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What Are the Barriers to Midwife Service Utilization Among Low-Risk Pregnant Women in Florida?

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A doctoral project submitted to the faculty of the Medical University of South Carolina
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Table of Contents

List of Figures

List of Tables

CHAPTER I INTRODUCTION

1.1 Background and Need

Midwives are healthcare professionals that are educated, trained, licensed, and regulated to provide primary care; gynecologic, prenatal care; care during pregnancy, childbirth, postnatal care; and care of the normal newborn during the first 28 days of life (Florida Senate, 2021; Association of Women's Health, Obstetric and Neonatal Nurses [AWHONN], 2016). The Midwives Alliance of North America also defined these professionals as providers who support labor and birth through relationships of trust and confidence with their patients (Midwives Alliance of North America [MANA], n.d.). If complications arise during pregnancy, midwives collaborate with other physicians and refer the case if necessary (AWHONN, 2016). Individualized care is one of the strengths that distinguish midwives. In the United States, there is evidence that shows the benefits of midwives in maternal care, such as promoting physiologic processes, fewer lower cesarean rates and repeats cesarean births, lower rates of health complications, lower rates of health complications, fewer repeat cesarean births and higher rates of breastfeeding (Neerland and Skalisky, 2022). Midwives have been recognized as an alternative to improve patient outcomes when working with maternity needs (Thumm et al., 2022).

Ensuring the health of mothers and babies is a public health goal in the United States (Healthy People, n.d.); therefore, providing prenatal and postnatal care is essential for their well-being and decreases the possibilities of risks. In 2020, 209,645 infants were born in Florida (Ladapo, 2021). Florida Health reported that midwives attended 27,629 (13%) births in a hospital, versus 176,842 (84%) attended by an obstetrician, and 884 births (3%) were attended by other/unknown providers (Ladapo, 2021). In other high-income countries, midwives are

considered the standard of care for low-risk pregnant women. In these countries, midwives attend between 30-65% of births providing services to low-risk pregnancies, childbirth, and postpartum, compared to 9.1% in the United States (Thumm et al., 2022). Midwives' utilization is lower in the United States, with only 10% of deliveries by midwives compared to 50-75% in other countries (Vedam et al., 2018).

Midwifery care can benefit pregnant women with good outcomes and cost savings (MANA, n.d.). Childbirth is one of the most common reasons for hospitalization, being a high expense to the health care system (Bernecki, 2010). In Florida, the cost of a vaginal childbirth can be $7,745 with insurance and $14,757.28 out of pocket, and a cesarean (c-section) can cost $11,162.80 with insurance and $19,328 out of pocket. Increasing awareness among women about the midwives' scope of services and better collaboration between other providers would benefit maternity services.

1.2 Problem Statement

The American Public Health Association (APHA) supports midwifery to increase maternity care options that can result in good outcomes for mothers and babies (APHA, 2014). After decades, midwifery is still undeveloped in the U.S., where the scope of practice is not understood in the healthcare field. Regulations and lack of autonomy result from physician supervision in some states affecting the midwife's inclusion in women's healthcare (Ollove, 2016). Public health is committed to improving individuals' health and well-being, including safe pregnancies and childbirth (Health and Human Services [HHS], n.d.). Nevertheless, while there have been discussions of the benefits of midwives' care, the percentage of patients seen by midwives is still low, which leads to a slow move toward change. It is unclear why low-risk pregnant women do not utilize the midwives' services. Literature and anecdotal evidence indicate

many types of barriers, bias, lack of marketing, lack of consumer awareness, no physician back-up, state mandates, and how they are perceived may all be critical factors that may prevent pregnant women from seeking midwifery services (Bernecki, 2010; Kristienne, 2020; Murphy, 2018; Thumm, 2022 and Wertman, 2020). Midwifery care still is not a routine care among women in the United States (Thumm et al., 2022).

1.3 Research Aims and Objectives

This research aims to understand women's perceptions influencing their decision to utilize midwifery care. Understanding the midwife's role in maternity care can be affected by misinformation (Johnson, 1998). The objectives are to get more information about how women in Florida perceive midwives and how familiar they are with this practice to determine the possible barriers that prevent them from receiving care from a midwife. In addition, findings about accessibility to a midwife's office, the options given for prenatal/postnatal care, and their awareness about insurance coverage can contribute to filling some gaps to understand better why low-risk pregnant women may not select a midwife as their provider.

CHAPTER II SCOPING LITERATURE REVIEW

Since 1800, Obstetricians have been more utilized than midwives even though studies show the benefits of midwifery care (Scientific American, 2019). The areas in the literature reviewed provide evidence of the barriers midwives encountered to be sought by women, previous qualitative and quantitative studies and surveys used that showed the outcomes and benefits of having birth assistance by a midwife, and the percentage of statistics of birth assisted by midwives in the state of Florida. There may be an opportunity to improve maternity care in the United States if midwives fill the gaps in the maternity workforce, including prenatal and postpartum wellness and the obstetrician shortage experienced in the United States (Kristienne, 2020; Martin, 2016 and Ollove, 2016). Maternity care is a public health issue where quality, safety, and cost-effectiveness play an important role.

