

2021

A Qualitative Systemic Review on Maternal Health Disparities in Haitian Women

Alexandra Jean-Louis
University of Central Florida

 Part of the [Maternal and Child Health Commons](#), and the [Obstetrics and Gynecology Commons](#)
Find similar works at: <https://stars.library.ucf.edu/honorstheses>
University of Central Florida Libraries <http://library.ucf.edu>

This Open Access is brought to you for free and open access by the UCF Theses and Dissertations at STARS. It has been accepted for inclusion in Honors Undergraduate Theses by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

Jean-Louis, Alexandra, "A Qualitative Systemic Review on Maternal Health Disparities in Haitian Women" (2021). *Honors Undergraduate Theses*. 1083.
<https://stars.library.ucf.edu/honorstheses/1083>

A QUALITATIVE SYSTEMATIC REVIEW ON MATERNAL HEALTH
DISPARITIES IN HAITIAN WOMEN

by

ALEXANDRA JEAN-LOUIS

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Health Sciences
in the College of Health Professions and Sciences
and in the Burnett Honors College
at the University of Central Florida
Orlando, Florida

Fall Term, 2021

Thesis Chair: Danielle Webster, Ph.D.

Abstract

Background: It is universally known that pregnancy is a vulnerable time for a woman's health. Women of all backgrounds endure significant physiological and anatomical changes during pregnancy and after childbirth. But the latest research studies have called attention to the unique experience of Black mothers. Compared to other racial and ethnic groups, Black women encounter health disparities at an all-time higher rate. According to research studies conducted in Haiti and the United States, Haitian women are amongst the community of Black women who are experiencing disproportionate maternal outcomes.

Research Aims: The aim of this systematic review is to explore the prenatal and postpartum support lacking for Haitian women residing in the United States and Haiti, resulting in elevated pregnancy-related mortality and morbidity.

Methods: To explore this study's research aims, a qualitative systematic review was conducted. Studies that met the inclusion criteria were found by inserting the following keywords in various research databases: Haitian women, maternal health, maternal disparities, Haitian-immigrant, maternal support, Haitian-American, Haitian pregnant women, Haitian descent, maternal mortality, and maternal morbidity.

Key Findings: Prenatal and postpartum support was lacking in various forms for Haitian women. In Haiti, women noted that a lack of compassion from healthcare providers, personal finances and hospital funds contributed to unpleasant maternal experiences. While Haitian women residing in the United States encountered an absence of support from their health professionals due to being culturally misunderstood.

Keywords: *Haitian women, maternal health disparities, mortality, pregnancy, prenatal care, postpartum*

TABLE OF CONTENTS

Introduction	1
Pregnancy-Related Mortality	2
Pregnancy-Related Morbidity	2
Prenatal Defined	3
Postpartum Defined	3
Objectives and Research Question	4
Study Design	5
Criteria for Inclusion of Studies in the Review	5
Search Strategy	5
Primary Screening	6
Secondary Screening	6
Tertiary Screening	7
Data extraction and assessment of methodological quality	7
Data synthesis	8
Results	8
Search Results	8
Included Studies	10
Key Findings	12
Prenatal & Postpartum Support Lacking in Haiti	12
Prenatal & Postpartum Support Lacking in the U.S.	13
Discussion	14

Introduction

It is universally known that pregnancy is a vulnerable time for a woman's health. Women of all backgrounds endure significant physiological and anatomical changes during pregnancy and after childbirth. But the latest research studies have called attention to the unique experience of Black mothers. Compared to other racial and ethnic groups, Black women encounter health disparities at an all-time higher rate. The Center for Disease Control (CDC) has recognized the association of maternal mortality and morbidity rates in women of various racial identities. However, the nationalities of the Black women were not specified by the CDC.

According to research studies conducted in Haiti and the United States, Haitian women are amongst the community of Black women who are experiencing disproportionate maternal outcomes. Consequently, this systematic review will explore the prenatal and postpartum support lacking for Haitian women residing in the United States and Haiti, resulting in elevated pregnancy-related mortality and morbidity.

The intention of this study is not to create division between marginalized groups of women (women who solely identify as being Black/African-American and Haitian/Haitian-American), but to intentionally acknowledge the significance of maternal health disparities existing in the Haitian community. Recognizing the sub-populations of Black women's experiences in research is vital to consider. Previous studies that infer that certain health behaviors or outcomes differ by race, ethnicity, or culture may be misleading because they rarely account for the distinct differences within racial and ethnic groups or cultures [1]. Similarly, in healthcare, it is important to include the cultural needs of a patient because an individual's beliefs, behaviors, and values are shaped by factors such as ethnicity, language, and nationality

[2]. Therefore, this research intends to regard the distinct maternal experiences of Haitian and Haitian-American women.

