia during pregnancy is thought to occur in two stages, with abnormal placentation leading to a maternal inflammatory response, but most of this interaction occurs for unexplained reasons (Hu et al., 2022; Katsi et al., 2020; Staff et al., 2022). Clinicians face the challenge of properly identifying which patients are at risk for

[1]PDF of the article reproduced with open access permission. Fant M, Rhoads S, Tucker J. Recognizing Early Warning Signs of Acute Hypertensive Crisis of the Postpartum Mother: An Important Role for Neonatal Nurses. Neonatal Network 2023; 42(5) DOI: 10.1891/NN-2022-0060 (**Appendix A**).

developing postpartum preeclampsia, as it can occur after childbirth unexpectedly. Minimal research has been conducted on the distinction between the presentation of preeclampsia during pregnancy and preeclampsia during the postpartum period. Both periods have the same symptoms, but one study found that mothers who were diagnosed with postpartum preeclampsia tended to have more severe symptoms, than those who were diagnosed during pregnancy (Vilchez et al., 2016).

Magnesium therapy protocol is the standard treatment for preeclampsia (ACOG, 2020a). Postpartum preeclampsia can present up to 6 weeks after delivery and require increased surveillance, yet it still calls for the same treatment recommendations as preeclampsia during pregnancy, with the addition of use of antihypertensives that are typically contraindicated during pregnancy as an option (CMQCC, 2021). Management of acute hypertensive crisis involves close inpatient monitoring that occurs in Labor & Delivery away from the neonate and typically includes magnesium therapy to prevent and treat seizures in pregnant and postpartum mothers (ACOG, 2020a). Untreated postpartum hypertension can lead to seizures, stroke, or death, therefore early detection and treatment is critical (Mayrink et al., 2018; Nwabueze et al., 2022).

NICU nurses are care clinicians with the most consistent contact with postpartum mothers who are present at the inpatient bedside with their neonates following their discharge, and these nurses are essential in detecting early warning signs of their complications (Bloyd et al., 2022; Davila & Segre, 2018; Neu et al., 2020; Saxton et al., 2021). NICU units have implemented successful collaborative practice changes for postpartum mothers such as screening for postpartum depression. Maternal well-being directly impacts the neonate's well-being. If the mother is separated for treatment of her hypertension, then this can interrupt bonding and breastfeeding (Bartick et al., 2021; Jones & Santamaria, 2018; Lee et al., 2022; Lv et al., 2019; Mogos et al., 2018; Tomori et al., 2020). Thus, the rationale to incorporate protocols in NICUs to screen postpartum mothers for acute hypertensive crisis to prevent re-hospitalization and severe maternal morbidity and mortality is warranted based on the evidence.

This manuscript introduces NICU units to a proposed clinical protocol geared towards identifying acute hypertensive crisis in postpartum mothers and immediately notifying her care team. If a mother presents with or reports any hypertensive symptoms, the NICU nurse should ask if she has been to her first postpartum appointment with her clinician, screen her for additional symptoms, and assess her blood pressure. NICU units should store adult sized blood pressure cuffs of various sizes to screen the symptomatic mother for hypertension. Steps for correctly obtaining a manual blood pressure are listed for NICU nurses in the manuscript. For patients with symptoms and blood pressure readings higher than 140/90 mmHg, the NICU nurse should follow the hospital's policy for emergency response (KJ Sharma, 2017). Depending on hospital protocol, the emergency response could include notifying the emergency response team and transporting the mother to the emergency department or Labor & Delivery for an immediate evaluation.

Conclusion

Timely detection of postpartum acute hypertension improves maternal and neonatal outcomes and involves a multidisciplinary approach from the dyad care team. NICUs provide family-centered care as the neonate's outcome is highly impacted by maternal presence and bonding. NICU nurses' screenings for postpartum depression in mothers who visit the NICU have been successful and similar screenings can be just as helpful in screening for acute hypertensive crisis. This manuscript provides an overview of acute hypertensive crisis and introduces a proposed protocol for NICU nurses to accurately obtain a manual blood pressure and contact emergency personnel.

CHAPTER 3. AMPLIFYING THE VOICE OF BLACK MOTHERS DIAGNOSED WITH HYPERTENSION AFTER BIRTH REGARDING PATIENT-CLINICIAN COMMUNICATION: QUALITATIVE INTERVIEW TECHNIQUES[2]

NOTE: This chapter refers frequently to content in **Appendix B**. When using Adobe Acrobat, after going there, return to the last viewed page using quick keys Alt/Ctrl+Left Arrow on PC or Command+Left Arrow on Mac. For the next page, use Alt/Ctrl or Command + Right Arrow. See **Preface** for further details.

Introduction

This chapter will summarize the second manuscript of this dissertation. Qualitative interviews provide the unique advantage of exploring human experiences, generating in-depth understanding, and capturing participants perspectives (Creswell, 2018). While conducting a qualitative research study on Black postpartum mothers, techniques were learned on how to capture their voices in the data. Historically, research abuse among Black Americans has negatively impacted recruitment and participation efforts in research that benefits this vulnerable population (Frierson et al., 2019). As a result, recruitment and participation in research has remained low among Black Americans. This manuscript describes recruitment and interview techniques and skills that can be replicated by other qualitative researchers in order to truly capture the perspectives of Black mothers.

Summary

Black postpartum mothers are vulnerable when they experience a 'threat' from a physical, psychological or social perspective and where 'barriers' and 'reparative' conditions influence the level of vulnerability" (Briscoe et al., 2016). Black postpartum mothers are three to four times more likely to die from pregnancy-related complications than non-Hispanic white mothers and the mortality rate is worsening (Creanga et al., 2017). Additionally, high risk disorders of pregnancies, such as acute hypertensive crises, also impacts their vulnerability. An acute hypertensive crisis is a severe increase in blood pressure that can lead to a stroke or organ damage, and it embodies several diagnoses according to Maternal Safety Consensus Bundle on Severe Hypertension (Bernstein et al., 2017).

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[2] Manuscript reused with authors' permission. Fant M, Rhoads S, Carroll L. Amplifying The Voice of Black Mothers Diagnosed With Hypertension After Birth Regarding Patient-Clinician Communication: Qualitative Interview Techniques. 2023. (**Appendix B**).

The purpose of this mixed-methods study was to explore perceptions of care and patient-clinician communication of Black American postpartum mothers diagnosed with and treated for an acute hypertensive crisis. For the qualitative component, twenty mothers participated in a one-on-one interview virtually. Four themes were identified: *Prior Experiences That Impact Perceptions of Care and Communication, Black Mothers Say Trust and Transparency Are Vital For Relationships, Black Mothers Desire Clear Communication and Information From Clinicians,* and *Black Culture and Cultural Competence Impacted My Care.* A phenomenological approach was used, as it ensured that their voice is heard and provides the reader insight of their experience through the lens of the participant.

Being able to reach the population and become a familiar face was the first lesson learned. Because the inclusion criteria included women of child-bearing ages (18 years to 40 years of age), I knew that my primary target would be millennials and generation Z. Millennials and Generation Z tend to utilize social media more than others (TrueList, 2023) and during the COVID-19 pandemic, many people were at home more than they were socializing. The flyer was reposted on popular social media platforms by many Black women and Black birth workers, which increased visibility to more black mothers who were eligible. Collaborating with stakeholders such as doulas, midwives, teachers, and maternal support organizers as well as speaking at community events geared towards Black Maternal Health have allowed Black mothers to be familiar with my research program.

Describing the informed consent to the participants and explaining that their interview transcripts would be de-identified, allowed them to feel more comfortable sharing experiences during the interview. Prior to beginning each interview, I took a few additional minutes to reassure Black mothers that their participation in the study would not impact future care because I would not be presenting findings to individual doctors or hospitals. Thus, they were able to let the conversation flow and be honest and open about their experiences, knowing their identity would remain private.

Open-ended interview questions were used as the interview guide, allowing participants to freely share their stories, conversational style. Allowing them to talk freely about their birth story, allowed me to discover themes that I wasn't expecting regarding their perceptions of their care and communication. The convenience of opting for virtual interviews, positively impacted study retention. Specifically for this population, the Zoom platform allowed for these moms to be able to attend the interviews, most of which who had their babies with them on maternity leave or were working from home while caring for their baby.

All of the participants were aware of the Black maternal mortality crisis and were impacted with fear and concern during their pregnancy. They shared that their willingness to participate was because they knew that it would directly benefit their population. Being a Black Woman investigator allowed for trust and openness from the participants in the interview. Some participants even felt relaxed enough to be emotionally vulnerable during the interviews, expressing sorrow by crying openly during

their interview and expressing their anger freely. Race-matching, or racial-concordance, is a strategy used to include racially matched researchers in order to garner trust and improve recruitment. Personal approaches that may be unique to myself during the interviews were also used such as initiating small talk prior to beginning the interviews, addressing the participant by name during the interview, laughing at their funny jokes, maintaining eye contact and my full attention when I wasn't writing notes.

Conclusion

Slowed recruitment and research participation from Black Americans continue to be a challenge when conducting qualitative research studies. Thus, adopting qualitative interview techniques allow for rich data that can inform clinical interventions and policies, which will result in improved maternal outcomes. Capturing the voice of Black mothers whose experiences have been overlooked allows for them to be accurately represented in the data. With there being minimal studies on perceptions of patient-clinician communication with Black postpartum mothers, these lessons can assist qualitative researchers in future studies.

CHAPTER 4. PERCEPTIONS OF PATIENT-CLINICIAN COMMUNICATION IN BLACK MOTHERS DIAGNOSED WITH ACUTE HYPERTENSIVE CRISES: A MIXED METHODS STUDY[3]

NOTE: This chapter refers frequently to content in **Appendix C.** When using Adobe Acrobat, after going there, return to the last viewed page using quick keys Alt/Ctrl+Left Arrow on PC or Command+Left Arrow on Mac. For the next page, use Alt/Ctrl or Command + Right Arrow. See **Preface** for further details.

Introduction

This chapter summarizes the third manuscript to this dissertation. The Black maternal mortality crisis has gained significant attention in recent years due to its persistent rise and no direct causative factors (Creanga et al., 2017; McLemore, 2019; Suplee et al., 2016). Research continues as the quest to find the solution is critically needed. Patient-clinician communication plays a vital role in health outcomes and is the central point of maternal health, from the beginning of conception all the way to postpartum (Carbone et al., 2021). Evidence shows that Black women often experience communication barriers and clinician bias in the healthcare system, which can contribute to disparities in maternal health outcomes (Anderson et al., 2021; Attanasio & Kozhimannil, 2015a). With high-risk disorders of pregnancy and postpartum, like acute hypertensive crises, this adds an additional challenge as Black mothers have a higher risk for pregnancy-related issues (Carter et al., 2017; Creanga et al., 2017). Thus, the exploration of Black mothers' perceptions of care and patient-clinician communication surrounding this disorder was needed to bring understanding to what is needed to improve their care.

Summary

This mixed methods study was conducted September 2022 through March 2023, in Memphis, TN which sits in the heart of the Mississippi Delta region- a region with one of the highest maternal mortality rates in the country (Smith et al., 2014). Eligibility requirements included Black postpartum mothers 18 years of age and older, residing in the Mississippi Delta region of the United States, no more than 12 months postpartum, and had to have a hypertensive diagnosis at childbirth or postpartum. Thirty-eight participants completed an online survey where they rated their patient-clinician communication during their prenatal and postpartum periods. Twenty of those

[3]Manuscript reused with authors' permission. Fant M, Rhoads S, Carroll L, Cao X, Fouquier K, Tate D. Perceptions of Patient-Clinician Communication in Black Mothers Diagnosed with Acute Hypertensive Crisis: A Mixed Methods Study. 2023 (**Appendix C**).

participants agreed to participate in one-on-one interviews via the Zoom platform, to share their experiences about their patient-clinician communication, relationships, and communicative behaviors from prenatal visits all through postpartum. Using descriptive and correlational statistical analysis for the quantitative component and a coding thematic analysis for the qualitative component, integration provided a more comprehensive understanding of Black mothers' perceptions of their care and communication with their obstetric clinician concerning their hypertensive diagnosis.

Findings showed that although Black mothers reported satisfactory relationships and patient-clinician communication during their prenatal visits and hospital stay, they reported a lack of clear information and education regarding their maternal hypertension management (**Table C-7**). Demographic findings revealed that the study sample were highly educated, married, had private insurance, and mostly ranged in age between 29 and 39 years old (**Table C-1**). Quantitative findings overall revealed that participants were satisfied with communication with their obstetric clinicians (**Table C-2**). The Spearman's correlation test also revealed that relationship and trust impacted information shared between the patient and the clinician (**Table C-4**). Most qualitative participants reported communication challenges and trust issues with their non-Black clinicians that impact how they perceived their care. They also reported adjusting the way they appear, speak or behave in efforts to appear more educated and taken seriously when receiving information regarding their care. Maneuvering through the healthcare system looks different in the eyes of Black mothers, as many have reported past experiences of their symptoms being minimized or dismissed. These experiences have impacted their perceptions prior to the first communication interactions during prenatal visits with their obstetric clinicians. Additionally, many of these participants reported those repeated experiences of being dismissed occurring with their obstetric clinician, further confirming what they have always experienced in the healthcare system.

All participants reported that they never received any education on their acute hypertensive crisis until after they were diagnosed, and even then, they were prompted to look up information on the internet. None of them knew the signs and symptoms of preeclampsia; therefore, they did not know what to report. Many of them reported feeling frightened by this diagnosis due to the lack of education concerning preeclampsia. With the Black maternal mortality crisis being publicized, many of these participants were also intentional about selecting a Black obstetric clinician. Participants who reported having a Black obstetric clinician emphasized their relationship being trusting and felt like their clinicians provided them with thorough information throughout their pregnancy, childbirth, and postpartum periods. They reported Black clinicians as more compassionate to their well-being and clearer in explaining their medical condition (**Table C-6**).

Conclusion

Acute hypertensive crisis of pregnancy and postpartum is a critical diagnosis that should not be ignored. Overall, more education and information should be given to all

pregnant women starting at the first prenatal care visit. Clinicians should be made aware that there is a shared phenomenon that Black mothers have past experiences of feeling dismissed and having poor patient-clinician communication prior to their first visit, and it impacts the way they decide to communicate with their clinician. Thorough information concerning their care, early education on acute hypertensive crisis, and establishing a positive relationship during prenatal visits are vital to improving their outcomes.

CHAPTER 5. CONCLUSION

NOTE: When using Adobe Acrobat, return to the last viewed page using quick keys Alt/Ctrl+Left Arrow on PC or Command+Left Arrow on Mac. For the next page, use Alt/Ctrl or Command + Right Arrow. See **Preface** for further details.

Evidence shows that the maternal mortality crisis continues to worsen, despite advances in prenatal and postpartum care. Policy and clinical changes are underway to help reduce the country's mortality rates, especially among women of color. However, research directly including the population is lacking. With cardiovascular complications and hypertensive disorders being the leading causes of maternal mortality, the need to explore Black mothers with acute hypertensive crisis was of interest. The overall purpose of this project was to explore Black mothers' perceptions of their hypertensive care and patient-clinician communication barriers that contributes to the Black maternal health disparity.

Chapter 2 explained the etiology and pathophysiology of preeclampsia as well as a proposal of care for hypertensive postpartum mothers to include neonatal nurses. This manuscript provides instructions for properly obtaining a manual blood pressure in adults as well as a proposed clinical protocol for neonatal nurses to triage a suspected hypertensive postpartum mother. The goal of this manuscript was an attempt to fill in gaps for identifying early warning signs of postpartum hypertension, among mothers of babies in the neonatal intensive care unit. Postpartum preeclampsia can affect any mother at any point, and early warning signs could present before the mother's postpartum visit. More clinicians and supports persons need to be aware of these warning signs for the mother, who likely isn't focused on prioritizing her own health over her hospitalized neonate.

Chapter 3 focused on qualitative research techniques utilized to amplify the voices of Black mothers who participated in this dissertation research. Techniques included ways to improve recruitment as well as maintain participation throughout the research study. Research mistrust and lack of research impacts Black mother's willingness to participate in research that benefits them. This manuscript informs qualitative researchers on ways to encourage more participation from Black mothers to adequately capture their stories during qualitative interviews.

Chapter 4 addressed the specific aims of this mixed methods project, which was to explore Black postpartum mothers' perceptions of care and patient-clinician communication while being diagnosed with an acute hypertensive crisis. Using a mixed methods research design, findings revealed that although Black mothers reported satisfactory patient-clinician communication about their hypertension diagnosis overall, they were still not thoroughly informed of their care and management of acute hypertensive crisis. Findings also revealed that there are external experiences that impact Black mothers' perceptions of their care and communication exchanges with their clinicians, and this should be made aware with obstetric clinicians. Black mothers have

recognized that their race plays a big role in the way their care is delivered to them, which impacts their perceptions. Findings from this study should be shared among obstetric caregivers to personally evaluate their implicit and explicit bias while delivering care to Black pregnant and postpartum mothers.