2.1 The History of Midwives

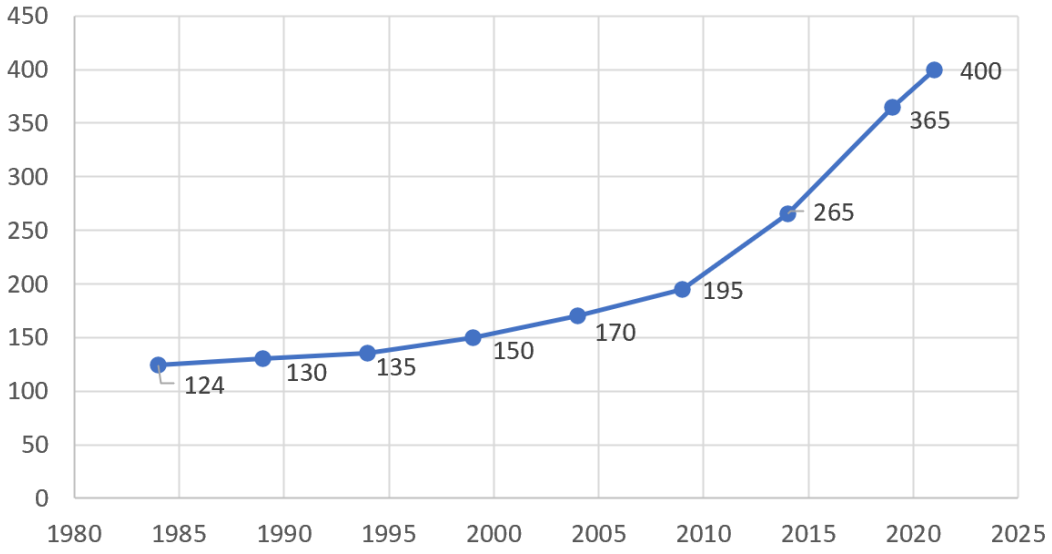
Midwives have existed since the 1800s, but their lack of education caused opposition against this group (Reed and Roberts, 2000). Between 1900-1930 infant mortality increased due to public health awareness; for the first time, physicians and nurses worked together toward improving public health and wanted midwives to be trained. Carolyn Van Blarcom was a pioneer who became the first nurse trained as a midwife in 1913. In 1915, midwives experienced resistance that affected their practice when Dr. J. DeLee stated that midwives were untrained and incompetent (Rooks, 2012). Later in 1921, maternity services were provided under the Sheppard Towner Act, known as the Maternity Act. This federal law aimed to reduce maternal and infant mortality and provided midwife training and maternity and childcare funds (Johnson, 2019). Unfortunately, the Maternity Act funding stopped in 1929, even though the infant mortality rate decreased from 1921-1929 (Madgett, 2017). In 1935 the number of deliveries assisted by

midwives decreased to less than 15% (Rooks, 2012).

From 1950-1960, midwives had more opportunities to be present and work at hospitals due to a shortage of Obstetricians. In 1969, the American College of Nurse-Midwives was created, becoming highly effective for this practice regarding their growth, education, acceptance, and merit as midwives (Reed and Roberts, 2000). The requirement of education and certification to practice midwifery has been in effect since 1971. Nurse Midwives introduced the concept of family-centered in the United States between 1960-1970. A significant milestone was attained in 1973 when the American College of Obstetricians and Gynecologists (ACOG) endorsed midwives as part of maternity care. The first freestanding birth center was created in 1975; by 2021, there were 400 birth centers (Figure 1).

Figure 1. Number of Midwifery-Led Birth Centers in the United States

(American Associations of Birth Centers [AABC], n.d.)



Source: U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. National Center for Health Statistics. National Vital Statistics Information. http://www.cdc.gov/nchs/births.htm

In 1980, only 1% of childbirth was assisted by midwives, and there was a lack of effective maternal care (Feldhusen, 2000). The Midwives Alliance of North America was founded in 1982. In 1992, the Midwifery Practice Act was signed, defining and regulating the profession. May 5th was declared as Midwifery Day. This day aims to recognize midwives' work and the care provided to mothers and their newborns. In 2015, ACOG stated that birth centers with CPMs practice were an option for low-risk pregnant women. However, midwives still have a hard road to being part of the healthcare community (Stephen, 2016).

2.2 Types and Regulations of Midwives

A midwife provides services and cares for mothers and babies before and after birth. Midwifery practice is regulated across the 50 states of the United States. There are four different licensed and certified midwives in the United States (Powell et al., 2018). Table 1 illustrates how The Midwives Alliance of North America defined their differences. Pregnant women should understand the differences between midwives to know which one will meet their prenatal and postnatal care needs.

Table 1. *Types of Midwives*

Type of Midwives	Able to Practice	Certification By:	Distinction
Certified Nurse Midwives (CNM)	50 states	American midwifery Certification Board	Have the most extensive education in nursing and midwifery. Licensed by the Board of Nursing. Practice in clinics and hospitals.
Certified Professional Midwives (CPM)	35 states	North American Registry of Midwives	Requires knowledge and experience in out-of hospitals settings. Independent midwifery practitioner.
Certified Midwives (CM)	15 states	American Midwifery Certification Board	Being a nurse is not a requirement. Similar training as a CNM. Need to complete a Master Level Midwifery education program
Direct-Entry Midwives	Few states	Some states have their own certification to provide them with a license	No liability insurance. No nursing prerequisite education. Practice out-of-hospital.

In the 19th century, the government pursued only qualified individuals already practicing and advised them that completing an accredited program's education requirement was the most important regulation. Certification Exams, competencies, keeping the credentialing, supervised clinical experience, and complying with each state's mandates are some of the midwives' responsibilities. Regulations facilitate the midwifery practice; however, different midwives' scope of practice regulations can confuse patients and policymakers. For example, in 19 states, Florida is one of them, midwives need a written collaboration agreement; they can't work independently, and their actions and interventions require the direct supervision of a Physician (Midwife Schooling, n.d.)

Midwives provide care to low-risk pregnant women during childbirth and postpartum (Martin, 2018). Some interventions midwives can perform are amniotomies, lacerations repair, and intravenous fluids administration. Still, if they provide services to high-risk pregnant individuals, they must work collaboratively with their supervised physician for pre and postnatal care. In addition, midwives must comply with the state's public health laws, emergency care plans and keep the records of every patient that receives their services.

2.3 Midwives' History, Scope of Practice, Integration, and Mandates in Florida

Florida did not have licensed midwives until the first state midwifery licensing law was passed in 1931, after which 1,400 midwives became licensed. In the state of Florida, the first nurse-midwife was licensed in 1969 (Hamilton, 2017). After a century, midwives still are not recognized by some states and other healthcare providers (Scientific American, 2019). Table 2 displays some important dates in Florida's midwives' practice development.