Pregnancy-Related Mortality

Data from the Center for Disease Control's (CDC) Pregnancy Mortality Surveillance System (PMSS) supports that pregnancy-associated mortality rates for Black women are higher when compared to American Indian/Alaskan Native, Non-Hispanic Asian, and Non-Hispanic White women. According to the CDC's PMSS, pregnancy-related deaths are defined as "death of a woman while pregnant or within 1 year of the end of pregnancy from any cause related to or aggravated by the pregnancy." [3]. The 2014-2017 PMSS records indicate that 41.7 per 100,000 (10^5) pregnancy-related deaths occur in Black women [3]. In comparison to American Indian/Alaskan Native women who experience 28.3 per 10^5 pregnancy-related deaths; and Non-Hispanic Asian women who experience 13.8 per 10^5 pregnancy-related losses [3]. Non-Hispanic White women's ratios were similar to that of Non-Hispanic Asian women ranking at 13.4 in the pregnancy-related mortality report [3]. While in Haiti the maternal mortality levels are amongst the highest in the world. The World Bank reported a ratio of 480 per 10^5 pregnancy-related losses in 2017 [4].

Pregnancy-Related Morbidity

Black women are more likely to have pregnancy-related complications. In fact, the risks for Black women experiencing stillbirths, thrombotic pulmonary embolisms, cardiomyopathy, hypertensive disorders, and premature births are elevated [5, 6, 7]. Previously cited diagnoses are most frequent in Black women compared to their White counterparts, which in turn raises issues of disparities within the population.

Cardiovascular diseases including chronic hypertension have been found to be a major cause of maternal morbidity for Haitian women [8]. A study conducted by Odell et al., examining if the low birth weight (LBW) in Haitian and African-American women delivering in Massachusetts are different, discovered that chronic hypertension and preeclampsia are strong risk factors for LBW; although, these diseases were found to be more vigorous in Haitian women due to “unknown factors” [9]. To add, adverse outcomes encountered in Haiti include preterm preeclampsia and stillbirths [10,11]. The stillbirth rates in Haiti are amongst the highest in the world in comparison to Latin American and Caribbean natives [11].

Prenatal Defined

The term prenatal, also known as antenatal, refers to the time before birth. Prenatal care is supplied by midwives or obstetrics and gynecology specialists to presumably healthy pregnant women, in order to examine for signs of diseases or complications [12]. Antenatal care is critical in reducing maternal mortality and morbidity, as potential issues during pregnancy, labor, and delivery will be detected and treated at earlier stages [13]. For example, the chances of developing stillbirths are reduced when prenatal care is provided [14].

Postpartum Defined

Postpartum denotes the time after a woman gives birth, and suitable treatment from health care providers is equally vital as during a woman's prenatal term. Receiving postpartum care prevents most maternal mortality and morbidity rates in women [15]. Postpartum check-ups for mothers should be provided within the first 24 hours after giving birth and should be continued for the first six weeks thereafter [16]. During comprehensive postpartum clinical

assessments, women are asked about their “emotional well-being, familial and social support, and usual coping strategies for dealing with day-to-day matters.” [16].

Objectives and Research Question

During pregnancy, the support of family, friends, and health care professionals is needed. However, there may be a lack thereof for expectant Haitian mothers, ultimately affecting maternal health outcomes. In a community-based participatory research study that explored factors affecting prenatal care attendance and preferences among low-income Black women, receiving more support was one of their requests [17]. Specifically, women stated that one of the barriers to prenatal care attendance was the “lack of support”, and that a “robust support system” was desired during phases of pregnancy [17]. Although this study did not specify the nationalities of the Black women involved, supportive inadequacies may also exist for Haitian women.

To explore the objectives of this study, the researcher conducted a qualitative systematic review. Qualitative systematic reviews offer the advantage of bringing together research evidence to better inform clinical practice because personal experiences are being shared (such as in focus groups or one-on-one interviews). This methodological approach also allowed for the researcher to critically evaluate and find a correlation between existing research studies.

Former systematic reviews have acknowledged the existence of maternal health disparities in Black women by focusing on the existence of racial discrimination in healthcare and maternal biology. But none have incorporated the significance of continuous support during and after pregnancy. The objectives of this systematic review were to gather data analyzing if there is an absence of support for pregnant Haitian women. If it is discovered that Haitian

women have an absence of support, this study will determine whether this is a contributing factor to poor maternal outcomes. The overall research question of the study is: What fundamental prenatal and postpartum supportive resources are not being provided to Haitian women residing in the United States and Haiti that are contributing to maternal health disparities?