Implications

Complex challenges exist within the patient-clinician communication interaction between Black American mothers and their obstetric clinicians, and the reasons vary. Changes to both clinician education for the obstetric team, as well as patient education are necessary. Obstetric teams need further education on better ways to establish a connection with Black mothers at the start of their interactions, which will improve the information exchange between them and their patients. Combating clinician bias that may develop as early as during medical school can be effective by standardizing a cultural competency course within curriculums nationwide. Cultural competency courses should also be included in nursing program curriculums as well.

Obstetric teams should strongly consider implementing standardized education of the warning signs of acute hypertensive crisis, starting at their first prenatal care visit. Most states have already established maternal health review committee boards and standardized education on warning signs of acute hypertensive crisis. California was the first state to start the California Maternal Quality Care Collaborative (CMQCC), and now many states have modeled their collaborative efforts after California (CMQCC, 2021). In 2021, 15 birthing facilities in Tennessee joined the state's project to promote the consistent application of diagnostic and treatment bundles and protocols to optimize the outcomes of patients with hypertensive disorders of pregnancy in conjunction with AIM's Severe Hypertension in Pregnancy Bundle (Tennessee Initiative For Perinatal Quality Care [TIPQC], 2023). This project provided free educational materials on the post-birth warning signs (including magnets), free educational materials for obstetric staff, and free blood pressure cuffs for the hospitals to distribute. However, few hospitals took advantage of these resources. More facilities should adopt this practice in order to make strides to improve patient knowledge of acute hypertensive crises.

Patient education should also continue during their hospital stay for childbirth before they are discharged from the facility. Pregnant and postpartum patients need detailed, consistent, and repeated information about the warning signs of acute hypertensive crisis to minimize the fear and confusion after being diagnosed. The clinic-flow is a barrier for clinicians to be able to spend the amount of time each patient desires during their prenatal visits. High patient volumes typically result in abbreviated discussions and limited time for adequate or detailed patient education. Thus, non-traditional birthing workers such as nurse educators and doulas should be embraced as they take on labor tasks for which clinicians are typically not afforded the time to handle (C. Adams & Curtin-Bowen, 2021). In addition to this, there are 1) time restrictions put on clinicians by insurance companies through reimbursement restrictions and 2) the expectations put on obstetric clinicians for the number of patients they need to see to

support not only their salaries but the overall practice. If those expectations were made more realistic and obstetric clinicians given the valuable time needed to communicate and care for their patients, then that could improve patient outcomes.

Educating obstetric clinicians on the doula's role and capabilities and encouraging acceptance of doulas on the obstetric care team are very imperative. Evidence shows that adding doulas to the birthing care team can bridge communication gaps with Black American mothers and ultimately reduce pregnancy-related health disparities, improving maternal outcomes (Collins et al., 2022). Several research studies on doula support during childbirth and postpartum reveal improved maternal and infant outcomes (Akhavan & Lundgren, 2012; Hans et al., 2018). The Tennessee House of Representatives approved a bill recognizing doulas as vital childbirth team members and community health workers. In 2021, State Legislator London Lamar introduced a new bill that requires that doula services be provided to recipients of TennCare (Bill Track 50, 2021).

Literature shows that obstetric clinicians' perceptions of doulas can be largely negative (C. Adams & Curtin-Bowen, 2021; Neel et al., 2019).The doula-clinician relationship is challenging as many obstetric nurses and clinicians have not fully embraced doulas on the obstetric team, and they aren't aware of doula's range (C. Adams & Curtin-Bowen, 2021). However, many obstetric clinicians aren't introduced to doulas until the delivery and rapport hasn't been established. There is room for improvement by simply introducing the doula and appointed clinician during earlier prenatal visits, and consistently collaborating about the mother's care. This study explains how cultural and societal powers influence how Black American mothers communicate and perceive their communication regarding their hypertension diagnosis, and why race-concordant clinicians and support persons benefit Black mothers. Team-building opportunities such as inviting doulas and obstetric clinicians to meet-and-greets and other educational platforms should be encouraged. Including doulas in obstetric clinician meetings at hospital institutions are also ways to better engage and repair the doula-clinician relationship, as it will display doulas as an important part of the interdisciplinary team.

Recommendations for Future Research

Research to help reduce maternal morbidity and mortality is complex and ongoing, but necessary to drive policy changes that will help save so many mothers. Future research recommendations include creating a communication scale for Black mothers that accounts for bias, using a Feminist lens. The discordance between the quantitative findings and qualitative findings revealed that participants did not want to rate their obstetric clinician low, but still desired better education and communication about their acute hypertensive crisis. Another recommendation is for further research on race-concordant obstetrical care and how it may benefit obstetric clinicians to understand how intersectionality and societal constructs impact Black mothers' perceptions of their care and communication from Black obstetric clinicians. Replicating this study with a more diverse sample of Black mothers (i.e. socioeconomic, education, age range, etc.)

would also highlight the additional barriers experienced during communication with their obstetric clinician.

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APPENDIX A. CHAPTER 2 ARTICLE

NOTE: Navigation with Adobe Acrobat Reader or Adobe Acrobat Professional: To return to the last viewed page, use key commands Alt/Ctrl+Left Arrow on PC or Command+Left Arrow on Mac. For "Next view," use Alt/Ctrl+Right Arrow on PC or Command+Right Arrow on Mac. See **Preface** for further details. If needed, use this link to return to **Chapter 2** after navigating within this appendix.

Introduction

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Article

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Learning Outcome. Upon completion of this activity, the learner will identify increased knowledge of the signs, symptoms, and management of maternal postpartum hypertensive crisis.

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Recognizing Early Warning Signs of Acute Hypertensive Crisis of the Postpartum Mother: An Important Role for Neonatal Nurses

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ABSTRACT

A delay in detecting acute hypertensive crisis in postpartum mothers can exacerbate complications in the mother. Neonatal nurses are uniquely qualified to identify postpartum warning signs in mothers while they are in the NICU with their infants. Few research studies have explored the use of neonatal nurse screenings for acute hypertensive crisis in postpartum mothers. NICU nurses screening mothers for postpartum depression has yielded success in improving outcomes, and this model could be translated into screening for acute hypertensive crisis. Further education should be implemented for NICU nurses that include a review of adult blood pressure monitoring, early warning signs, and symptoms of preeclampsia that the mother should report. This article discusses the importance of the neonatal nurse's role in identifying early warning signs of maternal postpartum hypertensive crisis.

Keywords: eclampsia; hypertension; maternal; postpartum; preeclampsia

Hypertensive crisis in pregnancy is one of the leading causes of perinatal morbidity and mortality in the United States. It affects approximately 10–13 percent of pregnancies, and this rate is steadily increasing.[1,2] An estimated 53 percent of mothers diagnosed with a severe maternal hypertensive crisis during pregnancy will experience a preterm delivery. However, the postpartum period sees the highest prevalence of acute hypertensive crisis in the setting of preeclampsia or eclampsia.[3,4] Preeclampsia is a new-onset disorder that can be diagnosed during pregnancy, usually after 20 weeks gestation, and during the postpartum period.[5,6] Therefore, knowledge of the etiology, signs, and symptoms, and management of acute hypertensive crisis can help NICU nurses improve maternal and neonatal outcomes.

Researchers have indicated that NICU nurses are essential in detecting early warning signs of disease and complications in postpartum mothers. Neonatal nurses are often the care clinicians who have the most consistent contact with mothers and families with infants in the NICU.[7–10] Trust between the nurse and mother is established

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during each interaction and creates opportunities for the mother to be open about her personal life.[11,12] Many mothers do not have follow-up appointments with their obstetric clinicians until 6 weeks postpartum; as a result, NICU nurses are often the most frequent healthcare providers to interact with the postpartum mother.[13,14]

Many NICUs have successfully transitioned to implement family-centered care,[15] with some using this model to maintain standards set by the baby-friendly initiative whereby mothers and families receive access to newborns 24 hours a day.[16] This increased time spent with mothers can aid NICU nurses in better recognizing the early warning signs of acute hypertensive crisis. Recognizing these early signs can lead to early intervention and treatment on behalf of the mother–neonate dyad, potentially enhancing outcomes.17,18

PATHOPHYSIOLOGY OF ACUTE HYPERTENSIVE CRISIS

The exact pathophysiology of postpartum acute hypertensive crisis remains unknown. Preeclampsia during pregnancy is thought to occur in 2 stages, with abnormal placentation leading to a maternal inflammatory response; however, most of this interaction occurs for unexplained reasons.[5,19,20]

Cytotrophoblasts (CTBs) are cells that form on the outer layer of the blastocyst to provide nutrients to the embryo. During normal placental implantation, these cells migrate from the chorionic villi into the uterine walls, deeply invading the spiral arteries within the uterine walls. This causes major remodeling of the spiral arteries so that they attain the physiologic properties required to perfuse the placenta adequately.[21]

In preeclampsia, CTB invasion of the interstitial uterine compartment is inconsistent and frequently shallow, which leads to an incomplete remodeling of the spiral arteries.[21] This inadequate spiral arteriolar remodeling results in narrow maternal vessels that are prone to arthrosis and fibrin deposits. Unlike a normal pregnancy, there are also markedly fewer endovascular CTBs, with some vessels retaining portions of their endothelial lining with relatively intact muscular coats while others are not modified.[21] As a result, placental

flow is compromised and can lead to placental ischemia. Doppler studies have shown that pregnant mothers with preeclampsia have a significant impairment of diastolic flow in the umbilical cord when compared with normal pregnancies.[21] The combination of abnormal CTB formation of the maternal vessels coupled with the inadequate perfusion of the placenta and reduction in its surface area likely causes the development of preeclampsia.[21] The mystery of what definitively causes these abnormalities still exists. Accordingly, there remains a critical need to determine and identify the instigating causes of preeclampsia.[21,22]

Risk Factors for Acute Hypertensive Crisis

It is imperative that clinicians are aware of the risk factors that predispose a pregnant or postpartum woman to develop an acute hypertensive crisis. The highest risk factor for developing preeclampsia is having a history of preeclampsia. Other risk factors include a family history of preeclampsia; chronic hypertension; women who have not given birth to a child previously; having multiples; mothers over 35 years of age; pregnancy originating from an egg donation; lower socioeconomic status; African American race; and a diagnosis of diabetes, kidney disease, thrombophilia, systemic lupus, obstructive sleep apnea, and overweight or obesity.[4,6]

Knowing these risk factors can help the clinician to better detect a postpartum acute hypertensive crisis. Bernstein and colleagues[18] published a consensus bundle on severe hypertension during pregnancy and postpartum as part of the National Partnership for Maternal Safety. This bundle addresses the readiness of every hospital unit to identify and deal with warning signs of severe hypertension in pregnant and postpartum women. In 2021, the California Maternal Quality Care Collaborative also published a quality improvement toolkit for improving the healthcare response to hypertensive disorders of pregnancy.[23]

Presentation of Hypertensive Crisis—Pregnancy Versus Postpartum

During pregnancy, women with an acute hypertensive crisis present to the emergency department or labor and delivery complaining of a headache, vision problems, or decreased fetal movement. At that time, the woman's blood pressure is monitored, blood is drawn for laboratory studies, and fetal surveillance studies are done.[24] During the postpartum period, the signs and symptoms are less clear because the mother may be sleep deprived, has pain or discomfort because of her delivery, and/or is solely focused on her neonate's health and not her own.

As postpartum preeclampsia can occur unexpectedly after childbirth, clinicians face the challenge of properly identifying patients at risk for this complication. Diagnosis of maternal acute hypertensive crisis may be delayed in the postpartum woman because studies such as fetal well-being can no longer be assessed to aid in the diagnosis.

Little research has been conducted on the distinction between presentation during pregnancy and presentation of preeclampsia during the postpartum period. Both periods have the same symptoms; however, Vilchez and colleagues found that mothers who were diagnosed with postpartum preeclampsia tended to have more severe symptoms (e.g., headache, nausea and vomiting, and higher blood pressure) than those who were diagnosed during pregnancy (Table 1).[4] Boakye and associates[25]

TABLE 1. ■ Signs and symptoms of postpartum hypertension or postpartum preeclampsia[6]

Postpartum hypertension: SBP ≥ 140 mmHg and DBP ≥ 90 mmHg for 2 or more occasions at least 4 hours apart.

Severe postpartum hypertension: SBP ≥ 160 mmHg and DBP ≥ 110 mmHg for 2 or more occasions at least 15 minutes apart.

What are the symptoms?

- Severe headache that is typically not resolved by over-the-coun-ter medications
- Visual disturbances, such as seeing spots or blurred vision
- Facial swelling
- Bilateral extremity swelling
- Nausea and vomiting
- Decreased urination
- Dizziness

- Shortness of breath
- Abdominal pain specifically in the upper middle abdomen

Note. DBP = diastolic blood pressure; SBP = systolic blood pressure.

found a specific demographic profile of mothers most at risk of developing postpartum preeclampsia and recommended that clinicians consider this profile while caring for women during the postpartum period.[25]

TABLE 2. ■ Types of maternal hypertension[6,29]

	Features
Gestational hypertension	• Systolic blood pressure of 140 mmHg or higher and/or a diastolic blood pressure of 90 mmHg or higher. • The high blood pressure first happens after 20 weeks of pregnancy. • Normal blood pressure before pregnancy.
Preeclampsia	• Systolic blood pressure of 140 mmHg or higher and/or a diastolic blood pressure of 90 mmHg or higher. • Develops after 20 weeks of pregnancy, often in the third trimester. It can also develop weeks after childbirth,during the postpartum period. • Severe headache. • Visual disturbances. • Facial swelling. • Bilateral extremity swelling. • Nausea and vomiting (in the second half of pregnancy). • Decreased urination. • Dizziness. • Shortness of breath. • Abdominal pain.
Preeclampsia with severe features	• A systolic pressure of 160 mmHg or a higher or diastolic pressure of 110 mmHg or higher. • A low number of platelets in the blood. • Abnormal kidney or liver function. • Pain in the upper abdomen. • Changes in vision. • Fluid in the lungs. • Headache that will not go away.
Eclampsia	• Caused by untreated, persistent hypertension, and significant proteinuria. • New-onset tonic-clonic, focal, or multifocal seizures (in the absence of other causative conditions such asepilepsy, cerebral arterial ischemia and infarction, intracranial hemorrhage, o drug use). • Can occur before, during, or after labor. • Preceded by severe and persistent headaches, blurred vision, photophobia, and altered mental status, orsometimes no warning signs or symptoms.

Signs and Symptoms of Acute Hypertensive Crisis Hypertensive pregnancy disorders in the United States are the most common diagnoses associated with postpartum readmissions and are one of the top six causes of maternal mortality.[2,26] An acute hypertensive crisis involves a severe increase in blood pressure that can lead to a stroke or organ damage; it can also embody several diagnoses.[18] Maternal hypertension, including preeclampsia, severe preeclampsia, and eclampsia, can be diagnosed up to 6 weeks after delivery (Table 2).[6] Each of these diagnoses involves elevated blood pressure that necessitates immediate intervention. Postpartum preeclampsia symptoms include headache, visual disturbances, swelling, nausea and vomiting, dizziness, and abdominal pain, and clinicians use these symptoms in addition to laboratory studies to determine a diagnosis. Proteinuria is usually a sign of preeclampsia, but some women will present with multisystemic signs and the absence of proteinuria. The presence of multisystemic signs

usually indicates disease severity.[21] A delay in timely intervention can increase maternal morbidity and mortality.[27,28]

TABLE 3. ■ Steps for performing a manual blood pressure in an adult[47]

1. Have the patient relax, sitting in a chair with feet flat on the floor, legs uncrossed, and back supported. The patient should be seated for 3–5 minutes without talking or moving around before recording the first BP reading.
2. Neither the patient nor the observer should talk during the rest period or during the measurement.
3. The blood pressure should be taken on the patient's bare arm.
4. Use an upper-arm cuff BP measurement device that has been validated and ensure that the device is calibrated periodically.
5. Support the patient's arm (e.g., resting on a table surface).
6. Select the correct cuff size. BP cuff bladder length should be 75%– 100% of the patient's measured arm circumference.
7. Use either the stethoscope diaphragm or bell for auscultatory readings.
8. For auscultatory determinations, use a palpated estimate of radial pulse obliteration pressure to estimate SBP. Inflate the cuff 20– 30 mmHg above this level for an auscultatory determination of the BP level.
9. For auscultatory readings, deflate the cuff pressure by 2 mmHg/s and listen for Korotkoff sounds.
10. Record SBP and DBP. If using the auscultatory technique, record SBP and DBP as the onset of the first of at least two consecutive beats and the last audible sound, respectively.
11. Record SBP and DBP to the nearest even number.
12. If the BP reading is outside of the normal range, you must repeat using a proper technique.

Note. BP = blood pressure; SBP = systolic blood pressure; DBP = diastolic blood pressure.

Early Identification and Management of Acute Hypertensive Crisis

Maternal hypertensive disorders can manifest without warning and worsen during postpartum, but if recognized early, they are treatable.[6,30,31] Maternal blood pressure usually peaks 3–6 days after delivery, typically after mothers have already been discharged home.[32–34] Because mothers with infants in the NICU visit after they are discharged from the delivery hospital, the NICU nurse may recognize signs of hypertension, or a mother may discuss her symptoms while visiting with her neonate.