Table 2. *Midwives' milestones in the state of Florida (Midwifery School, n.d.)*

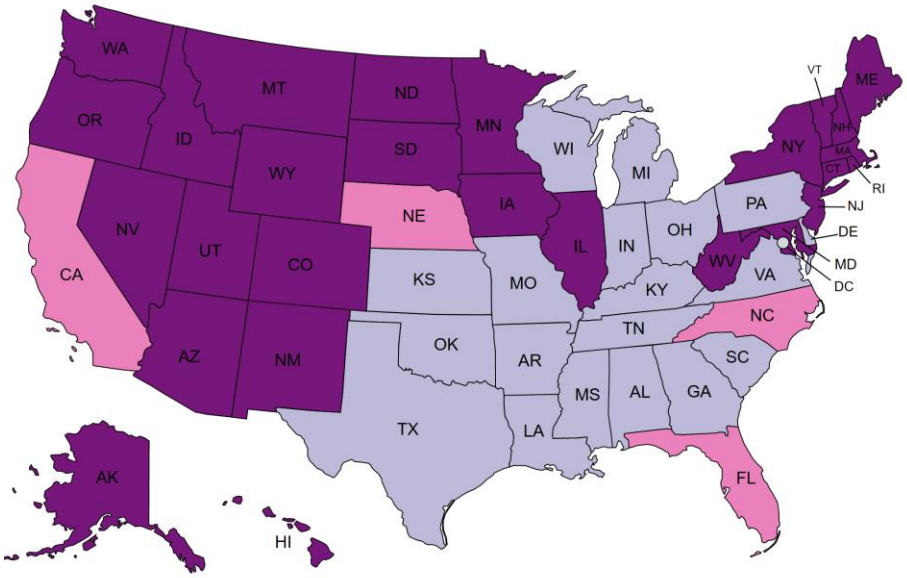
	Midwives' milestones in the state of Florida
1920	4,000 midwives were serving in Florida
1930	Florida Health Department recruited and trained midwives to provide care to the undeserved population
1931	First state midwifery licensed law was passed: Florida Statue 485
1969	The first Nurse-Midwife was licensed under the Board of Nursing
1982	Florida Midwifery Practice Act, F.S. 467 passed
1984	Sunset Review was added to the Midwifery Practice Act, F.S. 467
1989	Senator Lawton Chiles' daughter-in-law unplanned delivered at home. He expressed that a midwife saved his grandchild's life
1991	Call to repopening F.S. 467 to educate and licensure new midwives
1997	Law mandating for Medicaid Reimbursement for midwives with liability inurance
2010	Federal Health Care Reform authorized Medicaid reimbursement for licebsed midwives in birth centers
2017	Lobbyist meet with Legislators to talk about practice regulations
2018	Adverse Incident Reports are legally required for Out-of-Hospital birth.
2019-2020	There is still negative press toward Out-of-Hospital birth

In Florida, state regulations and mandates have played an important role in protecting maternal-fetal health. Decreasing infant complications and mortality rates are part of their public health agenda. In addition, the government desires that women and infants reach their fullest health potential. Therefore, policymaking has been very active since 1931.

Mandates like the Midwifery Act, FS 467, regulate midwives' licensing requirements to provide patient services (The Florida Senate, 2021). The Act also requires midwives to report adverse events while assisting childbirth outside the hospital. In 2021, Florida's Senator Rodriguez reviewed the Midwifery Act, where no new advocacy was made for their practice regarding the services provided. The only change was removing duplicate and obsolete language and keeping the education standards (The Florida Senate, 2021). The Midwives Association of Florida has worked with the state capitol to advocate for their practice and maternity care. One of the midwives' priorities is to be in the Legislators' minds and fight any possible threat against their practice, such as limiting their scope of service (Midwives Association of Florida [MAF], n.d.).

Although there are states in the U.S. with full integration among midwives and physicians for better decision-making and coordination of care, Florida is still partial (Vedam et al., 2018). Figure 2 shows the level of midwives' practices by state; in dark purple states, independent practice is allowed; in light purple states requires a collaborative agreement; and in the pink states, including the State of Florida, physician supervision is required (Georgetown University, 2019). The legislation recognizes that a pregnant woman has the right to choose the manner and setting of giving birth (The Florida Senate, 2020).

Figure 2. *Scope of Practice for Certified Nurse-Midwives (Georgetown University, 2019)*

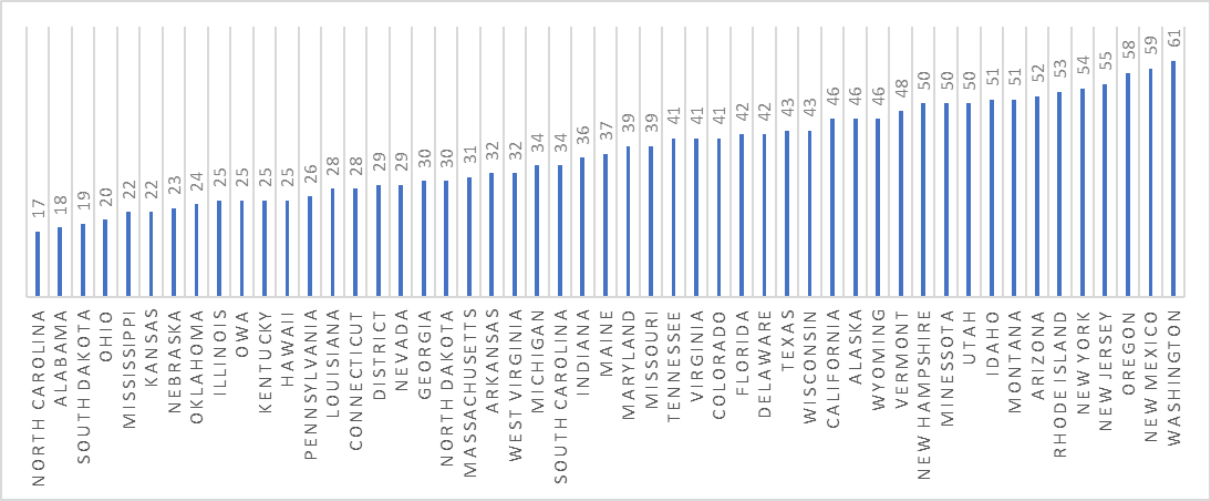


Source: Practice Environments for Certified Midwives, June 2018, "American College of Nurse-Midwives"

In many states, midwives are not fully integrated into the healthcare system. The Midwifery Integration Scoring System (MISS) 2014-2015 aimed to identify states where women and newborns benefit from the integration of midwives (Vedam et al., 2018). Between 2014-2015, States were scored from 1-100 to determine the midwives' level of integration. Iowa scored the lowest with a 17, and Washington, DC scored the highest integration with 61. As illustrated in Figure 3, Florida scored 42 out of 100.