Study Design

Search Strategy

The search for articles will begin by utilizing the following databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science, and PubMed. Keywords and phrases that were entered into each database to populate relevant studies were derived with the assistance of an expert librarian at the University of Central Florida. Multiple searches were conducted by combining the following keywords: Haitian women, maternal health, maternal disparities, Haitian-immigrant, maternal support, Haitian-American, Haitian pregnant women, Haitian descent, maternal mortality, and maternal morbidity.

Criteria for Inclusion of Studies in the Review

For this study, the primary reviewer will include all categories of support identified during article analysis. Support can come from multiple areas during a woman's pregnancy, including but not limited to their health care providers, family, community, and government-funded programs. This review will also focus on studies from the year 2000 and onward using a qualitative design, such as ethnographic research, focus groups, interviews, and case studies. Qualitative studies found must have been conducted within the United States (U.S.) or Haiti.

The population of focus for this systematic review are Haitian women residing in the U.S. or Haiti. Studies that recognize women of Haitian descent as “Haitian-American” are acceptable. Given the nature of the researcher’s aims, articles that focus on women who have already given birth are of equal importance. For example, breastfeeding disparities exist for Black women because of an inadequacy of support [18]. Therefore, this review will incorporate any relevant qualitative findings related to undesirable maternal outcomes.

Studies referring to participants as only being Afro-Caribbean will not be added because they do not mention the particular country or island (e.g., Jamaica or Dominican Republic) of origin. Articles that compare Haitian women to women of other ethnic or racial groups will not be accepted. Also, studies should not make infant and child mortality and morbidity the focus of the study. Maternal and child details usually correspond in studies, therefore, articles noting such details will be examined based on being able to provide significant details to this study's objectives.

Primary Screening

Prior to beginning the primary screening, various databases were utilized to populate articles. There were three main purposes for conducting the primary screening: (1) eliminating all studies completed outside of the years 2000-2021; (2) removing all duplicate articles compiled; (3) removing all studies that were not written in English.

Secondary Screening

The secondary screening served to narrow down the number of full-text articles that needed to be thoroughly reviewed for inclusion in the systematic review. To achieve this the title

and abstract of each article were read to determine compatibility within the margins of this research study's goals. The reasoning for studies not continuing to the tertiary screening is the article is a published abstract, meta-analysis, systematic review, or magazine; not being conducted in the U.S. or Haiti, and studies that compared Haitian/Haitian-American women to other ethnic groups.

Tertiary Screening

The final screening of articles was done to develop the final set of articles for in-depth analysis on their significance to addressing maternal health disparities in Haitian women. All sections of articles selected to reach the tertiary phase were read and taken into account by abiding by the inclusion criteria. As this systematic review is only looking for qualitative studies, the researcher made sure to exclude studies that did not meet such criteria. After the tertiary screening was completed, studies were assessed for quality using a health research scoring tool.

Data Extraction and Assessment of Methodological Quality

After each of the screening phases, resources provided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) website [20], such as the PRISMA flow diagram and the PRISMA check-list were incorporated in this study to ensure all criteria of a thorough systematic review were met. The PRISMA flow diagram was used as an organizing tool to keep track of the number of articles identified, included, and excluded.

Articles gathered for review quality were measured using the scoring tool for qualitative health research provided by Appendix D of Hawker et al. [19]. With this tool, nine questions needed to be answered for each study. The categories 'Good', 'Fair', 'Poor', or 'Very poor' were

selected based on fitting the criteria listed for each option. To populate an overall quality score for each study, each choice was assigned a value: 4 points for 'Good,' 3 points for 'Fair,' 2 points for 'Poor,' and 1 point for 'Very poor.' Therefore, the highest quality score that an article could receive was a 36.

Data Synthesis

All articles that the primary reviewer identified as meeting the standards of inclusion were read and conclusions were drawn from the data of the individual studies. All studies included for review were listed in a table for bookkeeping. The study's data collection method/s, location, number of participants, participants' characteristics, and quality score were provided in the table. Overall conclusions were drawn from the primary reviewer to answer the questions of this systematic review.