Untreated postpartum hypertension can lead to seizures, stroke, or death.[35,36] Eclampsia, seizures because of maternal hypertensive disorders, are usually preceded by severe headaches, blurry vision, and altered mental status but also can present without any warning signs.[37] Postpartum preeclampsia calls for the same treatment recommendations as preeclampsia during pregnancy, with the addition of antihypertensives that are contraindicated during pregnancy.[23] Management of acute hypertensive crisis involves readmission to the Labor & Delivery Unit, away from the neonate, and typically includes magnesium therapy to prevent and treat seizures in pregnant and postpartum mothers.[6]

TABLE 4. ■ Example protocol for triaging maternal acute hypertensive crisis in the NICU

1. Mother complains of warning signs of acute hypertensive crisis(Table 1).
2. NICU nurse questions the mother regarding her signs andsymptoms.

   a. Mother inpatient

   i. Ask the mother if she has talked about her symptoms with the postpartum or L&D nurse?

   b. Mother outpatient

i. Do you have a headache that will not go away with over-thecounter meds? ii. Do you have upper abdominal pain that will not go away?

iii. Are you having vision changes like seeing spots or blurred vision? iv. Are you having any shortness of breath?

v. Have you had your first postpartum appointment?

3. Assess maternal blood pressure or have another nurse assessmaternal blood pressure. Depending on the severity of the blood pressure, the urgency varies.

a. Severe or high blood pressure along with warning signs of acute hypertensive crisis

i. Notify per your NICU protocol

1. Mother inpatient—notify L&D or postpartum nurse andNICU charge nurse
2. Mother outpatient—NICU charge nurse, Emergency Department, other medical personnel

b. Normal blood pressure along with warning signs of acute hypertensive crisis (Table 1)

i. Notify per your NICU protocol

1. Mother inpatient—notify postpartum or L&D nurse andNICU charge nurse
2. Mother outpatient—advise her to call her obstetrician for athorough assessment and evaluation, ideally within the next 1–3 days.

Impact on the Neonate

Many things can impact the mother's ability to be present with her hospitalized newborn, such as distance from the NICU, other children at home, transportation issues, and visiting policies. Rehospitalization of a mother compounds those issues and further increases time away from her newborn.[38] Many NICUs encourage maternal presence for skin-to-skin contact and bonding with the neonate as well as to facilitate breastfeeding. The neonate's development while in the NICU is positively impacted during maternal bonding. Separation, while the mother is treated for acute hypertensive crisis, can impact bonding and duration of breastmilk pumping and feedings.[15,39–43] Any opportunity for the NICU nurse to screen mothers may serve to reduce maternal morbidity and mortality and thus prevent undue hardship for the neonate and family.

Nursing Implications

Complications caused by hypertensive disorders in pregnant and postpartum women are leading causes of maternal morbidity and mortality. Several next steps are critical in supporting the health and well-being of postpartum mothers and their infants:[8,44]

1. Increase maternal awareness of the potential for acute hypertensive crisis in postpartum mothers.
2. Teach neonatal nurses to recognize early warning signs of this complication.
3. Implement standardized screening protocols for postpartum hypertensive crisis that are similar to those currently used to screen for postpartum depression.
4. Implement family-centered care, which may also improve early detection of maternal postpartum hypertension. With more time spent with families, nurses are better able to ascertain what the postpartum mother is experiencing because warning signs and symptoms may be downplayed because of lack of instruction or, perhaps, prioritizing the infant's health over her own. If a mother reports a continued headache, epigastric pain, vision changes, and lingering fatigue, for example, an assessment of her blood pressure would be appropriate.

Normal postpartum changes may be similar to those of postpartum hypertensive crisis. Mothers can experience fatigue, weight gain, anxiety, difficulty urinating after vaginal birth, overall achiness from

childbirth, lack of sleep, stress, or abdominal pain (Office of the Assistant Secretary for Health).[23,45,46] Communication is essential among the NICU team, the mother, and the obstetrical team to ensure that further assessment of the mother occurs as needed and that there is continuity of care. Sharing maternal findings in the NICU nurses' change-of-shift report can also be very beneficial in ensuring that every nurse is aware of the high-risk mother and that continuity of care has been established.

If a mother presents with or reports any hypertensive symptoms, the NICU nurse should ask if she has been to her first postpartum appointment with her clinician, screen her for additional signs and symptoms, and assess her blood pressure. Ideally, NICU units should store one adult-sized cuff for screening. Using the American Heart Association (AHA) guideline steps for obtaining blood pressure in Table 3 will help the NICU nurse obtain an accurate blood pressure.[47] The nurse should ensure the mother is seated with feet flat on the floor, relaxed, and quiet for at least 5 minutes. After removing clothing from the arm and selecting the correct size cuff, the nurse should use a properly calibrated blood pressure monitoring device to check the mother's blood pressure. Proper blood pressure measurement technique involves supporting the mother's arm and positioning the cuff at the level of the right atrium.[47] For blood pressure readings ≥160/110 mmHg, along with severe signs of distress such as shortness of breath, the NICU nurse should follow the hospital's policy for emergency response.[45] Depending on hospital protocol, the emergency response may include notifying the emergency response team and transporting the mother to the emergency department or to the Labor & Delivery Unit for an immediate evaluation. Following these recommendations helps ensure the postpartum mother is properly diagnosed and treated. Table 4 provides an example of a protocol to triage postpartum hypertensive crisis in mothers.

CONCLUSION

Early detection of postpartum hypertension in mothers is crucial for the well-being of the mother and the neonate. By capitalizing on new initiatives being instituted that encourage family-centered care for the neonate and postpartum mother, NICU nurses can contribute a unique role in caring for the newborn while advocating for the mother's most appropriate care.

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APPENDIX B. CHAPTER 3 ARTICLE

NOTE: Navigation with Adobe Acrobat Reader or Adobe Acrobat Professional: To return to the last viewed page, use key commands Alt/Ctrl+Left Arrow on PC or Command+Left Arrow on Mac. For "Next view," use Alt/Ctrl+Right Arrow on PC or Command+Right Arrow on Mac. See **Preface** for further details. If needed, use this link to return to **Chapter 3** after navigating within this appendix.

Introduction

Manuscript reused with authors' permission. Fant M, Rhoads S, Carroll L. Amplifying the Voice of Black Mothers Diagnosed with Hypertension After Birth Regarding Patient-Clinician Communication: Qualitative Interview Techniques. 2023.

Article

Qualitative Health Research

Amplifying the Voice of Black Mothers Diagnosed with Hypertension after Birth Regarding Patient-Clinician Communication: Qualitative Interview Techniques

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Introduction

Qualitative research is typically chosen when there is a need to obtain a deeper understanding of a phenomenon. When the aim is to explore the lived experiences of a population, qualitative interviews provide rich data by allowing participants' perspectives to be the main focus. With the postpartum period exhibiting the highest risk for maternal death, especially among Black postpartum mothers (Adams & Young, 2022), it is vital to explore the perceptions of Black postpartum mothers through their experiential lens. However, years of ethical violations and abuse of Black American research participants have negatively impacted research recruitment and participation efforts that could otherwise benefit this vulnerable population. Accordingly, the primary investigator (PI) learned additional techniques and skills while conducting this research project that can be replicated by other qualitative researchers to truly capture the perspectives of Black mothers. The purpose of this article is to discuss the investigator's experiences and lessons learned while conducting studies with Black mothers.

Acute Hypertensive Crisis

An acute hypertensive crisis, a condition embodying several diagnoses according to the Maternal Safety Consensus Bundle on Severe Hypertension (Bernstein et al., 2017)), results in a severe increase in blood pressure that can lead to a stroke or organ damage. For the sake of this study, the terminology of Acute Hypertensive Crisis will be used. The types of acute hypertensive crisis that can affect pregnant and postpartum women include preeclampsia, postpartum hypertension, and eclampsia (American College of Obstetricians and Gynecologists [ACOG], 2020)) (see Table 1). Each condition consists of elevated blood pressures during pregnancy and postpartum that requires immediate intervention. Preeclampsia is a form of new onset hypertension that can be diagnosed during pregnancy—usually after 20 weeks' gestation—and during the postpartum period (ACOG, 2020; Katsi et al., 2020). Preeclampsia is usually a new onset disorder coupled with proteinuria, but some women will present with multisystemic signs

and the absence of proteinuria (Erez et al., 2022). The presence of multisystemic signs usually indicates disease severity (ACOG, 2020). ACOG has listed the signs and symptoms of preeclampsia that clinicians should use to determine a diagnosis (Table 1).

Black American Postpartum Mothers

Briscoe et al. (2016) defined vulnerability as follows: "women are vulnerable when they experience 'threat' from a physical, psychological, or social perspective, where 'barriers' and 'reparative' conditions influence the level of vulnerability" (p. 2338). Black postpartum mothers are a vulnerable population per this definition, with a study by McLemore (2019) also finding that 1 in 6 Black women report mistreatment during pregnancy and postpartum periods. Considering the connection and attachment of the mother to her newborn and its development, the postpartum period is complex, thus necessitating a focus on dyad-patient care. This period of time is sensitive to the development of the neonate, and varying levels of maternal presence will be needed to ensure their optimal development (Launder, 2015). This means the mother has the innate responsibility of balancing and prioritizing her neonate's health and well-being as well as her own. In addition to challenges accompanying the postpartum period and its complexities, the African American/Black race is considered a vulnerable population due to systemic health inequities (Bowdler, 2023). Black mothers are 3-4 times more likely to die from pregnancy-related complications than non-Hispanic white mothers, and this mortality rate is worsening (Creanga et al., 2017). The literature has demonstrated that racism affects the quality of healthcare Black people receive (Altman et al., 2019; Markin & Coleman, 2021). Reports of not being heard or listened to have also been well-documented in the literature (Davis, 2019; McLemore et al., 2018; Vedam et al., 2019).

During many years of working as a Labor & Delivery nurse while also being a Black woman, the PI witnessed gaps in communication between Black mothers and the obstetric health care team. These observed complications during pregnancy and postpartum were further compounded by inadequate patient-provider communication, delays in care, and implicit bias, mostly putting these mothers at significant risk for adverse outcomes. The realization of how these gaps in communication and health care impacted the health and well-being of mothers became personal when the PI's close friend and work colleague, who was also a Black woman, suffered a massive stroke and passed away three days postpartum, leaving her newborn baby behind. The cause of her stroke was documented as "uncontrolled high blood pressure and delayed treatment." The following year, the investigator's best friend was unexpectedly hospitalized for postpartum preeclampsia. Fortunately, she was treated in a timely manner, but this was only because the investigator prompted her to call her doctor after screening and assessing her and recognizing the early warning signs of a hypertensive crisis. When the friend, who is also a Black woman, was asked about why she had not been honest with her white male doctor, she replied she did not feel like he would trust her symptoms or do anything about them.

Research Project

The title of the research project conducted was *Exploring Perceptions of Patient-Clinician Communication in Black Mothers Diagnosed with an Acute Postpartum Hypertensive Crisis*. The purpose of this mixed-methods study was to explore perceptions of care and patient-clinician communication of Black American postpartum mothers

diagnosed with and treated for an acute hypertensive crisis. Thirty-eight mothers completed a 24-question online survey exploring their communication with their doctors during their antepartum and intrapartum periods, with 20 out of this group of 38 agreeing to participate in a one-on-one interview conducted virtually via Zoom. Both quantitative and qualitative data were collected concurrently and then analyzed and integrated together. From the 20 interviews, four themes were identified: *Prior Experiences That Impact Perceptions of Care and Communication, Black Mothers Say Trust and Transparency Are Vital For Relationships, Black Mothers Desire Clear Communication and Information From Clinicians, and Black Culture and Cultural Competence Impacted My Care*

Qualitative Data Collection & Analysis

A phenomenological approach was selected for the qualitative content, as the purpose was to explore the phenomenon of Black American postpartum mothers' experiences and their perception of care and communication. Interpretive phenomenology, also called hermeneutic phenomenology, is based on the philosophical assumption of ontology that focuses on questioning experiences, interpretation, and understanding (Rodriguez & Smith, 2018). Interpretive phenomenology also focuses on the interaction between a situation and the individual and how one identifies and interprets this interaction as implicit (Rodriguez & Smith, 2018). A phenomenological approach is important in health professions education, as it focuses on the voice of the population being researched (Neubauer et al., 2019), ensuring that the participants' voices are heard and provide the reader with insight of their experience through their lens. Coding thematic analysis also ensured that the voices of Black postpartum mothers were heard by organizing and simplifying the complexity of the data into meaningful and manageable codes, categories, and themes (Peel, 2020).

Lessons Learned

During the study, several lessons learned emerged, with takeaways being observed regarding recruitment, qualitative interviewing, and data collection. Lessons learned from this project were grouped into the following categories: Reachability and Familiarity Impacts Recruitment, Providing and Understanding Informed Consent, Structure of the Interview Questions, Convenience: Making It Easy for Mothers to Participate, Participants' Interest in the Research Topic, and Relatability Garners Trust.

Reachability and Familiarity Impacts Recruitment

According to the literature, Black Americans tend to have low recruitment in research studies (Alegria et al., 2021; Frierson et al., 2019; Rogers et al., 2021; Taani et al., 2020). Moreover, many Black Americans report being unaware of research studies and having no understanding of the purpose of research studies (Frierson et al., 2019). This study aimed to recruit Black women from the Mississippi Delta Region of the United States (US), an area known for having historical and structural barriers that have contributed to difficulties associated with Black participant recruitment (Scharff et al., 2010). Because the inclusion criteria for the study included women of child-bearing ages (18 years to 40 years of age), this participant set comprised a large age group. Because of this wide age range, creative measures had to be undertaken to reach this population to determine their interest in participating. Millennials and Generation Z tend to utilize social media more than others (TrueList, 2023), and during the COVID-19 pandemic,

many people spent more time at home than socializing with others. For this reason, it was determined that advertising via social media platforms would be the best method of recruitment. The flyer was posted on the investigator's social media pages where other social media users were asked to share the flyer. The flyer was reposted on Instagram and Facebook by many Black women and Black birth workers, which increased visibility to more Black mothers who were eligible for the study. Many of them even commented that they were simply reposting to help other Black mothers' voices get heard.

The PI's connections in the birthing community also impacted recruitment and research participation. Working as a Labor & Delivery nurse at one of the largest local maternity units for several years provided personal connections to many obstetrical and maternal child nursing health care providers. These connections facilitated opportunities to collaborate with stakeholders, such as doulas, midwives, teachers, and maternal support organizers, who allowed the PI to disseminate study flyers and speak on Black maternal health at community events hosted by organizations. In October 2022, the PI spoke at an annual community meeting for the Arkansas Birthing Project, a non-profit organization led by Black women, and discussed the research project and desire to recruit participants (*Arkansas Birthing Project*, 2023). In January 2023, the PI also spoke at the University of Arkansas for Medical Sciences' Perinatal Outcomes Workgroup through Education and Research (POWER) virtual lunch meeting where evidence-based practices and guidelines are provided for obstetrical providers in Arkansas and surrounding states (The Perinatal Outcomes Workgroup through Education Research (POWER) | UAMS High-Risk Pregnancy Program, 2023). There, the PI was able to introduce herself as well as explain her dissertation study. As a result of these presentations for lay community members and obstetrical providers, many people in the community familiarized themselves with the PI's name and the background for this study, which was a critical factor for greater research participation.

Providing and Understanding Informed Consent

In order to ensure that the Black women fully understood the study and what their study participation meant, the PI considered the best way to provide informed consent. Informed consent was structured to include information on reasons for conducting the study, study procedures, possible benefits and risks of participation, and study confidentiality procedures. Every component of the consent was explained on an 8th grade reading level and avoided the use of medical terminology. The PI explained to each participant that they could withdraw from the study at any time and their participation throughout the study was voluntary. During the informed consent process, several participants had questions concerning anonymity and if participation in the study would impact their future health care services. Therefore, the most important piece emphasized to all participants was that all data would be de-identified prior to data transcription and analysis to maintain anonymity. Prior to beginning each interview, participants were assured that participating in the study would not impact future care because study findings would not be presented to individual doctors or hospitals. Further, participants were informed that the data would be aggregated and identifying information or specific provider, or hospital names removed prior to any future publication. This reassurance of anonymity allowed the participants to freely discuss their experiences, knowing that they

could say names, locations, and more with the knowledge that this information would not be revealed outside of their interactions with the PI. This ultimately facilitated easier conversation flow and more open and honest commentary on their experiences, as they were assured their identity would remain private.

Structure of the Interview Questions

When developing the interview guide, the PI carefully considered the wording of the interview questions and consulted with experienced qualitative researchers. Each participant was asked five interview questions using non-medical language in a conversational style. Each question was structured to be open-ended and specifically asked about their experiences. The five questions were as follows: 1) Tell me about your birth story? 2) What were your prenatal visits like? 3) Tell me about your postpartum experience and what preeclampsia means to you? 4) Can you recall your experience with your obstetrician and obstetrics team? and 5) In what ways does the healthcare system hinder Black women from achieving and maintaining optimal treatment for preeclampsia/high blood pressure? The structure of the interview guide and the conversational interview style allowed for the mothers to talk in detail about their birth stories, which most were excited to do. Allowing them to talk freely about their birth story allowed for the discovery of unexpected themes related to their perceptions of the care and communication they received. This allowed room for them to speak and walk the PI through their story. Probing questions were included to help redirect the participant if needed, but the findings were illuminating due to the openness of the participants.