Figure 3. *Mapping integration of midwives and outcomes in the United States*

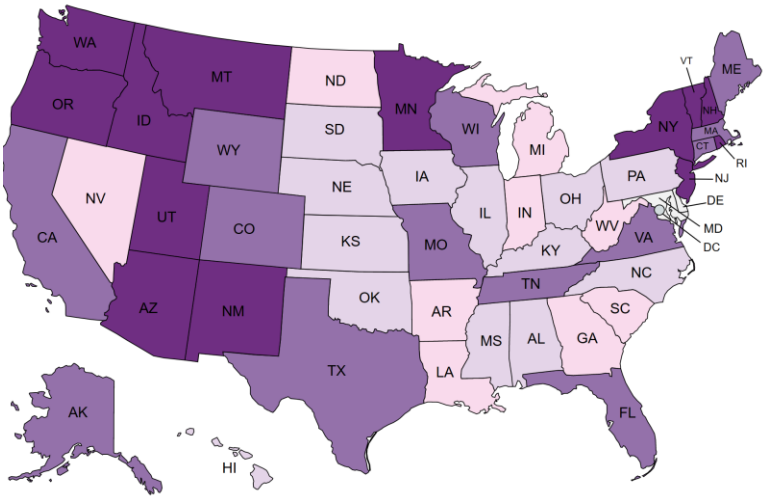
Rank-ordered integration scores for 50 states and Washington, DC (2014-2015).



Source: https://doi.org/10.1371/journal.pone.0192523.g001

The level of midwives' integration is shown in Figure 4, where deeper shades of purple represent a higher integration versus the lighter shades that represent a lower integration.

Figure 4. *Map of midwifery integration across the United States (Vedam et al., 2018)*

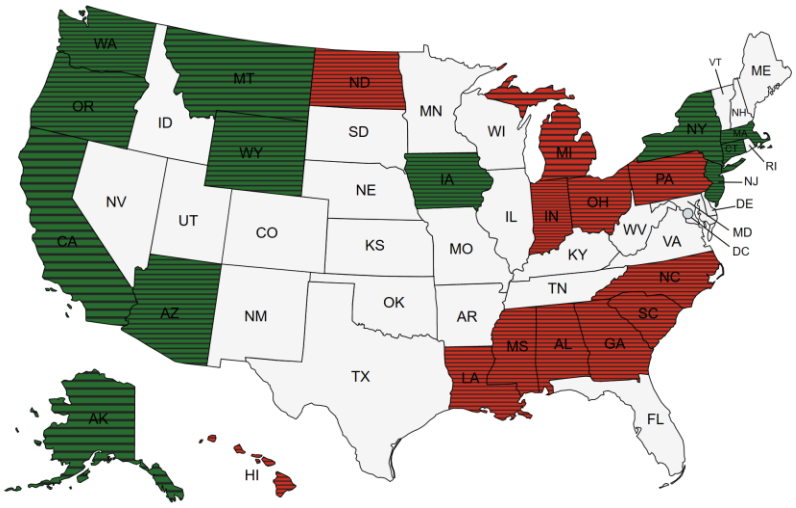


Source: doi: https://doi.org/10.1371/journal.pone.0192523.g002

According to Vedam et al. (2018), a nationwide survey across the U.S. to review the MISS found that the higher the integration, the higher the rates of vaginal deliveries. In Figure 5, states with green lines had the most increased vaginal deliveries, and those with red lines had the highest rates of c-sections. The MISS survey also found that states with higher midwives' integration had lower rates of preterm birth, low birth weight, and infant death (Vedam et al., 2018*)*. The major finding in this nationwide survey was that midwifery integration could be a solution in public health.

Figure 5. *The Access and Integration Maternity care Mapping (AIMM) Report Card (Vedam et al., 2018).*

States with the highest vaginal deliveries vs. highest cesarean rates (c-sections).



Source: https://doi.org/10.1371/journal.pone.0192523.g003

2.4 Evidence for midwifery-led care: Practice, Benefits, Outcomes, and Barriers

The childbirth experience should be optimized through intrapartum care and women's experience (Edmonds et al., 2021). According to the CDC, midwife-attended deliveries show excellent birth outcomes. This finding is associated with the time the midwife spends with the

patient, the education, counseling, and emotional support provided (Center for Disease Control and Prevention [CDC], 1998). According to Souter et al. (2019) and King (2020), patients who received care from midwives had fewer interventions and C-sections.

There has been research that shows evidence of the benefits of midwifery care. In the article by Declercq et al. (2020), secondary data analysis showed that birth experience with midwives has fewer interventions than with OBs, such as C-sections and analgesic administration. According to Declercq (2020), in a study in California that included 1,421 patients with vaginal childbirth between September 1 to December 15, 2016, only 12.4% were assisted by a midwife. The participants who delivered with a midwife showed less epidural analgesia (59.8 vs. 73.8%), more involvement from the patient in the decision-making (84.9% vs. 76.7%), more encouragement, different approaches to labor pain, and fewer IV fluids. One of the findings in the analysis was that more patients were interested in having a midwife for future births. In 1997, a Call to Action in Florida estimated that 50% of low-risk pregnant women could have been seen by midwives (Gabay and Wolfe, 1997).

In 2019, Romano et al. (2020) reviewed other research and literature with evidence supporting midwifery care's benefits. The article mentioned a 2019 study in which in 11 hospitals with over 23,000 low-risk births, midwifery care was associated with an approximately 30% lower cesarean birth. In addition, in a 5-year finding from 44,000 Medicaid members, the U.S. Center for Medicare and Medicaid, some outcomes were fewer low birth weight newborns and lower costs. An additional literature review included in the article was the 2014 Lancet Series of Midwifery, which showed a projection of possible maternal and newborn mortality prevention with midwifery care (Romano et al., 2020). Unfortunately, there has been little progress for midwives in the United States.

Neerland and Skalisky (2022) developed a qualitative descriptive study with mixed-method research to increase the understanding of the US birth center model and how the birth center prenatal care contributes to birthing people's confidence for physiologic childbirth. Twelve women between the ages of 18 and 42 were interviewed using semi-structured interviews. Glaser's constant comparative method was used to transcribe and analyze the data. In this study, birth center care was associated with several positive health outcomes, including lower rates of health complications, such as cesarean birth and genital laceration, and higher breastfeeding rates. Confidence in birth centers has been associated with confidence during labor, more unmedicated birth, and more positive birth experiences. Women who gave birth in birth centers had positive experiences overall and felt empowered by their experiences. Women discussed the lack of awareness of birth centers and midwifery within the United States and how this has become a barrier for women to access this model of care.