Results

Search Results

Multiple searches were completed using CINAHL, PubMed, and Web of Science. There were over 500 articles tallied by all three databases (Figure 1). Once the duplicates were identified then removed, a total of 472 records remained. Afterward, the titles and abstracts of the remaining records were screened based on meeting the criteria for this Thesis. A total of 423 records that did not measure the aims of this research were withdrawn from the final set of studies to be further analyzed. Therefore, the 49 articles left were full-text articles to be assessed for eligibility in this systematic review. Publications that were not completely written in English, study location was not in the United States or Haiti, were magazines, opinion papers not based

on scientific data, and were not conducted qualitatively were removed. The articles that proved to provide exhaustive evidence for addressing the maternal health outcomes for Haitian and Haitian-American women were kept for the systematic review (n=5). These articles were then further assessed using the quality screening tool for health research studies.

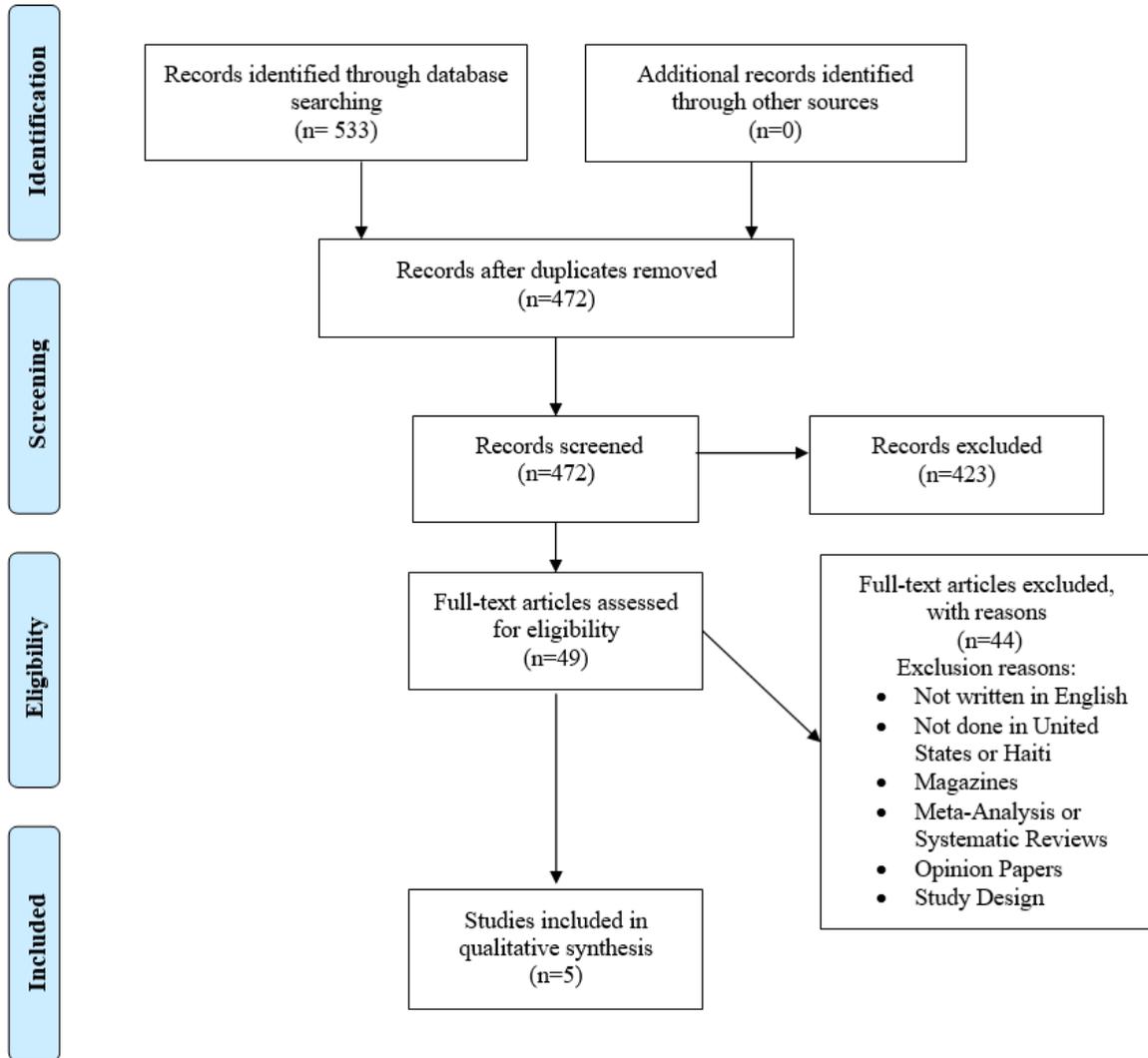


Figure 1. PRISMA Flow Diagram.