Convenience: Making is Easy for Women to Participate

The original study plan involved the participant choosing whether to join the interview in-person or via Zoom. Since the start of the COVID-19 pandemic in March 2020, many people utilized Zoom to gather with groups as a substitute to gathering in-person (Kim et al., 2022) in order to slow the transmission of the COVID virus and keep others safe. However, in addition to safety advantages during the pandemic, many Zoom users realized how convenient virtual meetings were in comparison to meetings held in-person (Falter et al., 2022). The hassle of transporting to a location and finding parking seemed a bit daunting in comparison to taking a meeting in the comfort of one's own home and eliminating transportation time altogether. Because of this, all of the participants opted for a virtual interview via Zoom. The features of Zoom are also user-friendly and allowed for ease of use on a smart device or computer with webcam access. Features also included protection from others joining the interview, with password access being shared between the PI and participant only. For technical issues such as loss of internet connection, those participants were instructed to re-access the Zoom link from their emails to re-join and complete the virtual interview.

Specifically for this population, the Zoom platform allowed for the mothers, most of whom had their babies with them while on maternity leave or were working from home while caring for them, to be able to attend the interviews. Most of the moms were able to remain on camera throughout their virtual interviews. The PI served as the only interviewer, which provided consistency. She remained patient and avoided rushing while conducting the interviews. In addition, while the interview was being conducted, mothers

were given the opportunity to take short breaks to tend to their babies. This made the participants feel more comfortable with opening up and sharing their experiences more and also be willing to share recruitment details with other friends who were eligible to participate.

Participants' Interest in the Research Topic

All of the participants expressed interest in participating in this study due to its purpose and topic. All 20 of the interviewed participants were aware of the Black maternal mortality crisis and were impacted with fear and/or concern during their own pregnancy because of this knowledge. They shared that their willingness to participate was because they knew that it would directly benefit their population. They also stated that there is not enough research on Black postpartum mothers diagnosed with acute hypertensive crisis and expressed the need for more. Additionally, in their interviews they reported experiencing implicit bias from clinicians and feeling like nothing is being done about it. Therefore, they wanted to be a part of this change. Additionally, many mothers regardless of their backgrounds tend to be open to sharing their birthing experience, even in casual conversation. They typically can recall specific details, as childbirth is a hallmark event in their lives. Many of the participants had some sort of negative experience during their childbirth and postpartum experience related to dealing with their acute hypertensive crisis. Experiencing childbirth laced with unfortunate mistreatment, such as what was shared during the interviews, can be very traumatic.

Relatability Garners Trust

Experts on the research team for this study informed the PI that recruitment would be difficult, as Black Americans are traditionally harder to recruit into research studies due to mistrust and statistically lower literacy rates (Frierson et al., 2019). A strategy often used to combat the challenge of research mistrust is called "race-matching," or racial-concordance, which consists of coordinating racially matched researchers to participants in order to increase trust and improve recruitment (Frierson et al., 2019). Research mistrust is a common occurrence among this population due to years of ethical violations resulting in abuse by researchers on Black Americans.

Many Black Americans have knowledge of the historical deception and mistreatment of Black participants in the *Tuskegee Study of Untreated Syphilis,* and this has impacted their perceptions of research participation (Frierson et al., 2019; Le et al., 2022; Scharff et al., 2010). Being a Black female investigator of similar age, the PI was able to generate more trust and openness from the participants during the interviews. They appeared to be more relaxed, as if they were talking to a close friend, expressing their feelings about their experiences. Some participants even felt relaxed enough to be emotionally vulnerable during the interviews, expressing sorrow by crying openly during their interview and expressing their anger freely. This was important, as it added to the emotional weight of their experiences that were shared. The PI also recruited mothers who were sent flyers by mutual friends, family members, and work colleagues, as they knew the PI was a Black woman with a similar background and colleagues. Many of them felt like they could trust the study, as it was being conducted by a Black woman, and they made sure to tell the PI this in the interview.

Personal approaches that may have been unique to the PI at that time during the interviews were also used, such as initiating small talk prior to beginning the interviews, addressing the participant by name during the interview, laughing at their jokes, and maintaining eye contact and full attention when not writing notes. The PI also explained in the beginning that notes would be occasionally taken so that participants never felt like they were being ignored. Also, encouraging them to get comfortable, as the PI wanted them to detail their birth story and postpartum story, allowed them to take the reins of their own storytelling. In addition, because of the PI's Labor and Delivery nurse experience, she was familiar with the terms the participants used in the interviews and knew when to ask clarifying questions.

Conclusion

When it comes to amplifying the voice of Black postpartum mothers in qualitative research, it will take trust and a study focus that they find valuable to their population. Many of the participants knew that more research was needed for Black pregnant and postpartum mothers and wanted to simply do their part in contributing to these efforts. Considering flexibility and patience while interviewing this population is also vital, as it took several months to recruit participants for the study. Many of these lessons learned will benefit future research with this population in the future.

Ethical considerations. All participants consented to the study that was discussed in this manuscript electronically prior to data collection. Informed consent was provided again at the beginning of each qualitative interview. The authorized consent disclosure statement was obtained from the UTHSC IRB once they were deemed eligible to participate in the study.

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TABLE 1. Types of Maternal Hypertension During Postpartum

Maternal Hypertension Type	Features
Pre-eclampsia	• **Systolic blood pressure of 140 mm Hg or higher and/or a diastolic blood pressure of 90 mm Hg or higher.** • Develops after 20 weeks of pregnancy, often in the third trimester. It can also develop weeks after childbirth during the postpartum period. • Severe headache • Visual disturbances • Facial swelling • Bilateral extremity swelling • Nausea and vomiting (in the second half of pregnancy) • Decreased urination • Dizziness • Shortness of Breath • Abdominal Pain
Pre-eclampsia with Severe Features	• **Systolic pressure of 160 mm Hg or higher or diastolic pressure of 110 mm Hg or higher** • Low number of platelets in the blood • Abnormal kidney or liver function • Pain in the upper abdomen • Changes in vision • Fluid in the lungs • Headache that will not go away
Eclampsia	• **Caused by untreated, persistent hypertension and significant proteinuria** • New-onset tonic-clonic, focal, or multifocal seizures (in the absence of other causative conditions such as epilepsy, cerebral arterial ischemia and infarction, intracranial hemorrhage, or drug use) • Can occur before, during, or after labor • Preceded by severe and persistent headaches, blurred vision, photophobia, and altered mental status, or sometimes no warning signs or symptoms
HELLP (hemolysis, elevated liver enzymes, and low platelet count) Syndrome	• Same symptoms as severe pre-eclampsia, characterized by both low platelet and elevated liver enzymes

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APPENDIX C. CHAPTER 4 ARTICLE

NOTE: Navigation with Adobe Acrobat Reader or Adobe Acrobat Professional: To return to the last viewed page, use key commands Alt/Ctrl+Left Arrow on PC or Command+Left Arrow on Mac. For the next page, use Alt/Ctrl or Command+Right Arrow. See the **Preface** for further details. If needed, use this link to return to **Chapter 4** after navigating within this appendix.

Introduction

Manuscript reused with authors' permission. Fant M, Rhoads S, Carroll L, Cao X, Fouquier K, Tate D. Perceptions of Patient-Clinician Communication in Black Mothers Diagnosed with Acute Hypertensive Crisis: A Mixed Methods Study, 2023.

Article

Perceptions of Patient-Clinician Communication in Black Mothers Diagnosed with Acute Hypertensive Crises: A Mixed Methods Study

Abstract

Objective: To understand the perceptions of care and communication among Black postpartum mothers who were diagnosed with an acute hypertensive crisis.
Design: A convergent mixed-methods design.
Setting: Online Qualtrics survey and virtual one-on-one interviews via Zoom. Participants resided in the Mississippi Delta region of the United States: Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee.
Participants: A total of 38 postpartum Black mothers.
Methods: For the quantitative strand, we measured satisfaction of the patient-clinician relationship and communication using the *Doctor-Patient Communication* questionnaire and *HCAPHS Adult 4.0* (physician questions). For the qualitative strand, we asked participants to share their birthing and postpartum experiences while they were diagnosed with an acute hypertensive crisis.
Results: The median score of the *Doctor-Patient Communication* questionnaire was 52 (42.5~58), which shows that most participants rated higher satisfaction with their doctor-patient communication during their outpatient prenatal visits. There was correlation between the participants' overall score for their communication with their clinician during prenatal visits and if they felt their clinicians explained things in a way they could understand during their hospital stay ($r=0.485$, $p=0.002$). Using coding thematic analysis, we identified four themes: *Prior Experiences While Being Black Impacted My Current Perceptions, Black Mothers Say Trust and Transparency Are Vital For Relationships, Black Mothers Desire Clear Communication and Information from Clinicians, and Black Culture and Cultural Competence Impacted My Care*.
Conclusion: To meet the needs of Black postpartum mothers who experience high risk disorders such as acute hypertensive crises, obstetric clinicians must understand their experiences with patient-clinician communication and the adjustive communicative behaviors they adopt to navigate healthcare spaces. Repeated experiences of being dismissed and their symptoms being minimized have impacted their perceptions, and their goals are to receive optimum health outcomes. Obstetric clinicians must be intentional about providing detailed information early in pregnancy and establish a trusting relationship in order to improve their perceptions of care and patient-clinician communication.

Keywords: postpartum, Black, preeclampsia, patient-clinician communication

Precis

Results converge and diverge, showing the sociocultural influences that impacts patient-clinician communication, which still leaves Black mothers unsatisfied with education on their acute hypertensive crisis.

Introduction

Preeclampsia is the leading cause of maternal morbidity and mortality in the US, with the odds for maternal death being 1.39 times higher in the Mississippi-Delta region (Garovic & Kattah, 2022; Hardeman et al., 2022; Kuklina et al., 2009; Smith et al., 2014). Hypertensive disorders in pregnancies affect approximately 10% of pregnancies in the

United States and are the most common diagnoses associated with postpartum readmissions (Hoppe et al., 2020b). Hypertensive disorders of pregnancies can significantly increase the risk for cardiovascular diseases, which is the leading cause of pregnancy and postpartum-related death in the US, especially among Black mothers (Carter et al., 2017; Creanga et al., 2017; Johnson & Louis, 2022; Williamson, 2020). An acute hypertensive crisis is a severe increase in blood pressure that can lead to a stroke or organ damage, and it embodies several diagnoses according to Maternal Safety Consensus Bundle on Severe Hypertension (Bernstein et al., 2017). The types of acute hypertensive crisis that can affect pregnant and postpartum women include preeclampsia, postpartum hypertension, and eclampsia (ACOG, 2020a) (Figure 1). For the sake of this paper, the terminology of Acute Hypertensive Crisis will be used to encompass these diagnoses.

Variations in patient-clinician communication and clinical outcomes exist among different patient populations, yet evidence shows that patient-centered communication is key to improved patient outcomes (King & Hoppe, 2013; McCabe & Healey, 2018). Prior research has demonstrated poorer patient-clinician communication ratings among Black Americans than White Americans (Li et al., 2017). Communication patterns and barriers exist among Black American mothers and their clinicians for various reasons. Societal norms and structures contribute to those communicative techniques for both interactants that contribute to gaps in care. With patient-clinician communication influencing patient health outcomes, it is worth examining in this study as Black American mothers continue to have the highest maternal mortality rates in the country. Oftentimes, Black mothers do not feel empowered to relay information to their providers or when they let their provider know about their health concerns, the provider dismisses their symptoms (Altman et al., 2019). For pregnant and postpartum mothers, a focus on patient-clinician communication is imperative to facilitate collaboration, mutual trust, and respect. Due to the disparity of Black American mothers dying more often during and after childbirth, these mothers' perceptions of their patient-clinician communication exchange should be explored specifically with those who have experienced an acute hypertensive crisis.

Although there is limited literature on patient-clinician communication among Black American postpartum mothers who experienced an acute hypertensive crisis, there are individual studies closely related that give us the insight to consider (Altman et al., 2019; Attanasio & Kozhimannil, 2015b; Berk et al., 2023; Jeffers et al., 2023). During pregnancy and postpartum, effective communication is crucial as labor and birth are vulnerable and stressful times where lapses in communication can result in health complications or maternal mortality (Madula et al., 2018). Informational needs and self-advocacy are reportedly areas of concern when exploring patient-clinician communication between clinicians and Black American mothers. According to studies, Black American mothers reportedly did not receive adequate informational needs during pregnancy (Dehlendorf et al., 2017; McLemore et al., 2018). Many were left not knowing what was going on with their care and unsure about the treatment recommended. Some other barriers can be simple such as the patient's perceived attitudes of their clinicians. One study identified good behavior and attitudes from clinicians as effective facilitators in patient-clinician communication (Madula et al., 2018).

The purpose of this mixed-methods study is to explore perceptions of care and patient-clinician communication of Black American postpartum mothers diagnosed with and treated for an acute hypertensive crisis. We also aim to identify the factors that impact these perceptions.

Methods

Research Design. A convergent mixed methods design was utilized to better understand 1) the birth stories of Black American mothers; 2) their experiences (interactions/or relationships with their clinicians) and 3) and the lived of experience of being Black, pregnancy, and diagnosed with preeclampsia. The quantitative component consisted of a 15-questions *Doctor-Patient Communication questionnaire which measures* Black women's perceptions about their communication and care from their obstetric clinician during their prenatal visits. Additionally, the provider questions of the HCAHPS Adult Survey were used to measure their obstetric clinician's communication during their inpatient stay. The qualitative component utilized a semi-structured interview guide, that elicited information about participants experiences during pregnancy, childbirth, and postpartum while being diagnosed with an acute hypertensive crisis. Both the quantitative and qualitative data were collected simultaneously, analyzed separately and then merged together (see Figure 2). This study was granted approval from the Institutional Review Board (IRB) at The University of Tennessee Health Science Center (UTHSC).

Setting The odds for maternal death are 1.39 times higher in Mississippi Delta states than in non-Mississippi Delta states (Smith, Sandlin, Bird, Steelman, & Magann, 2014). Centered in this region lies the city of Memphis, which is the primary location of most Black mothers who participated in this study. Memphis is central in the infamous "Stroke Belt" and has a large population of hypertension and stroke victims each year, with the county population of 52% being Black (Shelby County TN, 2010; TN Department of Health, 2021). The study population is reflective of the birth statistics, as 63.8% of the births within Shelby County alone are to Black mothers (Shelby County TN, 2010; TN Department of Health, 2021).

Sample. Convenient sampling was used to recruit 50 mothers for the quantitative component, and a subset of 20 mothers were purposefully recruited for the qualitative component. Recruitment was conducted by two primary methods: flyers posted on social media and referrals from members of the community such as pastors at local churches, local family support organizations, OB/GYNs, nurses, daycare teachers, colleagues, family and friends. Eligibility for the study was determined by a pre-screening process. Potential participants contacted the study investigator and were pre-screened using six questions to determine eligibility. Eligible participants were Black women, over the age of 18 years old, no more than 12 months post-childbirth that occurred in the Mississippi Delta region of the United States *(Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee)*, were diagnosed with an acute hypertensive crisis during pregnancy or postpartum, ability to speak and read English and the ability to consent to this study. After the potential participant was determined to be eligible, the

investigator sent a participant specific Qualtrics link to an online survey. The online survey began with the same six online pre-screening questions before the consent disclosure statement.

Ethical considerations. All participants consented to the study electronically before beginning the survey and informed consent was provided again at the beginning of each qualitative interview. The authorized consent disclosure statement was obtained from the UTHSC IRB once they were deemed eligible to participate in the study.

Data Collection

Quantitative. The quantitative component utilized online surveys which were completed between September 2022 and March 2023. Participants were instructed to complete the survey thinking back on their experiences with one obstetrical clinician. Most of the participants completed the online survey based on interactions with their obstetrician or the on-call obstetrician at the time of care. There were 27 questions in the online survey. The first 7 questions consisted of 5 demographic questions and 2 characteristic questions. The next 15 questions were from the *Doctor-Patient Communication Questionnaire*, which asked participants to rate their communication with their obstetric clinician(s) during medical office visits or prenatal visits. The next 3 questions were from the *HCAHPS Adult Inpatient* survey and asked the participants about their care from their obstetric clinician(s) during their hospital stay for their childbirth and postpartum only. The next 2 questions served as validity questions as they asked for their state and facility where the childbirth occurred. These two questions were included to be compared with their geographical location at the end of the survey and aided in identifying fraudulent survey entries. These two questions were not included in the data analysis. The last two questions asked the participants if they would like to participate in a one-on-one interview and then asked for their contact information to receive their electronic gift card.

Demographic Questions. The demographic questions were developed by the investigator and completed by the participants to obtain important information about the demographic characteristics of the participants. Specifically, the demographic data were used to identify the characteristics that may contribute to their perceptions of their care and communication with their clinicians. Participants were asked about their highest level of education, Hispanic/Non-Hispanic descent, race, marital status, and the characteristic question asked participants about the type of health insurance at the time of delivery. **Table 1-1** illustrates the demographic variables used for the study.