A retrospective study using a cross-sectional method analyzed the percentage of midwife-attended births at hospitals in the State of New York in 2014 (Attanasio and Kozhimannil, 2017). The secondary data was collected from the Healthcare Cost and Utilization Project State Inpatient Database from New York in 2014 and the New York State Department of Health. This study aimed to document the association between midwives' and obstetricians' deliveries and procedure utilization, including 164,653 low-risk women from 126 hospitals. The study showed statistical significance ($P < .001$) in hospitals with no midwifery care with higher cesarean rates (20.7% vs. 15.4%), episiotomies (14% vs. 5.8%), and maternal mortalities (2.2% vs. 1.7%). This study suggests that more midwife-assisted births may be related to fewer obstetric procedures, which could lower expenses while maintaining the quality of care. This can contribute to the

possibility of improving maternity care if there is greater access to midwifery care for low-risk pregnant women in the United States.

Another study surveyed 2,400 women who gave birth in a U.S. hospital between July 1, 2011, and June 30, 2012 (Attanasio et al., 2020). The study was quantitative research that used national data and a decision-analytic model of costs. The objective was to demonstrate that low-risk pregnant women assisted by midwives have similar birth outcomes to women assisted by physicians, with the opportunity to experience fewer medical procedures and cost savings. Some results were that 91.1% received care from an OB, and 8.9% of low-risk pregnant women had midwife-led care. This study showed that low-risk pregnant women with midwife-led care could produce cost savings and improvement in maternity care quality in the US. Some findings were that midwife-led care was associated with cost savings of $2421 related to 60% lower episiotomies and lower rates of preterm births. It was also mentioned that there is limited research on cost implications.

The Baystate Medical Center in Massachusetts implemented a project by the American College of Nurse-Midwives to reduce c-sections. As a result, they had a c-section decrease of 14% and a total of $413,289 in cost savings (King, 2020). In addition, a finding shown in different articles and research is that midwives spend more time with their patients, allowing patients to feel less pressure during childbirth and empowering them. It also gives them more education, time, and emotional support than when delivering with an OB.

Midwives have been facing a lot of barriers for a long time. These practices were in jeopardy in the 20th century due to the development of OBs. For example, the struggle between midwives and physicians is competition vs. collaboration, which has not changed after a long time of practice (Powell et al., 2018). Other barriers present are equity, quality, safety, payment,

and the effectiveness of midwives. In addition, the progression of this profession is affected by the lack of skill recognition and the lack of relationships with other healthcare professionals (Nove et al., 2021). In the United States, midwifery access is lower than in other countries, 10% vs. 50-75% (Vedam et al., 2018). Declercq et al. (2020) mentioned two crucial barriers: bias and fewer opportunities and interventions when OBs are in the same location. Integration between OBs and midwives is essential to improve safety and quality.

Lack of consumer awareness and no physician backup is detrimental to the midwife practice growth. Because of insufficient marketing initiatives, patients may see them as "old-fashioned," uneducated, unsafe, and not part of the healthcare system (Roberts, 2001). Additional barriers mentioned by Murphy (2018) in her article are the following. First, midwifery care can be difficult to access when there is a lack of understanding of the midwives' role. Second, midwives are not accepted as part of the obstetric culture. Third, for women who want to use midwives out of the hospital, such as birth centers, barriers can be more significant when their insurance, including Medicaid, may not cover this kind of service.

How others perceive midwives is a significant barrier. Kristienne et al. (2020) used a qualitative meta-synthesis to study the maternity workforce where midwives and obstetricians worked together. The study used systematic literature research to compare the data across eight qualitative studies in March and April 2018. A total of 160 midwives were part of these studies, but only ten were from the United States, being a limitation of this study. Midwives expressed different barriers that minimize their ability to provide quality midwifery care. Dr. Kristienne included in the study how midwives struggle to keep their professional role and autonomy and how they are seen as obstetric nurses. Midwives also expressed that their scope of practice was

limited in a collaboration setting. The research highlights the need to study the reasons and conflicts for better collaboration between midwives and Obstetricians.

From 2002-2007, Bernecki, S. (2010) conducted a qualitative analysis to study the perception of 259 College students from an undergraduate public health program about midwives and childbirth. In the study, the primary concerns were childbirth and midwifery training and practice. The students thought that midwives were caring but less educated. The student's biggest concern was safety during childbirth and the lack of technology used by midwives being dangerous for the mother and infant's health, even for low-risk pregnant women. In their responses, the students expressed concern about the midwife's competence to assess an unforeseen complication. Participants felt that is their preference to give birth in a hospital. Their central perception was that midwives could be there for emotional and informative support rather than a medical provider. Participants were unaware that midwives received education and training.

Understanding the midwives' scope of service is not the only aspect that can be misunderstood and affect a woman's or provider's perception. Johnson (1998) studied if consumers were familiar with the terms midwives and nurse-midwives and their differences. The study consisted of 56 questions during a telephone survey in which 200 consumers from Nebraska, New York, North Carolina, and Massachusetts participated. Results showed that 92% of the participants were familiar with the midwives' term and 51% with the nurse-midwife term. One of this study's significant findings was that only 54.5% of the participants were confident in the midwives' ability to assist in childbirth. There were also uncertainties about the midwives' level of education, service, and their integration and roles in maternity care. The study suggested

that consumers' lack of education about midwives could have affected their perception of these maternal care providers.

The study by Thumm et al., 2022; used a pragmatic qualitative design to survey 2,887 CNMs and CMs. In the research, 1,035 comments were received. Some of the barriers experienced by the participants were the lack of autonomy and the lack of knowledge from Physicians and Administration about their practice where their practice was not promoted. In addition, health settings where Physicians dominate were a barrier for midwives to take control of their practice.

Regulatory barriers, payor restrictions, and not securing third-party reimbursement can reduce midwifery practice. In 2014, hospital births were paid 44.2% by Medicaid, 48% by private insurance, 3.4% by self-pay, and 4.4% by others. In the case of midwives, birth center was paid only 16.4% by Medicaid, 29.4% by private insurance, 50% by self-pay, and 4.2% by others. Insurance does not cover many birth centers (Vedam et al., 2018).

Throughout the literature review, it has been found that regulatory barriers, including removing limitations on the scope of practice, impact the utilization of midwife services for pregnancy and childbirth. Even though there is evidence of the potential benefits of midwife-led care, less than 10% of US births are assisted by midwives.

2.5 Literature Review Limitations

There is limited research on physicians and women's perceptions of midwives. Many studies have been done in Europe rather than the U.S., where the infant mortality rate is higher. There is not enough research to understand and know women's perspectives toward midwives and the differences between OBs and midwives. After all the reading, searching data, and

statistics, this study seeks to contribute to the body of knowledge with information about patients' perceptions of midwife services in Florida.