Included Studies

A total of 5 studies met the requirements for inclusion in this systematic review (Table 1). Four out of five of the studies were conducted in Haiti, while one was in South Florida. Participants in the studies had a wide range of experiences and perspectives to offer during the focus group interviews. Expectant mothers, mothers in the postpartum period, and individuals who were employed to provide quality health care to women and their newborns during childbirth and post-pregnancy (e.g., skilled birth attendants) were involved.

Each of the five articles underwent a complete analysis to assess the quality of the article and identify the aims. The aims of each study are summarized in Table 2. The overall quality score was calculated for each article by reviewing each question from the scoring tool for qualitative health research provided by Hawker and colleagues [19]. The total quality score that each article received can be found in Table 1, while the individual score that studies received for each question is marked in Table 3.

Summary of Reviewed Articles						
Study	Date	Data Collection Method/s	Study Location/s	Number of Participants	Participant Characteristics	Quality Score
Dev et al [11]	2017	Focus group interviews	Locations in Haiti: Three rural communes of southern Haiti and three downtown districts of Port-au-Prince	<i>n</i> =14	Pregnant women and women who had recently delivered	33
Alex et al [22]	2019	Audiotaped semistructured interviews	Central Haiti	<i>n</i> =21	Skilled birth attendants (<i>n</i> =4), traditional birth attendants (<i>n</i> =10), and postpartum mothers (<i>n</i> =7)	32
MacDonald et al [23]	2018	Focus group discussion/interviews	Villages that line the Artibonite Valley of Central Haiti	<i>n</i> =31	Community leaders (<i>n</i> =15) and traditional birth attendants (<i>n</i> =16)	35
Fordyce [24]	2009	Interviews	South Florida	<i>n</i> =27	Preganant Haitian women	33
Hosler et al [25]	2018	Focus group interviews	Locations in Rural Haiti: Jacksonville and Roy Sec	<i>n</i> =52	Haitian women who have given birth, have children and have utilized health care resources (e.g. mobile clinics)	34

Table 1. Summary of Reviewed Articles.

Summary of Aims			
Dev et al [11]	<ul style="list-style-type: none"> •Investigate whether the women participating in the study experienced any form of mistreatment during the time they gave birth while at the hospital. •Identify where women would rather give birth (in a hospital or at home). 	Fordyce [24]	<ul style="list-style-type: none"> •Evaluate and suggest ways to improve the clinical assessment of risk during pregnancy for Haitian women living in South Florida. •Examine issues that have important implications for clinical risk assessment: gender, class, and sociopolitical experiences.
Alex et al [22]	<ul style="list-style-type: none"> •Receive more insight on the experiences of skilled birth attendants, traditional birth attendants, and postpartum mothers during pregnancy and childbirth in Haiti (i.e., complications during pregnancy). 	Hosler et al [25]	<ul style="list-style-type: none"> •Explore Haitian women's perceptions of the Midwives for Haiti model. •Identify what motivates women to obtain care at the Midwives for Haiti (MFH) Prenatal Mobile Clinic. •Share the experience of women at the MFH Prenatal Mobile Clinic. •Provide suggestions for the improvement of the MFH Prenatal Mobile Clinic.
MacDonald et al [23]	<ul style="list-style-type: none"> •Explore the causes of maternal mortality in rural Haiti through the Community-Based Action Research, guided by the delays that lead to maternal death. 		

Table 2. Aims of Reviewed Articles.

Methodological Quality Assessment										Total Quality Score
Study	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	Question 9	
Dev et al [11]	3	4	4	4	4	3	4	3	4	33
Alex et al [22]	3	4	4	4	4	3	4	3	3	32
MacDonald et al [23]	4	4	4	4	4	4	4	3	4	35
Fordyce [24]	3	4	4	4	4	3	4	3	4	33
Hosler et al [25]	4	3	4	4	4	4	4	3	4	34

Table 3. Methodological Quality Assessment.

Key Findings

In each of the articles reviewed, there were common themes across the studies conducted in Haiti. Although there were different aims of each study, all articles included in this systematic review provided significant findings to address the lack of support for Haitian women residing in Haiti and in the U.S. during their intervals of motherhood.

Prenatal & Postpartum Support Lacking in Haiti

When it is time for delivery, Haitian women have noted that they would rather deliver at a hospital because they benefit from having a trained provider to assist if there are any complications during delivery [11]. Additionally, groups of Haitian women are aware of pregnancy-related diagnoses (such as eclampsia, hemorrhage, and anemia) as being primary contributors to maternal mortality [22]. However, numerous study participants have expressed that there are still some knowledge gaps and an overarching lack of support in various forms, whether at hospital facilities, financially, or socially.