Research Question	**Variables**	**Instruments**
Q: What are the characteristics of Black American mothers who were diagnosed with an acute hypertensive crisis at delivery or after delivery in the Southern region of the United States?	Characteristics	7 Demographic Questions 1. Age 2. Level of education 3. Ethnicity 4. Race 5. Marital Status 6. Health Insurance

			7. Race of Clinician
	Q: How do Black American mothers rate the quality of their patient-clinician communication throughout pregnancy and delivery?	Perceptions of Care and Communication	Doctor-Patient Communication Questionnaire (DPC - 15) HCAHPS Adult Survey – *3 questions about clinician*

Table 1-1. Quantitative Research Variables and Instrumentation

Doctor-Patient Communication Questionnaire. The *Doctor-Patient Communication questionnaire* was utilized to measure participants' adherence to treatment, knowledge of the acute illness, and satisfaction with communication with their provider or obstetrician in an ambulatory setting (Sustersic et al., 2018). According to the Agency for Healthcare Research and Quality (AHRQ), an ambulatory setting includes outpatient settings such as medical offices and clinics, ambulatory surgery centers, hospital outpatient departments, and dialysis centers (Ambulatory Care, 2018). The *Doctor-Patient Communication questionnaire* consists of 15 questions with graded responses on a Likert scale from 1 to 4: Yes (4), Possibly yes (3), Possibly no (2), and No (1). The main dimensions measured were listening, confidence, empathy, decision-making, information and reassurance. A higher total score indicated positive patient-clinician communication.

Psychometric properties of the DPCQ were calculated from a sample of 156 adults and adolescents over the age of 15 years old (accompanied with consenting parents) who were patients in the Emergency Department (Sustersic et al., 2018). To measure the reliability of the DPCQ, Cronbach's alpha was calculated as 0.89, indicating good internal consistency of the questionnaire (> 0.8).

HCAHPS Adult Inpatient Survey. The *CAHPS Hospital Survey*, also known as the HCAHPS or Hospital CAHPS, asks patients to report on their recent experiences with inpatient care (CAHPS Hospital Survey, 2014). The National Quality Forum has endorsed the CAHPS Hospital Survey as a measure of hospital quality (CAHPS Hospital Survey, 2014). There are two versions of this survey: one for adults and one for children. Both versions of the survey focus on aspects of hospital care that are important to patients. The *HCAHPS Adult Inpatient survey* is a standardized questionnaire people 18 and older who have been inpatients in medical, surgical, or obstetric departments (CAHPS Hospital Survey, 2014). The 29-question survey covers topics such as the communication skills of providers, helpfulness of staff, and access to care, which are important to consumers and for which they are the best source for this information. The surveys and accompanying tools can be used by providers, health care organizations, government agencies, and researchers to assess and improve patient-centered care (Dyer et al., 2012). For the purpose of this study, only three questions pertaining to their clinician during their inpatient hospital stay were selected to be used in the survey. All three multiple choice questions gave the choices were (1) Never, (2) Sometimes, (3) Usually, and (4) Always. The main dimensions evaluated how often their clinician treat them with courtesy and respect, how often their clinician listened to them carefully, and

how often their clinician explained things to them carefully in a way that they can understand. Psychometric properties of CAHPS were calculated from a sample of 170 survey respondents. To measure the reliability of the CAHPS survey, Cronbach's alpha was calculated as 0.70, indicating good internal consistency (Lee Hargraves et al., 2003). Statistical analysis of CAHPS was performed using SAS 5.0.

Qualitative. Semi-structured interviews were conducted with Black American postpartum mothers diagnosed with an acute hypertensive crisis to elicit information regarding perceptions of care and communication and factors that may influence their perceptions. All interviews were conducted by the primary author via Zoom, recorded, lasted 45 to 90 minutes, and conducted between September 2022-March 2023. The primary author is a Black woman of similar age to the participants and has previously worked as a Labor and Delivery nurse. During the interviews, the women could talk about any health care clinicians they interacted with during the perinatal period. Most of the participants completed the interview based on their obstetrician or the on-call obstetrician at the time of care.

The interview guide was investigator-developed in partnership with two experienced qualitative researchers. The interview guide consisted of 5 broad questions with a subset of probing questions for each broad category to encourage sharing information in greater detail. The first question asks for the participant to tell the investigator about herself and to discuss her experiences during her prenatal visits. The second interview question asked the participant to share her birth story. The third question asked the participant to share her postpartum experience and her experience with preeclampsia or postpartum hypertension. The fourth question asked the participant to discuss her communication interactions with her obstetric clinician and the obstetric team. The last question asks for them to add anything else that was not covered that they find to be important to share. Probing questions were only asked if needed to guide the interview. To ensure validity and trustworthiness, member checking was done with each participant at the end of their interview.

Analysis

Quantitative Analysis. Descriptive statistics (means, medians, standard deviation, and percentages) were implemented to describe demographics and survey variables. We examined the associations between demographic health factors and perceptions of care and communication were examined as well as correlation between their perceptions of care and communication during prenatal visits and hospital stay. We used a Dunn's rank association test to compare the median values of the three sub-domains of the Doctor-Patient Communication questionnaire by the demographics. We used the Spearman's rank correlation to assess relationships between doctor-patient communication during prenatal visits and doctor-patient communication during their hospital stay.

Qualitative Analysis. All interviews were recorded, transcribed verbatim by the primary author and loaded into a text-based data management program, NVivo 2022. To initiate analysis, the research team met virtually to read through the first few transcripts. A codebook was developed, and thematic analysis was employed to analyze the qualitative

data. This process involved reading each interview transcript multiple times to identify repetitive topics and to ensure that the participants' experiences were analyzed accurately before assigning codes and developing emergent themes, similarities, and differences. Emerging themes were then identified based on frequency in the rich data set, with actual phrases from the interviews to support these themes. Multiple coders were used to ensure validity and trustworthiness.

Mixed-Methods Analysis & Integration. Both the quantitative data and qualitative data were integrated to enhance the understanding the perceptions of care and patient-clinician communication among Black American mothers who are diagnosed with and treated for an acute hypertensive crisis. The primary investigator analyzed both data separately and then integrated the two datasets.

Results

Demographics. A total of 38 self-identified Black American postpartum mothers who were diagnosed with postpartum acute hypertensive crisis participated in this study and provided complete data, meaning they completed all 27 questions of the survey. The majority of the participants were 29-39 years old (73.68%, *n*=28). Most participants were married during the time of data collection (60.5%, *n*=23), 14 participants were single (36.8%, *n*=14), and one chose not to disclose. Most participants reported having private insurance (60.5%, *n*=23) and 15 participants had Medicaid (39.47%, n=23). Most participants had a 4-year college degree or higher (68.42%, *n*=26), 11 participants had high school diploma or GED (28.95%, *n*=11) and 1 participant had less than a high school diploma (2.63%, *n*=1). Eighteen participants were treated by a Black obstetric clinician (47.37%, *n*=18), 17 participants had a White obstetric clinician (44.74%), and 3 participants had an obstetric clinician of another race (7.89%, *n*=17) (Table 1). The demographics for the subsample of participants that participated in the qualitative interviews (*n*=20) were similar to the overall sample.

Quantitative Survey results. The median value of the total communication score was 52 (42.5~58), which shows that most participants rated higher satisfaction with their doctor-patient communication during their outpatient prenatal visits. We compiled percentages for each question in Table 2. Three sub-domains were created for the 15 doctor-patient communication survey questions: Information Sharing, Relationship and Trust, and Self-Adjustment and Assertiveness, and total communication score. The neutral total survey score is 37.5 with higher scores indicating more satisfaction with patient-clinician communication. Because the three CAHPS questions were scaled differently, they were analyzed separately.

Association of demographics with patient-clinician communication during prenatal visits. Education, marital status, and insurance showed no statistically significant differences in all three subscales and total communication score. There was statistically significant difference in median total score levels among the 3 age groups (p=0.037). The black mothers with ages 40 and up had median total score of 60 (59.5~60), which was significantly higher than those in age group 18 to 28 (49 (38.25~56.75), p = 0.025). Participants with Medicaid insurance had a median total score of 45 (35~58.5), while

those with private insurance had a median total score of 53 (46~58). However, this was not statistically significant (p=0.18). We also observed significant association of age groups and Information Sharing (p = 0.027) or Relationship Trust (p = 0.048). Black mothers with ages 40 and up had a median Information Sharing score of 32(32~32), significantly higher than those in reference group of age 18 to 28 (26 (19.5-30.25), p=0.027). For Relationship and Trust, Black mothers with ages 40 and up had a median score of 20 (19.75~20), significantly higher than those with ages 18-28 (17 (13.5~19), p=0.032).

When it came to the association of Self-advocacy and Assertiveness, age, education, and marital status showed no statistically significant differences. However, insurance showed a statistically significant association (p=0.0401). Participants with Medicaid insurance had a median score of 6 (4.5~8) and participants with private insurance had a median score of 8 (7~8). (Table 3).

Correlation of doctor-patient communication during prenatal visits and hospital stay. Spearman's correlation analysis was performed to evaluate associations between communication interaction with their obstetric clinician during prenatal visits and inpatient visits. There was significant correlation between the participants' Information Sharing with their clinician during prenatal visits and if they felt their clinicians explained things in a way they could understand during their hospital stay (r=0.481, p=0.0023). There was correlation between information sharing during prenatal visits and how often their clinicians explained things in a way they could understand during their hospital visit (r=0.481, p=0.0023). There was correlation between relationship and trust and how often the clinician explained things in a way they could understand during their hospital visit (r=0.463, p=0.0034). For self-advocacy and assertiveness during prenatal visits, there was correlation with how often they felt their clinician explained things in a way they could understand (r=0.358, p=0.0274).

There was correlation between if the participant felt they were given all the necessary information during their prenatal visits and if they felt their clinician listened to them carefully during their hospital stay (r=0.374, p=0.0206) and if their clinician explained things in a way, they could understand during their hospital stay (r=0.335, p=0.0398).

There was correlation between if the participant felt their clinician explained the advantages or disadvantages of treatment or care strategy during their prenatal visits and if their clinician explains things in a way they could understand during their hospital stay (r=0.343, p=0.0349). There was correlation between if the participant felt that the clinician had a reassuring attitude and way of talking during prenatal visits and how often clinicians explained things in a way they could understand during their hospital visits (r=0.411, p=0.0103).There was correlation between if the clinician was respectful in general and if the clinician treated them with courtesy and respect during their hospital stay (r=0.462, p=0.0035). There was correlation between if the participant felt their clinician told the whole truth during their prenatal visits and if their clinician explained things in a way, they could understand during their hospital stay (r=0.366, p=0.0237) (Table 4).

Sub-Analysis of Qualitative survey respondents vs Quantitative survey respondents. A sub-analysis was performed to examine any differences between the 20 participants who completed parts of the study and the 18 participants who completed the survey only. We compiled a table comparing the two groups in Table 5. Notably, 70.59% of the qualitative group had a Caucasian obstetric clinician and 55.56% of the quantitative group had a black obstetric clinician. This was statistically significant at p=0.044. For the question "Do you think the clinician was in general respectful?" during prenatal visits, 75% of the quantitative group rated "possibly, yes" compared to 25% of the qualitative group and 33.33% of the quantitative group rated "yes" compared to 66.67% of the qualitative group. This was statistically significant at p=0.05.

Qualitative. For the 20 participants that were interviewed, 15 out of the 20 were multi-parous, 8 out of the 20 had the latest pregnancy planned, 12 out of the 20 had a primary care clinician prior to their latest pregnancy, and 14 out of the 20 participants were still taking blood pressure medicine at the of the interview. From the 20 interviews, four themes emerged: *Prior Experiences While Being Black Impacted My Current Perceptions, Black Mothers Say Trust and Transparency Are Vital For Relationships, Black Mothers Desire Clear Communication and Information from Clinicians, and Black Culture and Cultural Competence Impacted My Care*. Table 5 presents some of the qualitative quotes for each of the themes that emerged from the interviews.

Prior Experiences While Being Black Impacted My Current Perceptions. The first theme, *Being Black Impacted My Current Perceptions*, represented how previous experiences in healthcare as a Black woman have impacted her perceptions of care and communication with her obstetric clinicians in her current encounter.

Subtheme: Prior Experiences That Impact Current Perceptions.
Participants reported how previous experiences with other clinicians (i.e., primary care physician, child's pediatrician, etc.) or experiences from their family and friends, impacted their willingness to trust and willingness to communicate openly with their obstetric clinician. Participants shared that they were used to feeling dismissed by prior clinicians and having their symptoms minimized, while sometimes witnessing different treatment to non-Black patients. These experiences impacted their current birthing and postpartum experience. They also reported similar experiences that family members and friends have shared, recalling times when they had negative interactions with healthcare clinicians that resulted in negative outcomes. These experiences reflected clinicians implicit bias, as they felt that these negative experiences were due to the color of their skin. Further leading to them carrying this experience of never being listened to which impacted the current birthing experience.

One mother stated, *"And all I hear when I hear hospital, you know, potentially not being listened to for five days. So, there's that. That was my birth story."*

Participants also shared how their previous birth story as well as other encounters within this pregnancy, impacted their perceptions of their current experience. Most had at least

one less than favorable experience, such as reporting that their epidural wasn't working well and they were experiencing pain, but the CRNA didn't check the line. These less than favorable experiences compounded with other isolated situations (e.g. list one or two of the situations) with this pregnancy and prior pregnancies, made mothers less than satisfied with the overall care and communication they received pertaining to their hypertensive crisis. This added to the mistrust that existed prior to their experience with their clinician and obstetric team, which impacted their decision for not being separated from their babies during care.

Another mother said, *"I was afraid. And I was like, Lord, I don't want to go through what I went through 10 years ago when I had my baby at the hospital, because it was scary. And I don't want to become a victim of circumstances because people not listening. They think they know better than you. You don't know nothing because is the color of your skin or the level of education. Or because they just have a perception about you all together."*

Subtheme: Encounters with Obstetric Team Members Impacted Communication with Clinician.

Several of the participants also voiced how negative experiences with obstetric nurses impacted their current experience. Several questioned the trustworthiness of obstetric clinicians while caring for their newborn (i.e., the nursery nurse or NICU nurse). If the nurse took the baby out of the room for any testing, this raised anxiety within the Black mother. Some were even reluctant to share any symptoms that made them seem incapable of caring for their baby while hospitalized, out of fear that their baby would be taken away.

One mother said, *"I was kind of hesitant [to open up], because you know they kind of play games like I don't want nobody on no "I'm just trying to take your baby-type stuff"."*

Participants also voiced their dissatisfaction with the way obstetric nurses communicated with their husbands, who were also Black. This impacted their perceptions of their communicative interaction with their obstetric clinician.

Another mother shared, *"A lot of the nurses the way they treated my partner was, I didn't like that either. A lot of the nurses that came in treated him like he wasn't any good. Just like the way that they were interacting with him and talking to him, like he wasn't doing what he was supposed to be doing. Or talk to him like he just wasn't present. But he was being very supportive the whole time."*

Black Mothers Say Trust and Transparency Are Vital For Relationships. The second theme, *Black Mothers Say Trust and Transparency Are Vital For Relationships,* represented how the mothers felt that trust and transparency from their obstetric clinicians were a vital indicator of their patient-clinician relationships, thus impacting their perceptions of care and communication. If trust and transparency were present, then mothers reported satisfaction with their communication interaction.

Subtheme: Perception That Clinician was Trustworthy.
Participants reported the clinician's transparency regarding their care and treatment, impacted their ability to gain trust in their clinician.

One mother stated, *"I can definitely say that I trust her and her judgement. She's one of those who would be transparent and say "If it were me". A lot of doctors, I don't think they do that. They probably don't advise you do that but maybe her and I have that relationship where she doesn't mind being vulnerable and say, "If it were me, I would do that". That puts me in comfort place because you're not just advising someone to do something. You feel how I feel."*

Subtheme: Seeing the Same Clinician Consistently.
Participants report having better trust and a better relationship with obstetric clinicians that they were able to see every visit, as opposed to seeing someone different every visit. Seeing a different clinician every prenatal visit interrupted the process of building a relationship with one obstetric clinician each visit, causing those mothers to feel as though they didn't really have a patient-clinician bond.

Another mother said, *"I saw somebody different every time I went. And so I felt like I really didn't know how to feel, I didn't really feel like I was you know…building a relationship. And you kind of felt like you were just being heard in and out. And like you didn't really feel like you were your doctor's patient I guess."*

Black Mothers Desire Clear Communication and Information From Clinicians. The third theme, *Black Mothers Desire Clear Communication and Information From Clinicians,* represented the participants' need for clear or detailed communication and education about acute hypertensive crisis, stating that it would have improved their satisfaction with their care and communication.

Subtheme: Lack of Proper Education and Clear Explanation.
Participants voiced not being educated on Acute Hypertensive crises such as preeclampsia in a way they could understand. The fear of the unknown impacted their desire to want better communication about preeclampsia.

One mother said, *"They also didn't really explain preeclampsia to me. They said I didn't have it until the end. But before like, they induced me because of gestational hypertension, not preeclampsia, but I had to get like four, like I went in four times to get tested for preeclampsia."*

Most were not even aware that this could happen during postpartum.

Another mother stated, *"I didn't even know this was a thing until someone sent me a flyer from you."*

Participants did not recall being told a diagnosis or the steps to monitor their blood pressure. Many reported how obstetric nurses never told them their actual blood pressure readings.