CHAPTER III METHODOLOGY

3.1 Research Design

Survey research will be used to collect quantitative data for this study. The quantitative data with a descriptive statistical analysis will be used to analyze the data. The survey research will help explore low-risk pregnant patients' knowledge and perceptions of care from midwives. This study aims to answer the research question: *What are the barriers to midwife service utilization among low-risk pregnant women in Florida?*

3.2 Population Sample

This research will use non-probability, convenience, and snowball sampling. Women from the American Daughters of Conservation (ADC) were invited to participate in this study. The members are women between the ages of 18-60, with different workforce roles, such as Home Health, Management, Farmers, IT support, Insurance Representatives, and stay-at-home moms. The study pursues 25 participants; a minimum of 18 is needed being a 72% response rate of the sample size. The organization was chosen because there is a chapter in Florida with 110 members allowing the study to have participants from different counties of the state of Florida willing to participate.

The eligibility criteria for this study are women who gave birth between the ages of 18-34 within the last seven years (2015-2022) and are living in Florida at the time of completing the survey. Women who gave birth over 34 years old (high-risk pregnancy) and women who did not live in Florida during the survey will be excluded from this study.

3.3 Instrument

The survey for this study followed a validated questionnaire of 2016 led by the National Partnership for Women & Families for Listening to Mothers in California and was approved by the IRB (Sakala et al., 2018). For this study, the questionnaire was modified to collect additional data to answer the research question. The survey was adapted to study women's maternal care experiences and beliefs, whether they know what a midwife is, their views and preference about choosing maternity care services, and possible reasons not to choose a midwife as their care provider. The survey can be found in Appendix A.

The survey was built using the web-based tool Research Electronic Data Capture [REDCap] (Harris, 2009 and 2019). The application facilitated the data collection, storage, and analysis and ensured the participant's confidentiality by disabling the participant's identifier option and improving the validity of the open-ended questions. REDCap is a secure web-based software platform hosted by the Medical University of South Carolina (MUSC) and the South Carolina Clinical and Translational Science (SCTR). REDCap also provides an intuitive interface for validated data capture, audit trails for tracking data manipulation and export procedures; automated export procedures for seamless data downloads to common statistical packages; and procedures for data integration and interoperability with external sources (Harris, 2009 and 2019). In addition, the National Center for Advancing Translational Sciences of the National Institutes of Health under Grant Number UL1 TR001450 supports using REDCap.

The survey consists of the following type of questions:

- Thirteen close-ended questions with multiple-choice response options (Questions 4, 5, 6, 9, 10, 13, 14, 16, 17, and 19), including three Likert scale questions (Questions 7, 11, and 12).

- Two quantitative open-ended questions that require a numeral answer (Questions 3 and 15).
- Six dichotomous questions that require a yes or no response (Questions 1, 2, 8, 18, 21, and 23).
- Four contingency questions where participants can skip a question that doesn't apply to them (Questions 9, 10, 13, and 22).
- Two two-way questions, including a third alternative besides a yes or no response (Questions 20 and 24).
- Three possible open-ended questions for participants to respond to using their own words (Questions 10, 13, and 22).

3.4 Data Collection

Prior to the survey being conducted, the Institutional Review Board for Human Research (IRB) of the Medical University of South Carolina (MUSC) approved the study to be exempt (Appendix B). Therefore, online survey data collection was used. First, a public survey link created in REDCap was sent to the ADC leader. Next, the ADC leader emailed the survey link on January 30, 2023, to 38 potential members, constituting women with children. The email included a research letter of participation explaining the study purpose, the inclusion criteria, voluntary participation, how to access the survey, the time to complete it, the Principal Investigator information, and that responses will be confidential and anonymous (Appendix C). Seven days after the initial email, a second email was sent as a reminder to reach the responses needed for the study. Both emails included the same information.

The data collected lasted from January 31 to February 12, 2023. During the two-week timeline, 35 survey responses were received anonymously through REDCap. Participants were allowed to share the survey link with other possible respondents outside the group, leading to a possible snowball sampling. Because the responses were anonymous, the collected data can be from the group members selected for this study or the snow sampling. The data collected did not include any information identifying any participant (no demographic information such as name, date of birth, or email address). REDCap assigned them a number (1,2,3…) based on the order they filled out the survey. It was only known the date/time they completed it. I will never see or have access to any electronic mail addresses or identities beyond the survey's collected information. Data are protected in MUSC's secure network storage.

Of the 35 responses, 13 participants did not meet the inclusion criteria and were excluded from the study. The following were the exclusions:

- 8 participants did not give birth between 2015-2022
- 1 participant doesn't live in Florida
- 4 participants were over 34 years old during their last pregnancy

The final sample size includes 22 participants for a 88% of response rate to answer the research question. It is important to note that this is an estimated response rate, given that the survey responses could result from snowball sampling responses and potentially not from the original sample. Participants could skip any questions they did not wish to answer, but each participant answered all the survey questions.

When the participant answered yes to questions one and two, they met this study's criteria and could continue with the questionnaire.

3.5 Data Analysis

Descriptive statistical methods will be used to examine survey responses.

The survey includes the following variables to be analyzed:

a. Categorical:
    1. Nominal: Education level, employment, race, type of insurance, multiple choice questions (maternity care provider preference, reasons for not having a midwife, familiarity with midwives' scope of service), and yes/no questions.
    2. Ordinal: Likert scale questions
b. Categorical/Numerical
    1. Continuous: Last childbirth age
    2. Discrete: Total of children

Descriptive Analysis was used to summarize the collected data. The univariate analysis examines each variable (Shi, 2019). Frequency distribution tables using numbers and percentages were the way to measure, assess, analyze, and identify if there was any pattern in the data. Percentages represent the number of people with a specific answer versus the sample's total.

The data collected were exported into Microsoft Excel and presented in pie charts and bars. In addition, the free-text responses from the open-ended questions were included in Chapter 4 as part of the results. The data captured can identify tendencies and patterns to find the possible barriers that will help answer the research question. The collected data and results may not predict a change for the future, but they will provide insights into how midwives are perceived in the present.

3.6 Ethical Implications

A validated survey was utilized for this research proposal, and the participants' responses were anonymous. There is a risk of confidentiality loss if participants share their participation in the study and their answers.

3.7 Limitations

Some limitations include possible bias for being a non-random selection and not knowing an exact response rate due to snowball sampling. Respondents may also not be truthful in their answers, though they will be encouraged to answer honestly.