Haitian women noted a lack of compassion and feeling “isolated” at hospitals before and during delivery [11]. During focus group interviews, women expressed, “I found no support from anyone.” and “You have no one to support you.” when explaining their hospital experiences [11]. In Haiti, women have been confronted with being left alone without the supervision of medical staff for hours on the delivery bed. Their families were not allowed in the delivery rooms to provide them with comfort as they contracted. Other examples of instances when supportive experiences were missing for women were when their doctor was sleeping in a chair next to them before delivery, and the requests for necessities such as drinking water being ignored [11, 21].

Other women exposed how the lack of personal and hospital financial support lead to negative maternal experiences. Women in certain parts of Haiti do have access to mobile clinics and hospitals, but these resources are often inconsistently sought by women because of the shortfall of proximity. Many women have to walk to the hospitals if they do not have enough money to buy a vehicle or pay someone to be transported to distant hospitals. In most cases, women who are unable to have a vehicle of their own are not able to afford a hospital visit; therefore, delivering at home is their only solution. Additional resources that were impacted because of funding shortages are the amount of charting paper available for nurses, patient gowns, pain medications to ease delivery, safe drinking water, and the number of beds available for delivery [11, 22].

Haitian women expressed that they were unaware and misinformed about their health needs during pregnancy, birth and postpartum. Women admitted to delaying and inconsistently receiving care because they did not have enough money to be seen by a physician. So, they would work alongside a skilled/traditional birth attendant to assist them with their at-home birthing experience. Those who knew that they needed to see a physician and could afford to, confessed to waiting too long before seeking care and being negligent to seeking healthcare during pregnancy [11, 22].

Prenatal & Postpartum Support Lacking in the U.S.

Although women in the U.S. have the capacity to regularly visit a physician, they do face obstacles during pregnancy. Fordyce raised the concerns of community health workers who were involved in the study. Community health workers mentioned that Haitian women are less forthcoming when it is necessary for them to share clinically relevant information. The language

barriers and differing cultural ideas about health and illness impacted their prenatal care experience because providers are not able to adequately assess the risks of Haitian women [23].

Discussion

The Haitian community is a population that is centered around their distinct culture, values, perspectives, and beliefs. This systematic review exposes the resources missing to help alleviate the additional stressors that mothers (and their families) experience. In general, Haitian women need more compassion from providers, more financing at hospitals for necessities, and the structure of healthcare facilities need to be refined. Articles reviewed did not explicitly say that the unrobust prenatal and postpartum care in Haiti and the United States is a cause for the elevated pregnancy-related mortality and morbidity. However, researchers have discovered a great correlation. According to Barnes-Josiah and colleagues, improving the quality and scope of the maternity care system would substantially reduce maternal mortality in Haiti [25]. The maternal mortality rates in Haiti are unacceptable and need improvement. Haiti is a low-income country; despite that, some solutions can be implemented from their local government, and assistance from abroad can be provided to assist with such challenges.

The difference in care available to pregnant women in Haiti showed to vary based on their location. Hospitals and mobile clinics are available for women in Haiti, but some women mentioned the difficulty that they have with accessing maternal health care. Unfortunately, the maternal health realities of mothers are impacted due to such inadequacies in Haiti. If a woman is unable to attend a hospital, a skilled/traditional birth attendant is available to assist them with at-home births. But, in the event that a complication occurs during the at-home delivery, it may

be too late to save the mother or her newborn by transporting them to the hospital because the technologies provided at hospitals are not accessible from home.

In South Florida, women face their own challenges. Women can retrieve care from physicians, yet the issue appears to be that there are not enough physicians culturally competent about the woes of Haitian women in the U.S. According to Florida Department of Health, in 2009 (the same year that Fordyce's study was conducted) 4.4% of physicians identified as being Black [26]. No data was published about the specialties, the locations in Florida, or self-identifying nationalities of the Black physicians. However, this statistic is still valuable for consideration of the physician-patient encounter. Patients who have a physician who is the same racial or ethnic group as they are, are more likely to use needed health services, less likely to postpone or delay seeking care, and reported a higher volume of use of health services [27]. Furthermore, a Haitian-immigrant community in Brooklyn stated preferring a Haitian physician who is proficient in Creole because, in their experiences, Haitian physicians spent more time with them [28].