One mother shared, *"No one told me to monitor myself. Once I came home, check your blood pressure and none of that. They were like, "Okay, you should be good." But I was like, I'm checking my blood (pressure) because I know to. And I left the hospital and the blood pressure. It was doing okay. But it (blood pressure) was on the rise when I was leaving and 150s."*

Subtheme: Fear Impacted the Desire for Detailed Information.
Participants also desired more detailed information regarding their care as the lack of information regarding their hypertension diagnosis made them feel afraid and anxious.

One mother stated, *"They were very, very detail oriented. And I really appreciated that because I was very afraid."*

Black Culture and Cultural Concordance Impacted My Care. The fourth theme, *Black Culture and Cultural Competence Impacted My Care*, represented how participants perceived their communication and care to be much better with Black obstetric clinicians and perceived their interactions as lacking with white obstetric clinicians. For example, most of them felt like things pertaining to their care were clearly explained to them because their clinician was black. They felt like white obstetric clinicians dismissed them or omitted information due to implicit and explicit bias.

Subtheme: Felt the Need to Adjust Behavior to Be Heard.
Those who were treated by white obstetric clinicians reported the need to make adjustments in their behavior in order to reduce the chance of discrimination involving their care (or combat clinician bias). This includes their decision to reveal or not reveal their occupation and educational status.

One mother said, *"I code switch all the time when I speak to my doctor. I want to be taken seriously because if I don't, they will think that "Oh, we don't really have to listen to her. She don't know what she is talking about?" But I do. So absolutely, I do have to speak appropriately, and I cannot be myself at the least bit with these medical providers because I don't know who I'm going to get. I don't know if they're going to have my best interests at hand."*

Whereas others intentionally chose not to reveal their educational background, in an attempt to test the clinician for implicit/explicit bias.

Another mother said, *"I don't let them know [that I'm in the medical field] because I don't want you not to treat me like you would treat somebody else. Give me that whole roll out and tell me what I need to do, right? Don't assume that I know how to treat myself because I'm here for you to treat me."*

Participants also make strategic decisions such as bringing their partners to their prenatal visits, to combat the assumption that they are a single black, unsupported mother.

One mother stated, *"I have to be someone else in order for them to take me seriously. Because honestly, I didn't finish college, but I do have two years of education around my belt. I feel like when people see me automatically, they think that I don't know anything. And they already stereotype me. There's just another single black mom with all these kids. Because I do have… I have my hands full, and I love them to pieces. But I'm not a single black mom. I have a very supportive black husband, who is educated. He graduated and studied study criminal justice. He was a law enforcement officer, for a number of years before we got married. And, of course, to prevent such stereotypes, he's been present at all my appointments, just so that they won't think that I'm by myself and I don't have anybody."*

Subtheme: Felt Dismissed and Not Listened To.
Participants shared how they were dismissed by their white obstetric team whenever they reported their symptoms of their acute hypertensive crisis, which prompted them to be assertive and self-advocate for their own health.

One mother said, *"I had explained to the nurse in question that day that I went to the emergency room, and my blood pressure was elevated, they told me that I needed to follow up with them. And the nurse was giving me such a hard time. She was like, "Well, it's the holidays, and I doubt that they can see you." I said, "What do you want me to do because they told me to follow up with you." And she was like, "Well, I don't know what we can do."*

Subtheme: Felt More Comfortable with Black Clinician.
For those who had Black clinicians, the participants shared that they understood everything that they told them, which made them feel safe and more comfortable communicating with them.

Another mother said, *"Most of my doctors and nurses were my color, honestly. So everything that they talked about, I understood completely. Medical terms it was understandable, very clear. And even when they did start to speak in those high or kind of educated ways, they will take time and break it down to what it really means."*

Integration. Qualitative themes were compared to Quantitative results, with findings revealing that not all Quantitative results and Qualitative themes aligned or confirmed each other (Table 7). The collective reported on their surveys that they were satisfied overall with their patient-clinician relationships and communication during their prenatal visits and hospitalizations. However, the quantitative findings are limited as they do not expound on the factors that impact their perceptions of communication and care from their clinician. Qualitative themes suggest that there were extrinsic experiences with clinicians that impacts their decisions of how they communicate with their obstetric clinicians, as well as how they perceive their care. Participants had a total median score of 52 (42.5~58), which shows that most participants rated higher satisfaction with their

doctor-patient communication during their outpatient prenatal visits. However, qualitative themes suggest that participants desired more clear information and education about acute hypertensive crisis and education. *"Nobody has told me anything like yeah lot of women get high blood pressure after they have a baby, nobody. They told me that this runs in my family. And I'm like, "…Okay?"*

Examining even further, there was correlation between relationship and trust during the prenatal period and how often the clinician explained things in a way the patient could understand during their hospital visit (r=0.463, *p*=0.0034). Qualitative themes also suggest that their relationship with their clinician impacted their viewpoints on the care received and communication experience. *"She listens a lot um. If I have questions, she's going to explain to the T and make sure I understand exactly what's going on. So I never feel in the dark about anything or you know I don't feel like she's working and I'm just a patient or a subject who doesn't know what's going on. I always feel involved in my choices."* Expounding on relationship and trust, all twenty of the Black mothers report how being black has impacted these relationships and communication interactions. Black mothers reported feeling less satisfied with their communication with white clinicians, admitting to feeling the need to adjust the way they speak and behave in attempts to receive better care. *"I feel like I have to be educated. I feel like if I'm not educated, they'll try to just tell me anything."*

Discussion. At the time of data collection for this study (September 2022-March 2023), participants voiced their perceptions of care and communication. Our results validate the findings of other researchers that postpartum mothers experience mistrust, lack of information sharing and education, and fear of the unknown due to lack of adequate education of preeclampsia (Altman et al., 2020; Hansson et al., 2022).

Prior Experiences While Being Black Impacted My Current Perceptions. Participants voiced how clinicians in general do not listen to or care for Black women, therefore they approached this encounter with hesitancy and fears of being dismissed. Several studies report that Black pregnant and postpartum mothers often felt dismissed and not listened to during office visits and hospital visits (Altman et al., 2019; Berk et al., 2023). This can greatly impact maternal and fetal outcomes. When asked why, many of the participants voiced that they feel White obstetric clinicians do not think of their symptoms as severe or crucial, in comparison to non-Black mothers. Participants shared statements such as, *"They don't really listen to us like they do I will say of a white woman. If a black woman say, "Oh, my head has been hurting all day today." "Oh, you know, this was sign of this. This is symptom like that… this can come along with it." But I feel like if a white woman say, "Oh, my head was hurting today, Doc." "Oh, no, that's not okay. Like, okay, this is what I can prescribe you." You know what I'm saying?"*

The beliefs that Black mothers do not care about their health or wellbeing of their children, or that they are more overweight and unhealthier due to genetic predispositions, are all harmful beliefs that causes clinicians to minimize symptoms instead of raising concern (Lujan & DiCarlo, 2018; Tsai et al., 2016). For example, there is this belief among healthcare professionals that because Black Americans are at a higher risk for

developing high blood pressure, then it's a genetic disorder and an expected comorbidity for Black Americans. However, having high blood pressure is not a "Black disease" and having this mindset can minimize the severity of preeclampsia in Black mothers. Dismissing symptoms or pre-hypertensive blood pressure readings on Black mothers can lead to a bigger threat and puts them at risk for stroke and/or death.

Black mothers' experiences maneuvering in the healthcare system have caused a great deal of mistrust and hypervigilance during their care to where they are also observing, and they value the appropriate treatment of their significant others and their newborns by obstetric staff. Removing their newborns out of their hospital rooms without any explanation that makes sense to them, negatively impacted their experiences while being treated for acute hypertensive crisis. Observing the way non-Black obstetric nurses ignore or not acknowledge their support person also impacts their perceptions of their care and communication.

It's important to realize that much of Black mothers' past experiences navigating the healthcare system molds their current perceptions of care while being treated for acute hypertensive crisis from their obstetric clinician.

Black Mothers Say Trust and Transparency Are Vital For Relationships. Relationship and trust are essential for Black mothers to be able to express and receive info, thus improving information sharing on both ends (V. Adams & Craddock, 2023). The obstetric clinician's transparency during communication made Black mothers feel like they mattered and feel like they could trust them. Familiarity of the clinicians were a true indicator of if the mother shared her symptoms or trusted her clinician with the information being shared. Mothers who reported communication and trust issues with the obstetric staff where they questioned their safety, did not feel safe because they had not established a rapport and were not familiar with them. Depending on the obstetric office or hospital system, some pregnant and postpartum mothers see a different obstetric clinician each prenatal visit. They may even have an obstetric clinician that they never met before, deliver their baby and/or treat them for postpartum hypertensive crisis. Also, if they have trust and transparency from their clinician, their clinician would have communicated to the mother that they would be seeing a different clinician every prenatal visit. Some mothers reported having a bond with their black obstetric clinicians and shared how much they really liked them, but also reported that they still weren't given clear education about preeclampsia. Lastly, the participants valued the time spent discussing their care during their prenatal visits and they related this to building trust with their obstetric clinician. Many times, due to high patient volumes, physicians do not spend enough time connecting with their patients and their visits are very quick. Sometimes, obstetric clinicians have to go to the hospital for an unexpected or emergency delivery. In the world of obstetrics, the emergency ranks priority over the routine visit.

Black Mothers Desire Clear Communication and Information from Clinicians. Our findings were similar to McLemore et al (2019) and Berk (2023), that Black postpartum mothers are still not receiving clear education on post-birth warning signs, specifically regarding acute hypertensive crisis (Altman et al., 2019; Berk et al., 2023). In one study,

only 54% of Black postpartum mothers reported being educated on post-birth warning signs. (Y. J. Adams & Young, 2022). Quality education is important in order to minimize the risk. When a mother is discharged from the hospital, the burden is on her and her family to be able to recognize when something is wrong and seek emergency care (Y. J. Adams & Young, 2022). Considering the busyness of caring for a newborn around the clock with inconsistent sleep schedules, support persons returning to work and no longer right by their side throughout the day, many are left with the responsibility of identifying their own symptoms and reporting them to their obstetric clinicians. Many of the participants reported a lack of education and a lack of explaining details surrounding their preeclampsia diagnosis. They desired to know their blood pressure readings and steps to properly monitor their high blood pressure but were not given this information. The reasons why could vary, but their belief is that their obstetric clinicians minimized the severity of their hypertension and simply didn't care about their well-being.

Black Culture and Cultural Competence Impacted My Care. Black mothers are not new to their disadvantage in the healthcare system and feel the need to adjust or be strategic in receiving transparent information about their care. Most of the participants made statements such as: "It is all about navigating those spaces and just doing. It sounds crazy, honestly you need to do what you do need to survive." Code-switching is the act of changing or adjusting your language, accent, style of speech, or behavior to assimilate to the environment and people present (Kusi-Appiah, 2022). For Black mothers, code switching is a tool that is necessary in efforts to receive the best care and communication and to them, it is the difference between life and death. All twenty of the participants acknowledged that racism is an issue in healthcare overall and that they agree that clinicians do not value their wellbeing in comparison to non-Black mothers. For many of the mothers, their goal was to simply make it out of the hospital alive. "It's so racist... so many aspects and I just literally do what I can to survive." "How can I literally make it out of the hospital alive?" With Black women being three times more likely to die due to childbirth related causes in comparison to White women, implicit bias has been identified as a causative factor, which many Black women are aware of (Janevic et al., 2020). The beliefs that Black mothers do not experience pain the same as non-Black women has caused a great deal of bias, which is why Black mothers aren't offered medications as much as non-Black mothers (Drogell et al., 2022; Kroll et al., 2022). This coincides with the belief that Black mothers are stronger or more resilient than non-Black mothers.

Race concordance with the obstetric clinician is a factor when examining the contrast between quantitative results and qualitative results. Eight out of twenty participants had Black obstetric clinicians and 12 out of 20 had white obstetric clinicians. According to a previous study, racial and ethnic concordance with one's clinician is related to patient's trust in one's clinician (Greene et al., 2023). Black mothers with black obstetric clinicians reported a sense of trust and safety while being cared for, and they felt that it was because they were Black. They reported feeling comfortable and didn't feel the need to make adjustments like code-switching, just to get adequate communication regarding their care. Previous studies shared similar findings that Black mothers find it to be beneficial to be treated by Black obstetric clinicians (Janevic et al., 2020; McLemore et al., 2018). Some of the participants with Black obstetric clinicians scored their obstetric clinician's

communication as highly satisfactory on the survey, but in the interviews, they shared that they did not receive enough information and education on post-partum preeclampsia. One participant mentioned that she loved her OB/GYN like a sister, stating “That’s my, girl!”. She also stated that when she took the survey, she didn’t want to score her low because she really liked her clinician, but that she desired more information about postpartum hypertension and more communication about her treatment.

Limitations. The results may not be generalizable to other maternal high-risk events due to the sample size and participant characteristics, as this study will only be conducted on postpartum mothers who were diagnosed with acute hypertensive crisis. However, we aimed to provide a comprehensive description of our methodology that may encourage other studies to use similar methods with different study populations and other phenomena. The participants in this study will be purposefully sampled, which may lead to bias and a non-representative sample. There was a variation in the type of obstetric clinicians prior to treatment for their acute hypertensive crisis(i.e. OB/GYN, midwife, etc) which can pose a limitation to their shared experiences with patient-clinician communication. In addition to this, the participants may have been treated by a different obstetric clinician during their hospital stay than the clinician(s) who visited them during prenatal visits, as some obstetric clinics are not set up to see the same clinician consistently. There were participants from both rural and urban areas, which can impact where the participant received prenatal care and treatment for acute hypertensive crisis.

Implications for Research. Further research is needed to explore the perceptions from an obstetric clinician’s viewpoint as well as obstetric nurses and doulas. Their impact on Black mothers’ experiences during childbirth and postpartum plays a role in the way they decide to communicate with their clinician. Another research opportunity could include a more diversified sample that has more participants from impoverished regions and different age groups. Further research is needed in a quantitative aspect as far as survey instruments specific to Black pregnant and postpartum mothers. Generalized hospital surveys, such as the CAHPS survey that measure patient experiences with communication and care while hospitalized, are not validated specific to the population. During childbirth and postpartum, the participant is not always being treated solely by the delivering obstetric clinician. Also, it should be considered that many Black Americans do not approach research surveys in the manner it is used for, but as more of a punitive outcome based on the participants evaluation. Giving their feedback to ultimately impact practice changes for their population as opposed to giving their feedback which may cause those specific clinicians to receive low ratings.

Implications for Practice. The approach to communicating with Black postpartum mothers with acute hypertensive crisis should be intentional by the obstetric clinician, considering the multiple experiences many have undergone prior to this experience. Being intentional about establishing a rapport and making a connection, to show interest in relationship building, will therefore improve the trust within this population of women who have experienced years of medical mistrust. Understanding that many of them have felt unheard and undervalued as patients, should motivate clinicians to spend more time listening to Black mothers and also taking the time to be thorough with explaining their

care and providing thorough education. Acknowledging and considering Black mothers birth plans and desires of how they would like for their pregnancies and birth to take place are also ways to strengthen positive patient-clinician relationships and maternal outcomes. Cultural competency and implicit bias education is desperately needed within the curriculum for medical students, citing research findings to better explain why it is important to identify bias before treating this population of mothers. There are opportunities to improve patient education, such as developing hospital protocols for discharge teaching to include warning signs of acute hypertensive crisis. There are also training opportunities for clinicians in other areas that the postpartum mother may visit, such as emergency room clinicians. Teaching those clinicians about risk factors for postpartum hypertensive crisis are extremely important, especially for patients who do not have access to an OB emergency department.

Conclusion

Being diagnosed with an acute hypertensive crisis during the postpartum period is to be taken seriously. However, many mothers are not aware of the signs and symptoms to report. In addition to this, being a Black mother navigating spaces in obstetric healthcare can be challenging as the odds of a favorable outcome are stacked against them. With maternal morbidity and mortality continuing to rise, we aimed to explore Black mothers' perceptions of care and patient-clinician communication while being diagnosed with a high-risk disorder like acute hypertensive crisis. Our findings helped reveal that the healthcare system impacts the way Black mothers perceive their care and communication with their obstetric clinician, but also compassion and relatability improves the patient-clinician relationship. Having an established positive relationship early in pregnancy can positively impact the communication interaction between Black mothers and their obstetric clinician. Early education on the signs and symptoms of acute hypertensive crisis is desired among Black mothers, especially due to the rising maternal mortality rates for Black women. Clinicians should consider approaching patient interactions with Black mothers with the primary intent of establishing a relationship and being thorough with information involving their care.