CHAPTER IV RESULTS

A total of 22 women met the inclusion criteria for this study. The respondents were between 24 and 34 years old within the study period; for an average of 29 years; they were also asked how many babies they had; one baby was the most frequent answer, with 11 responses for 50%, two babies with 9 responses for 41% and three babies with two responses for 9% (Table 3). The participants between the age of 24 and 29 are the group with the highest percentage in the category of having only one baby at 73%, versus the participants between the age of 30 and 34, where having two babies was the highest percentage at 89% (Table 4).

Among the respondents, 86% were white (Figure 6). In addition, the highest percentage in their education level was 36% with an Associate degree, and 23% had a college degree such as a Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) (Figure 7).

Table 3. *Participant Characteristics*

Age (Avg. age 29)	**N**	**One baby**	**Two babies**	**Three babies**
24	1	1	0	0
25	0	0	0	0
26	3	3	0	0
27	3	2	1	0
28	2	2	0	0
29	1	0	0	1
30	0	0	0	0
31	5	3	2	0
32	2	0	2	0
33	2	0	2	0
34	3	0	2	1
Total	22	11 (50)	9 (41)	2 (9)

Values are expressed as n (%)

Table 4. *How many babies have you had? By age group*

Age Group	One Baby	Two Babies	Three Babies
24-29	8 (73)	1 (11)	1 (50)
30-34	3 (27)	8 (89)	1 (50)

Values are expressed as n (%)

Figure 6. *Race; how do you identify yourself?*

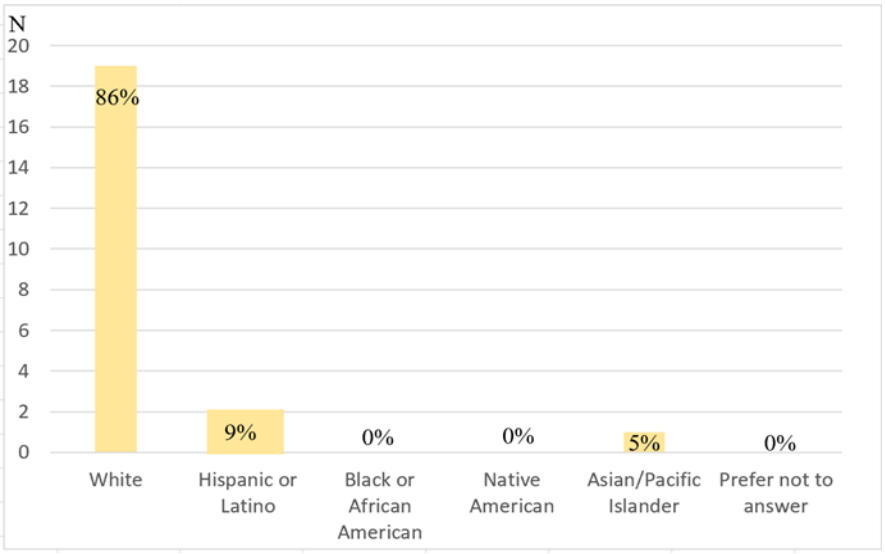
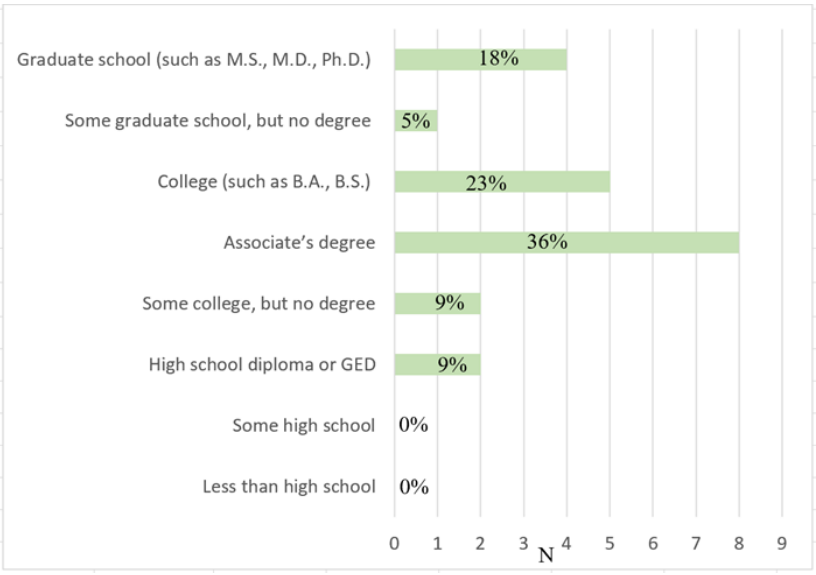


Figure 7. *Highest Level of Education*



Twelve participants (54%) have a Full-Time employment status (Table 5). One hundred percent of the participants have health insurance, of which 18 women (82%) have private insurance to pay for maternity care (Figure 8). However, 77% of the participants with health insurance were not sure if midwifery care was covered, 14% knew it was covered, and 9% did not know if it was covered (Figure 9).

Table 5. *Employment Status*

Employment Status	N (%)
Employed Full-Time	12 (54%)
Employed Part-Time	4 (18%)
Self-Employed	3 (14%)
Not-employed	3 (14%)
Prefer not to answer	0 (0%)