Maternal health is a topic that needs to continue to be explored to create a more pleasant period for Haitian women. Granted, involving Haitians in health research is difficult, but developing cultural awareness and connecting with community members is essential to increase recruitment [29]. There were not enough studies to completely answer this study's research aims for women in the U.S. The only article that populated from my article search was from South Florida. Certainly, only choosing qualitative studies for this systematic review limited the number of articles aggregated for final review.

Nevertheless, future studies may want to provide more qualitative findings on the subjects of maternal health in Haitian women. Be it Haitian/Haitian-American women in the United States or the women in Haiti, more qualitative research with focus groups needs to be completed. The reasoning behind choosing only qualitative studies is significant. Qualitative studies offer the advantage of having conversations with the source (Haitian women) to understand what they encounter to find potentially achievable solutions, thus creating more progress within the Haitian community.

Works Cited

- [1] Egede, L.E. Race, ethnicity, culture, and disparities in health care. *J Gen Intern Med* 21, 667 (2006). <https://doi.org/10.1111/j.1525-1497.2006.0512.x>
- [2] Swihart DL, Yarrarapu SNS, Martin RL. Cultural Religious Competence In Clinical Practice. 2021 Aug 31. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan–. PMID: 29630268.
- [3] Pregnancy Mortality Surveillance System. (2020, February 04). Retrieved from [cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm](https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm)
- [4] World Bank. (2017). Trends in Maternal Mortality: 2000 to 2017. Retrieved from data.worldbank.org/indicator/SH.STA.MMRT?locations=HT
- [5] Petersen EE, Davis NL, Goodman D, et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. *MMWR Morb Mortal Wkly Rep* 2019;68:762–765. DOI: [http://dx.doi.org/10.15585/mmwr.mm6835a3external icon](http://dx.doi.org/10.15585/mmwr.mm6835a3external%20icon).
- [6] Muglu J, Rather H, Arroyo-Manzano D, Bhattacharya S, Balchin I, Khalil A, Thilaganathan B, Khan KS, Zamora J, Thangaratinam S. Risks of stillbirth and neonatal death with advancing gestation at term: A systematic review and meta-analysis of cohort studies of 15 million pregnancies. *PLoS Med*. 2019 Jul 2;16(7):e1002838. doi: 10.1371/journal.pmed.1002838. PMID: 31265456; PMCID: PMC6605635.
- [7] Schaaf JM, Liem SM, Mol BW, Abu-Hanna A, Ravelli AC. Ethnic and racial disparities in the risk of preterm birth: a systematic review and meta-analysis. *Am J Perinatol*. 2013 Jun;30(6):433-50. doi: 10.1055/s-0032-1326988. Epub 2012 Oct 11. PMID: 23059494.
- [8] Bridwell M, Handzel E, Hynes M, Jean-Louis R, Fitter D, Hogue C, Grand-Pierre R, Pierre H, Pearce B. Hypertensive disorders in pregnancy and maternal and neonatal outcomes in Haiti: the importance of surveillance and data collection. *BMC Pregnancy Childbirth*. 2019 Jun 20;19(1):208. doi: 10.1186/s12884-019-2361-0. PMID: 31221123; PMCID: PMC6585002.
- [9] Odell, C., Kotelchuck, M., Chetty, V. *et al.* Maternal Hypertension as a Risk Factor for Low Birth Weight Infants: Comparison of Haitian and African-American Women. *Matern Child Health J* 10, 39–46 (2006). <https://doi.org/10.1007/s10995-005-0026-2>
- [10] March MI, Geahchan C, Wenger J, Raghuraman N, Berg A, Haddow H, Mckeeon BA, Narcisse R, David JL, Scott J, Thadhani R, Karumanchi SA, Rana S. Circulating Angiogenic Factors and the Risk of Adverse Outcomes among Haitian Women with Preeclampsia. *PLoS One*. 2015 May 12;10(5):e0126815. doi: 10.1371/journal.pone.0126815. PMID: 25965397; PMCID: PMC4428697.
- [11] Dev A, Kivland C, Faustin M, Turnier O, Bell T, Leger MD. Perceptions of isolation during facility births in Haiti - a qualitative study. *Reprod Health*. 2019 Dec 27;16(1):185. doi: 10.1186/s12978-019-0843-1. PMID: 31881973; PMCID: PMC6935234.