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Figure 1. Types of Acute Hypertensive Crisis

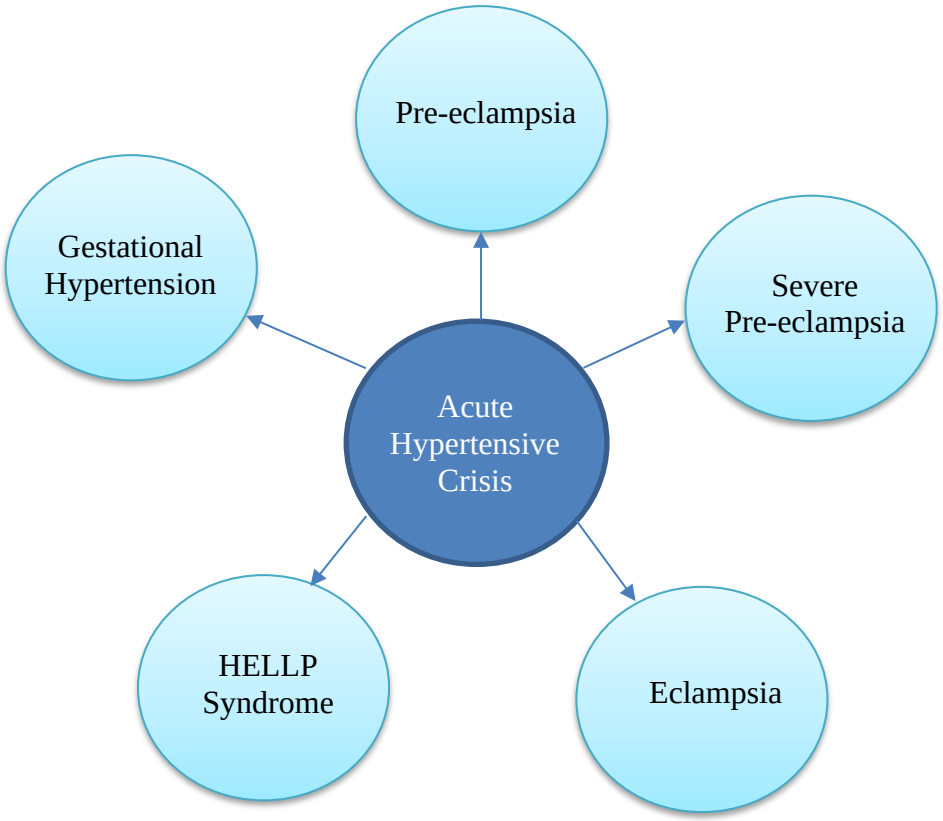

Figure 2. Diagram of the Convergent Study Design

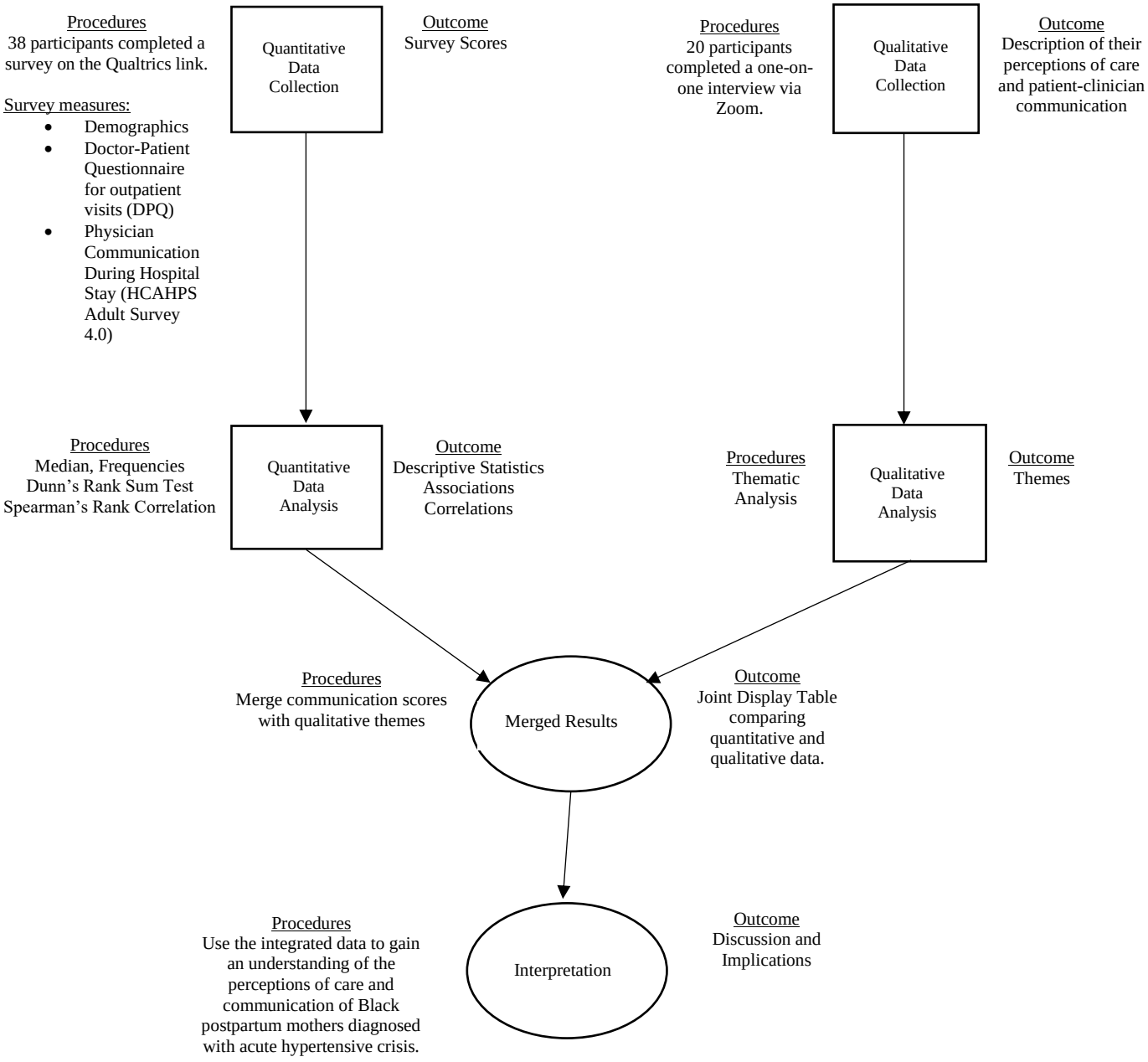

Figure 3. Conceptual Model

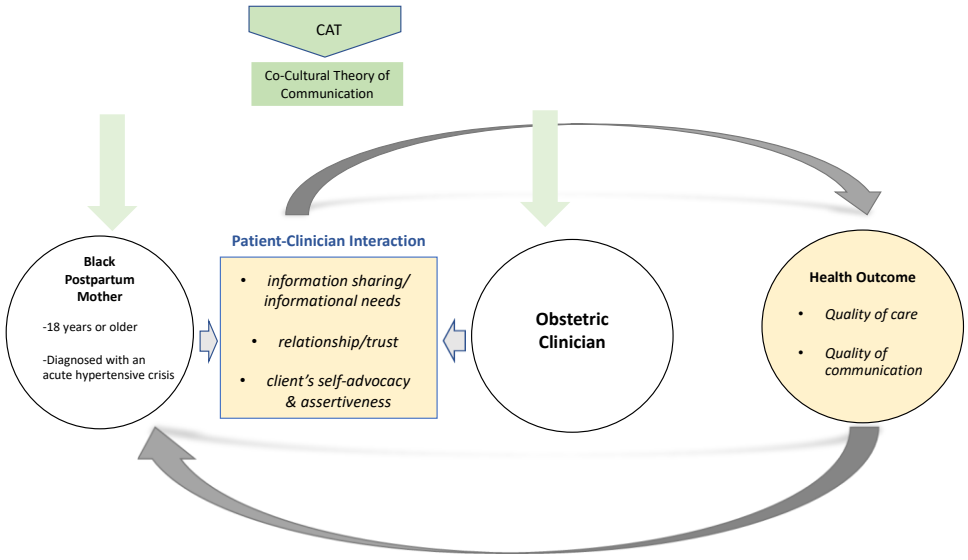

Table 1. Participant Demographics

Demographics	**Levels**	***N*%_Median IQR**
Age Range	18~28	6 (15.79%)
	29~39	28 (73.68%)
	40+	4 (10.53%)
Education Level	<High school	1 (2.63%)
	High school	11 (28.95%)
	College+	26 (68.42%)
Marital Status	Single	14 (36.8%)
	Married	23 (60.5%)
	Undisclosed	1 (2.7%
Insurance	Medicaid	15 (39.47%)
	Private	23 (60.53%)
Race of Clinician	Black	18 (47.37%)
	White/Caucasian	17 (44.74%)
	Other	3 (7.89%)

Table 2. Doctor Patient Communication Questionnaire

1. Did the provider listen to you carefully during your visits?	1 No	4 (10.53%)
	2 Possibly, No	4 (10.53%)
	3 Possibly, Yes	11 (28.95%)
	4 Yes	19 (50%)
2. **Did the provider allow you to talk without interrupting you?**	1 No	4 (10.53%)
	2 Possibly, No	1 (2.63%)
	3 Possibly, Yes	5 (13.16%)
	4 Yes	28 (73.68%)
3. **Did the provider encourage you to express yourself/talk?**	1 No	5 (13.16%)
	2 Possibly, No	1 (2.63%)
	3 Possibly, Yes	11 (28.95%)
	4 Yes	21 (55.26%)
4. **Did the provider examine you thoroughly?**	1 No	5 (13.16%)
	2 Possibly, No	4 (10.53%)
	3 Possibly, Yes	10 (26.32%)
	4 Yes	19 (50%)
5. **Do you feel that the provider understood you?**	1 No	9 (23.68%)
	2 Possibly, No	3 (7.89%)
	3 Possibly, Yes	8 (21.05%)
	4 Yes	18 (47.37%)
6. **Was it easy to understand the provider?**	1 No	2 (5.26%)
	2 Possibly, No	2 (5.26%)
	3 Possibly, Yes	11 (28.95%)

	4 Yes	23 (60.53%)
7. **Do you feel you were given all the necessary information?**	1 No	6 (15.79%)
	2 Possibly, No	5 (13.16%)
	3 Possibly, Yes	12 (31.58%)
	4 Yes	15 (39.47%)
8. **Did the doctor explain the advantages and disadvantages of the treatment or care strategy?**	1 No	7 (18.42%)
	2 Possibly, No	5 (13.16%)
	3 Possibly, Yes	5 (13.16%)
	4 Yes	21 (55.26%)
9. **Did the provider involve you in the decision making?**	1 No	6 (15.79%)
	2 Possibly, No	2 (5.26%)
	3 Possibly, Yes	9 (23.68%)
	4 Yes	21 (55.26%)
10. **In your opinion, did the provider have a reassuring attitude and way of talking?**	1 No	7 (18.42%)
	2 Possibly, No	3 (7.89%)
	3 Possibly, Yes	11 (28.95%)
	4 Yes	17 (44.74%)
11. **Do you think the provider was in general respectful?**	1 No	2 (5.26%)
	3 Possibly, Yes	12 (31.58%)
	4 Yes	24 (63.16%)
12. **Did the provider make sure you understood his explanations and instructions?**	1 No	4 (10.53%)
	2 Possibly, No	2 (5.26%)
	3 Possibly, Yes	11 (28.95%)
	4 Yes	21 (55.26%)

13. **Do you think the provider told the whole truth?**	1 No	5 (13.16%)
	2 Possibly, No	3 (7.89%)
	3 Possibly, Yes	12 (31.58%)
	4 Yes	18 (47.37%)
14. **Do you have confidence in this provider?**	1 No	4 (10.53%)
	2 Possibly, No	2 (5.26%)
	3 Possibly, Yes	9 (23.68%)
	4 Yes	23 (60.53%)
15. **Did the provider reply to all your expectations and concerns?**	1 No	5 (13.16%)
	3 Possibly, Yes	8 (21.05%)
	4 Yes	25 (65.79%)
16. **During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?**	2 Sometimes	5 (13.16%)
	3 Usually	15 (39.47%)
	4 Always	18 (47.37%)
17. **During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?**	1 Never	1 (2.63%)
	2 Sometimes	7 (18.42%)
	3 Usually	15 (39.47%)
	4 Always	15 (39.47%)
18. **During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?**	1 Never	2 (5.26%)
	2 Sometimes	7 (18.42%)
	3 Usually	14 (36.84%)
	4 Always	15 (39.47%)
Total		52 (42.5~58)
Information Sharing		27.5 (22.25~31.75)

Relationship & Trust		17 (14.25~19)
Self Advocacy/Assertiveness		7.5 (6~8)

Table 3. Association of demographics with the communication during prenatal visits

Response	Predictor	Level	(*N*) Subject	Median	IQR	P-value	P-value
Total	Age Range	Age.Range:18~28	6(15.8%)	49	38.25~56.75	—	0.0367
		Age.Range:28~39	28(73.7%)	51	42~55	0.8052	
		Age.Range:40+	4(10.5%)	60	59.5~60	0.0253	
	Education	<High school	1(2.6%)	40	40~40	—	0.4364
		High school	11(28.9%)	52	40.5~54	0.2442	
		College+	26(68.4%)	53	44.25~58.75	0.3651	
	Marital Status	Single	14(37.8%)	50	37~56.75	—	0.4792
		Married	23(62.2%)	52	44.5~58	0.4792	
	Insurance	Medicaid	15(39.5%)	45	34.5~58.5	—	0.1766
		Private	23(60.5%)	53	46~58	0.1766	
	Interviewed?	Interviewed	20(52.6%)	53	42~58.5	—	0.7688
		Not Interviewed	18(47.4%)	51.5	45~57.25	0.7688	
Information Sharing	Age Range	Age.Range:18~28	6(15.8%)	26	19.5~30.25	—	0.0266
		Age.Range:28~39	28(73.7%)	26	22~29.25	0.9962	
		Age.Range:40+	4(10.5%)	32	32~32	0.0273	
	Education	<High school	1(2.6%)	23	23~23	—	0.5898
		High school	11(28.9%)	27	20~28.5	0.4429	
		College+	26(68.4%)	28	23~32	0.6263	
	Marital Status	Single	14(37.8%)	25.5	19.25~30.25	—	0.4771
		Married	23(62.2%)	28	22.5~31.5	0.4771	

	Insurance	Medicaid	15(39.5%)	24	16.5~31.5	—	0.2576
		Private	23(60.5%)	28	23.5~31.5	0.2576	
	Interviewed?	Interviewed	20(52.6%)	27	22.5~32	—	0.9646
		Not Interviewed	18(47.4%)	27.5	22.5~30.75	0.9646	
Relationship Trust	Age Range	Age.Range:18~28	6(15.8%)	17	13.5~19	—	0.0482
		Age.Range:28~39	28(73.7%)	17	13.75~18.25	0.8062	
		Age.Range:40+	4(10.5%)	20	19.75~20	0.0317	
	Education	High school	1(2.6%)	13	13~13	—	0.4954
		High school	11(28.9%)	17	14.5~18.5	0.2525	
		College+	26(68.4%)	17	15~19.75	0.3324	
	Marital Status	Single	14(37.8%)	17	13~19	—	0.6468
		Married	23(62.2%)	17	15~19	0.6468	
	Insurance	Medicaid	15(39.5%)	15	12.5~19	—	0.1698
		Private	23(60.5%)	17	16~19.5	0.1698	
	Interviewed?	Interviewed	20(52.6%)	18	13.75~20	—	0.4876
		Not Interviewed	18(47.4%)	17	15.25~18.75	0.4876	
Self - Advocacy & Assertiveness	Age Range	Age.Range:18~28	6(15.8%)	6	5.25~7.5	—	0.2614
		Age.Range:28~39	28(73.7%)	7.5	6~8	0.305	
		Age.Range:40+	4(10.5%)	8	7.75~8	0.1021	
	Education	High school	1(2.6%)	4	4~4	—	0.2446
		High school	11(28.9%)	7	5.5~8	0.1049	

		College+	26(68.4%)	8	6.25~8	0.169	
	Marital Status	Single	14(37.8%)	6.5	4.25~8	—	0.1279
		Married	23(62.2%)	8	7~8	0.1279	
	Insurance	Medicaid	15(39.5%)	6	4.5~8	—	0.0401
		Private	23(60.5%)	8	7~8	0.0401	
	Interviewed?	Interviewed	20(52.6%)	7.5	6~8	—	0.9249
		Not Interviewed	18(47.4%)	7.5	6~8	0.9249	

Table 4. Spearman's Rank Correlation Coefficient of Doctor-Patient Communication during Prenatal Visits vs. Hospital Stay

Prenatal Visits (Variable 1)	Hospital Stay (Variable 2)	*r*	P-value
1. Did the provider listen to you carefully during your visits?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.299	0.068
1. Did the provider listen to you carefully during your visits?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.354	0.0294
1. Did the provider listen to you carefully during your visits?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.463	0.0034
2. Did the provider allow you to talk without interrupting you?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.118	0.4806
2. Did the provider allow you to talk without interrupting you?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.2	0.2283
2. Did the provider allow you to talk without interrupting you?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.277	0.0921
3. Did the provider encourage you to express yourself/talk?	Q21. During this hospital stay, how often did providers	0.227	0.1699

	(OB/GYN, midwives, etc) treat you with courtesy and respect?		
3. Did the provider encourage you to express yourself/talk?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.179	0.2827
3. Did the provider encourage you to express yourself/talk?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.303	0.0644
4. Did the provider examine you thoroughly?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.189	0.2565
4. Did the provider examine you thoroughly?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.296	0.0712
4. Did the provider examine you thoroughly?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.531	6e-04
5. Do you feel that the provider understood you?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.145	0.3852
5. Do you feel that the provider understood you?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives,	0.083	0.6187

	etc) listen carefully to you?		
5. Do you feel that the provider understood you?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.348	0.0324
6. Was it easy to understand the provider?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.316	0.0532
6. Was it easy to understand the provider?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.283	0.0852
6. Was it easy to understand the provider?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.111	0.5087
7. Do you feel you were given all the necessary information?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.272	0.0986
7. Do you feel you were given all the necessary information?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.374	0.0206
7. Do you feel you were given all the necessary information?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a	0.335	0.0398

	way you could understand?		
8. Did the doctor explain the advantages and disadvantages of the treatment or care strategy?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.259	0.1171
8. Did the doctor explain the advantages and disadvantages of the treatment or care strategy?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.262	0.1121
8. Did the doctor explain the advantages and disadvantages of the treatment or care strategy?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.343	0.0349
9. Did the provider involve you in the decision making?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.267	0.1054
9. Did the provider involve you in the decision making?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.286	0.0821
9. Did the provider involve you in the decision making?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.28	0.0883
10. In your opinion, did the provider have a reassuring attitude and way of talking?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.165	0.3211

10. In your opinion, did the provider have a reassuring attitude and way of talking?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.255	0.123
10. In your opinion, did the provider have a reassuring attitude and way of talking?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.411	0.0103
11. Do you think the provider was in general respectful?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.462	0.0035
11. Do you think the provider was in general respectful?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.375	0.0205
11. Do you think the provider was in general respectful?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.329	0.0434
12. Did the provider make sure you understood his explanations and instructions?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.155	0.3541
12. Did the provider make sure you understood his explanations and instructions?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.202	0.2246
12. Did the provider make sure you understood his explanations and instructions?	Q23. During this hospital stay, how	0.233	0.1595

	often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?		
13. Do you think the provider told the whole truth?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.094	0.5756
13. Do you think the provider told the whole truth?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.148	0.3743
13. Do you think the provider told the whole truth?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.366	0.0237
14. Do you have confidence in this provider?	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	-0.047	0.7798
14. Do you have confidence in this provider?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.03	0.8579
14. Do you have confidence in this provider?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.195	0.2399
15. Did the provider reply to all your expectations and concerns?	Q21. During this hospital stay, how often did providers	0.169	0.3111

	(OB/GYN, midwives, etc) treat you with courtesy and respect?		
15. Did the provider reply to all your expectations and concerns?	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.11	0.5117
15. Did the provider reply to all your expectations and concerns?	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.306	0.062
Total	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.283	0.085
Total	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.303	0.0644
Total	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.485	0.002
Information Sharing	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.481	0.0023
Relationship/Trust	Q21. During this hospital stay, how often did providers (OB/GYN, midwives,	0.218	0.1886

	etc) treat you with courtesy and respect?		
Relationship/Trust	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.267	0.1046
Relationship/Trust	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.463	0.0034
Self-Advocacy/Assertiveness	Q21. During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	0.254	0.1232
Self-Advocacy/Assertiveness	Q22. During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	0.234	0.1565
Self-Advocacy/Assertiveness	Q23. During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	0.358	0.0274

Table 5. Sub-Analysis of Participants Interviewed vs. Not Interviewed

Predictor	Level	Interviewed	Not Interviewed	Level P-value	P-value
Education Level	<High school	1 (100%)	0 (0%)		
	High school	6 (54.55%)	5 (45.45%)		
	College+	13 (50%)	13 (50%)		
Marital Status	Single	7 (50%)	7 (50%)		0.751
	Married	13 (56.52%)	10 (43.48%)		
Insurance	Medicaid	7 (46.67%)	8 (53.33%)		0.734
	Private	13 (56.52%)	10 (43.48%)		
Did the provider listen to you carefully during your visits?	No	2 (50%)	2 (50%)		
	Possibly, No	2 (50%)	2 (50%)		
	Possibly, Yes	6 (54.55%)	5 (45.45%)		
	Yes	10 (52.63%)	9 (47.37%)		
Did the provider allow you to talk without interrupting you?	No	1 (25%)	3 (75%)	0.319	0.515
	Possibly, No	1 (100%)	0 (0%)		
	Possibly, Yes	2 (40%)	3 (60%)	0.639	
	Yes	16 (57.14%)	12 (42.86%)		
Did the provider encourage you to express yourself/talk?	No	3 (60%)	2 (40%)		
	Possibly, No	1 (100%)	0 (0%)		
	Possibly, Yes	6 (54.55%)	5 (45.45%)		
	Yes	10 (47.62%)	11 (52.38%)		
Did the provider examine you thoroughly?	No	3 (60%)	2 (40%)		0.856
	Possibly, No	2 (50%)	2 (50%)		
	Possibly, Yes	4 (40%)	6 (60%)	0.45	
	Yes	11 (57.89%)	8 (42.11%)		
Do you feel that the provider understood you?	No	6 (66.67%)	3 (33.33%)	0.692	0.61
	Possibly, No	1 (33.33%)	2 (66.67%)	0.586	
	Possibly, Yes	3 (37.5%)	5 (62.5%)	0.673	
	Yes	10 (55.56%)	8 (44.44%)		

Was it easy to understand the provider?	No	1 (50%)	1 (50%)		0.81
	Possibly, No	1 (50%)	1 (50%)		
	Possibly, Yes	4 (36.36%)	7 (63.64%)	0.274	
	Yes	14 (60.87%)	9 (39.13%)		
Do you feel you were given all the necessary information?	No	3 (50%)	3 (50%)		0.601
	Possibly, No	4 (80%)	1 (20%)	0.603	
	Possibly, Yes	5 (41.67%)	7 (58.33%)	0.704	
	Yes	8 (53.33%)	7 (46.67%)		
Did the doctor explain the advantages and disadvantages of the treatment or care strategy?	No	5 (71.43%)	2 (28.57%)	0.396	0.753
	Possibly, No	2 (40%)	3 (60%)		
	Possibly, Yes	3 (60%)	2 (40%)		
	Yes	10 (47.62%)	11 (52.38%)		
Did the provider involve you in the decision making?	No	2 (33.33%)	4 (66.67%)	0.662	0.33
	Possibly, No	2 (100%)	0 (0%)	0.478	
	Possibly, Yes	6 (66.67%)	3 (33.33%)	0.44	
	Yes	10 (47.62%)	11 (52.38%)		
In your opinion, did the provider have a reassuring attitude and way of talking?	No	4 (57.14%)	3 (42.86%)		0.509
	Possibly, No	1 (33.33%)	2 (66.67%)	0.537	
	Possibly, Yes	4 (36.36%)	7 (63.64%)	0.246	
	Yes	11 (64.71%)	6 (35.29%)		
Do you think the provider was in general respectful?	No	1 (50%)	1 (50%)		0.05
	Possibly, Yes	3 (25%)	9 (75%)	0.033	
	Yes	16 (66.67%)	8 (33.33%)		
Did the provider make sure you understood his explanations and instructions?	No	1 (25%)	3 (75%)	0.322	0.372
	Possibly, No	2 (100%)	0 (0%)	0.502	

	Possibly, Yes	5 (45.45%)	6 (54.55%)	0.712	
	Yes	12 (57.14%)	9 (42.86%)		
Do you think the provider told the whole truth?	No	2 (40%)	3 (60%)	0.618	0.164
	Possibly, No	3 (100%)	0 (0%)	0.521	
	Possibly, Yes	4 (33.33%)	8 (66.67%)	0.264	
	Yes	11 (61.11%)	7 (38.89%)		
Do you have confidence in this provider?	No	2 (50%)	2 (50%)		0.687
	Possibly, No	2 (100%)	0 (0%)	0.48	
	Possibly, Yes	5 (55.56%)	4 (44.44%)		
	Yes	11 (47.83%)	12 (52.17%)		
Did the provider reply to all your expectations and concerns?	No	2 (40%)	3 (60%)		0.788
	Possibly, Yes	5 (62.5%)	3 (37.5%)	0.699	
	Yes	13 (52%)	12 (48%)		
During this hospital stay, how often did providers (OB/GYN, midwives, etc) treat you with courtesy and respect?	Sometimes	4 (80%)	1 (20%)	0.611	0.359
	Usually	6 (40%)	9 (60%)	0.491	
	Always	10 (55.56%)	8 (44.44%)		
During this hospital stay, how often did providers (OB/GYN, midwives, etc) listen carefully to you?	Never	1 (100%)	0 (0%)		0.453
	Sometimes	5 (71.43%)	2 (28.57%)	0.648	
	Usually	6 (40%)	9 (60%)	0.715	
	Always	8 (53.33%)	7 (46.67%)		
During this hospital stay, how often did providers (OB/GYN, midwives, etc) explain things in a way you could understand?	Never	2 (100%)	0 (0%)	0.485	0.608
	Sometimes	4 (57.14%)	3 (42.86%)		
	Usually	6 (42.86%)	8 (57.14%)	0.715	
	Always	8 (53.33%)	7 (46.67%)		

Race of Clinician	Black	8 (44.44%)	10 (55.56%)	0.257	0.044
	White/Caucasian	12 (70.59%)	5 (29.41%)	0.049	
	Other	0 (0%)	3 (100%)		
Total		53 (15 to 60)	51.5 (18 to 60)		0.769
Information Sharing		27 (8 to 32)	27.5 (8 to 32)		0.965
Relationship/Trust		18 (5 to 20)	17 (6 to 20)		0.488
Self-Advocacy/Assertiveness		7.5 (2 to 8)	7.5 (2 to 8)		0.925

Table 6. Qualitative Quotes

Themes	Categories	Quotes
Prior Experiences While Being Black Impacted My Current Perceptions	Prior Experiences That Impact Current Perceptions	*"Well, so I went to him [my OB/GYN] to confirm it, and I started seeing him and it was just a lot of anxiety. With that I just realized that I think I probably was a bit traumatized from my first birthing experience. And as a result, I personally think that's what ignited me having gestational hypertension. And I waited too late."*
	Encounters with Obstetric Team Members Impacted Communication with Clinician	*"A lot of the nurses the way they treated my partner was, I didn't like that either. A lot of the nurses that came in treated him like he wasn't any good. Just like the way that they were interacting with him and talking to him, like he wasn't doing what he was supposed to be doing. Or talk to him like he just wasn't present. But he was being very supportive the whole time."*
Black Mothers Say Trust and Transparency Are Vital For Relationships	Perception That Clinician was Trustworthy	*"She listens a lot um… If I have questions, she's going to explain to the T and make sure I understand exactly what's going on. So I never feel in the dark about anything or you know I don't feel like she's working and I'm just a patient or a subject who doesn't know what's going on. I always feel involved in my choices."*
	Seeing the Same Clinician Consistently	*"I saw somebody different every time I went. And so I felt like I really didn't know how to feel, I didn't really feel like I was you know…building a relationship. And you kind of felt like you were just being heard in and out. And like you didn't really feel like you were your doctor's patient I guess."*

Black Mothers Desire Clear Communication and Information from Clinicians	Lack of Proper Education and Clear Explanation	*"No one told me to monitor myself. Once I came home, check your blood pressure and none of that. They were like, "Okay, you should be good." But I was like, I'm checking my blood because I know to. And I left the hospital and the blood pressure. It was doing okay. But it was on the rise when I was leaving and 150s."*
	Fear Impacted the Desire for Detailed Information	*"They were very, very detail oriented. And I really appreciated that, because I was very afraid."*
Black Culture and Cultural Competence Impacted My Care	Felt the Need to Adjust Behavior to Be Heard	*"I don't let them know [that I'm medical] because I don't want you not to treat me like you would treat somebody else. Give me that whole roll out and tell me what I need to do, right? Don't assume that I know how to treat myself because I'm here for you to treat me."*
	Felt Dismissed and Not Listened To	*"They may hate you because sometimes I argued with them. And I'm like, "No I need you to explain X, Y, and Z. Give me all the details. And listen to me."* *"They don't really listen to us like they do I will say of a white woman. If a black woman say, "Oh, my head has been hurting all day today." "Oh, you know, this was sign of this. This is symptom like that… this can come along with it." But I feel like if a white woman say, "Oh, my head was hurting today, Doc." "Oh, no, that's not okay. Like, okay, this is what I can prescribe you." You know what I'm saying?"*
	Felt More Comfortable with Black Clinician	*"With the first baby, I had a white doctor. And I will say that was part of the reason why I switched [to a black doctor] because I felt like I wasn't getting cared for like I should have. Extremely more educational, and it made me feel extremely comfortable."*

Table 7. Joint Display Table

Associated Survey Theme	Quantitative Data	Qualitative Data Examples	Associated Qualitative Codes	Data Convergence Label
Information Sharing	The median score for during prenatal visits was **27.5** (22.5~31.75).	*"She listens a lot um... If I have questions, she's going to explain to the T and make sure I understand exactly what's going on. So I never feel in the dark about anything or you know I don't feel like she's working and I'm just a patient or a subject who doesn't know what's going on. I always feel involved in my choices."*	Satisfactory Communication Clear Communication	Confirm
	39.4% of participants reported that their obstetric clinician always explained things in a way that they could understand during their hospital stay. **36.84%** of participants reported that their obstetric clinician usually explained things in a way that	*"They also didn't really explain preeclampsia to me. They said I didn't have it until the end. But before like, they induced me because of gestational hypertension, not preeclampsia, but I had to get like four, like I went in four times to get tested for preeclampsia."*	Unclear Explanation Lack of Patient Education	Contrast

	they could understand during their hospital stay.			
Relationship & Trust	The median score during <u>prenatal visits</u> was **17** (14.25~19).	*"I saw somebody different every time I went. And so I felt like I really didn't know how to feel, I didn't really feel like I was you know…building a relationship. And you kind of felt like you were just being heard in and out. And like you didn't really feel like you were your doctor's patient I guess."*	Didn't Have the Same Doctor	Mixed
	47.37% of participants reported that their obstetric clinician <u>always</u> treated them with courtesy and respect during their hospital stay. **39.47%** of participants reported that their obstetric clinician <u>usually</u> treated them with courtesy and respect during their hospital stay.	*"I can definitely say that I trust her and her judgement. She's one of those who would be transparent and say "If it were me". A lot of doctors, I don't think they do that. They probably don't advise you do that but maybe her and I have that relationship where she doesn't mind being vulnerable and say "If it were me, I would do that". That puts me in comfort place because*	Relationship Relatable or Comfortable	Confirm

		you're not just advising someone to do something. You feel how I feel."		
Self-Advocacy & Assertiveness	The median score during prenatal visits was **7.5** (6~8).	*"In healthcare you're going to be your biggest advocate and the main person that's going to take care of you. The doctor reach is limited. You have to be compliant in whatever their care plans are and you have to make sure you're taking care of yourself. For black women especially since this is affecting us so much, we need to be checking high blood pressures, and I would say our blood sugars too."*	Felt Dismissed Advocates Took Initiative with Her Own Care	Confirm
	For self-advocacy and assertiveness during prenatal visits, there was	*"They may hate you because sometimes I argued with them. And I'm*	Took Initiative With Her Own Care	Confirm

	a weak correlation with how often they felt their clinician explained things in a way they could understand (r=0.358, *p*=0.0274).	*like, "No I need you to explain X, Y, and Z. Give me all the details. And listen to me."*		

VITA

Melanie Fant was born in Memphis, TN in 1987. She obtained her Bachelor's of Science in Nursing in 2010 from the University of Tennessee in Knoxville, TN. She worked as a registered nurse in Medical Surgical units for two years and then transferred to Labor & Delivery. She worked as a. Labor & Delivery nurse for the next seven years, while taking travel assignments in Houston, TX and Los Angeles, CA. During the 7 years working in Labor & Delivery, she took a second job position working as a Complex Pharmacy Nurse at Sedgwick Worker's Comp insurance company. At this point, she decided to pursue an advanced nursing degree. Melanie started her doctoral studies in 2019 at The University of Tennessee Health Science Center in Nursing Science, Memphis, Tennessee. During this time, she also began working as a nurse clinical educator for Methodist Lebohneur Healthcare outpatient clinics where she continued to work throughout her PhD journey. Her research focused on understanding the perceptions of care and patient-clinician communication from Black postpartum mothers diagnosed with an acute hypertensive crisis. Melanie's dissertation was mentored by Dr. Sarah Rhoads (Chair), Drs. Lacretia Carroll, Xueyuan Cao, Kate Fouquier, and Danielle Tate (Committee members). While pursuing her doctoral studies, Melanie has published one article: "*Recognizing Early Warning Signs of Acute Hypertensive Crisis of the Postpartum Mother: An Important Role for Neonatal Nurses*". She also has presented her projects at several events, Graduate Research Day in 2022, Graduate Research Day in 2023, Arkansas Birthing Project in 2022, UAMS Power Hour Luncheon in 2023, the International Congress of Qualitative Inquiry conference in Champagne, IL in May 2023, and the More For Memphis Presentation on Maternal Mortality in 2023. Melanie is scheduled to present her projects at the Arkansas Birthing Project September 2023 and the Community Involvement event on food insecurity, funded by a PCORI Grant in September 2023. Melanie expects to receive her Doctor of Philosophy degree in Nursing Science in October 2023.