- [12] Backe, B., Pay, A. S., Klovning, A., & Sand, S. (2014). Antenatal care. Retrieved November 12, 2020, from <http://www.nfог.org/files/guidelines/1%20NGF%20Obst%20Antenatal%20care%20Backe.pdf>
- [13] World Health Organization (2016) WHO recommendations on antenatal care for a positive pregnancy experience. Geneva, Switzerland: [\[http://apps.who.int/iris/bitstream/10665/250796/1/9789241549912-eng.pdf?ua=1\]](http://apps.who.int/iris/bitstream/10665/250796/1/9789241549912-eng.pdf?ua=1). Accessed 12 November 2020.
- [14] Lavin T, Pattinson RC. Does antenatal care timing influence stillbirth risk in the third trimester? A secondary analysis of perinatal death audit data in South Africa. *BJOG*. 2018 Jan;125(2):140-147. doi: 10.1111/1471-0528.14645. Epub 2017 Jun 26. PMID: 28317228.
- [15] Wudineh, K. G., Nigusie, A. A., Gesese, S. S., Tesfu, A. A., & Beyene, F. Y. (2018). Postnatal care service utilization and associated factors among women who gave birth in Debretabout town, North West Ethiopia: a community- based cross-sectional study. *BMC pregnancy and childbirth*, 18(1), 508. <https://doi.org/10.1186/s12884-018-2138-x>
- [16] WHO Recommendations on Postnatal Care of the Mother and Newborn. Geneva: World Health Organization; 2013 Oct. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK190086/>
- [17] Tucker Edmonds B, Mogul M, Shea JA. Understanding low-income African American women's expectations, preferences, and priorities in prenatal care. *Fam Community Health*. 2015 Apr-Jun;38(2):149-57. doi: 10.1097/FCH.000000000000066. PMID: 25739062.
- [18] Lutenbacher, M., Karp, S.M. & Moore, E.R. Reflections of Black Women Who Choose to Breastfeed: Influences, Challenges and Supports. *Matern Child Health J* 20, 231–239 (2016). <https://doi.org/10.1007/s10995-015-1822-y>
- [19] Hawker, Sheila. “Appraising the Evidence: Reviewing Disparate Data Systematically.” *Qualitative Health Research.*, vol. 12, no. 9, Sage Publications, 2002, pp. 1284–99, doi:10.1177/1049732302238251.
- [20] Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097
- [21] Marion Alex & Joanne Whitty-Rogers (2017) Experiences of pregnancy complications: Voices from central Haiti, *Health Care for Women International*, 38:10, 1034-1057, DOI: [10.1080/07399332.2017.1350179](https://doi.org/10.1080/07399332.2017.1350179)
- [22] MacDonald, T., Jackson, S., Charles, MC. *et al.* The fourth delay and community-driven solutions to reduce maternal mortality in rural Haiti: a community-based action research study. *BMC Pregnancy Childbirth* 18, 254 (2018). <https://doi.org/10.1186/s12884-018-1881-3>

- [23] Fordyce L. Social and clinical risk assessment among pregnant Haitian women in South Florida. *J Midwifery Womens Health*. 2009 Nov-Dec;54(6):477-82. doi: 10.1016/j.jmwh.2009.07.008. PMID: 19879520.
- [24] Hosler JJF, Abrams JA, Godsay S. Combining task shifting and community-based care to improve maternal health: Practical approaches and patient perceptions. *Soc Sci Med*. 2018 Nov;216:26-32. doi: 10.1016/j.socscimed.2018.09.018. Epub 2018 Sep 16. PMID: 30248573; PMCID: PMC6192702.
- [25] Barnes-Josiah D, Myntti C, Augustin A. The "three delays" as a framework for examining maternal mortality in Haiti. *Soc Sci Med*. 1998 Apr;46(8):981-93. doi: 10.1016/s0277-9536(97)10018-1. PMID: 9579750.
- [26] 2017 Physician Workforce Annual Report. <http://www.floridahealth.gov/provider-and-partner-resources/community-health-workers/physician-workforce-development-and-recruitment/2018DOHPhysicianWorkforceReport-FINALDRAFT.pdf>.
- [27] LaVeist, Thomas A., et al. "The Association of Doctor-Patient Race Concordance with Health Services Utilization." *Journal of Public Health Policy*, vol. 24, no. 3/4, Palgrave Macmillan Journals, 2003, pp. 312–23, <https://doi.org/10.2307/3343378>.
- [28] Francois, Fritz et al. "Colon cancer knowledge and attitudes in an immigrant Haitian community." *Journal of immigrant and minority health* vol. 11,4 (2009): 319-25. doi:10.1007/s10903-008-9126-6
- [29] Metayer, N., Boulos, R., Tovar, A. *et al*. Recruitment of New Immigrants Into a Randomized Controlled Prevention Trial: The *Live Well* Experience. *J Primary Prevent* 39, 453–468 (2018). <https://doi.org/10.1007/s10935-018-0519-6>