Figure 8. *Type of Insurance*

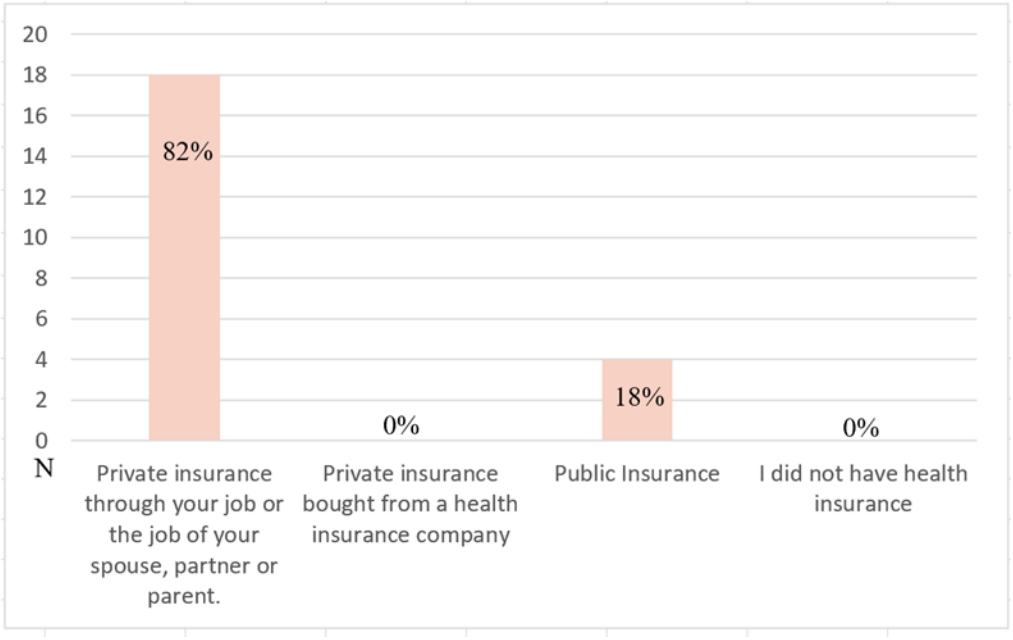
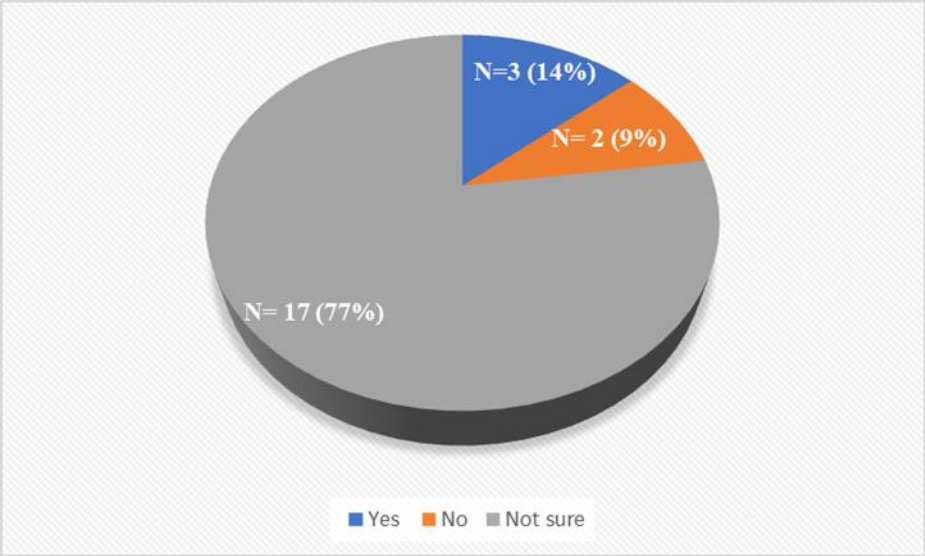


Figure 9. *Do you know if midwifery care is covered by your insurance?*



Analyzing the data collected, these are the findings regarding the participants' last pregnancy, maternity care, their interest in future maternity care, and their knowledge about midwives. Sixteen participants (73%) had a choice to choose their maternity care versus 6 (27%) that did not have a choice, and the maternity care was assigned to them. However, almost half of the participants (45%) did not have information to help them compare maternity care services, but ten participants had information regarding hospitals and providers (Table 6).

Table 6. *Information to compare maternity care services*

Information provided	N (%)
Yes, about different maternity care providers	1 (4.5%)
Yes, about different hospitals for giving birth	5 (23%)
Yes, about different maternity care providers and hospitals	5 (23%)
No	10 (45%)
Not sure	1 (4.5%)

An Obstetrician (OB) provided maternity care to 19 participants (86%); only one participant received care from a midwife (5%) and two from a nurse practitioner that is not a midwife (9%). Most participants (n=15, 68%) do not prefer a different maternity care provider rather than an OB. The 15 participants who answered that they did not prefer a different provider rather than an OB were asked why they did not have a midwife. Although participants were able to select more than one answer for a total of 24 responses, the primary reasons were that they did not know what would happen if they needed a doctor for a c-section (n=11, 46%), and they didn't think their health insurance will cover for midwives services (n=5, 33%). The breakdown can be found in Table 7. The 15 respondents also had the option to select "other" and provide a free text answer. The following were the responses:

"My first pregnancy resulted in termination due to genetic abnormalities which made the fetus incompatible with life outside the womb. Because of this trauma, I was more comfortable with a doctor and wanted all testing available to me."

"I work at a Women's hospital, and for safety/health concerns for myself and my baby, I preferred an OBGYN."

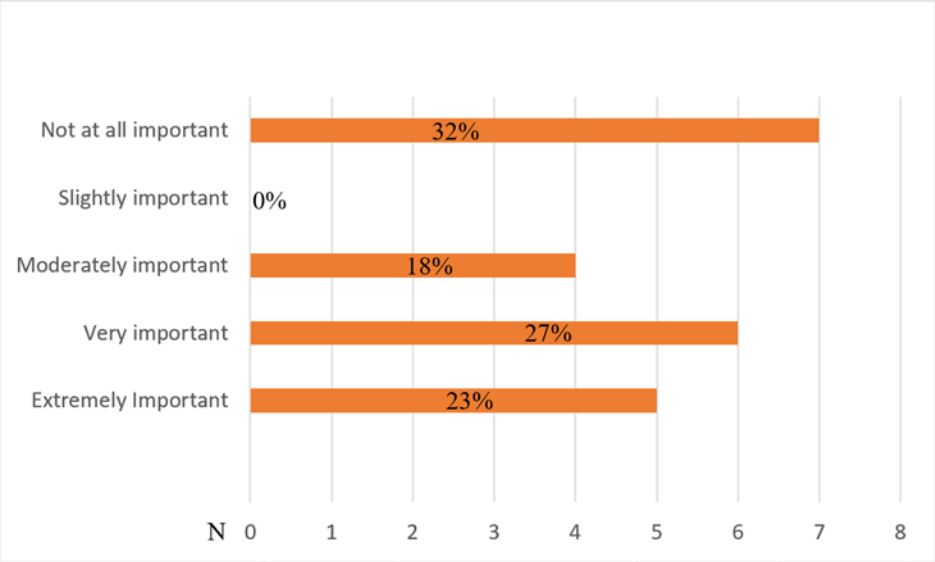
"This was just not an option that was presented to me at the OB with which I was already an established patient."

However, when asked how important it is to have an OB rather than a different provider, seven participants (32%) answered it was not at all important (Figure 10). Only seven participants (32%) would have preferred a midwife as their maternal care provider.

Table 7. *Why didn't you have a midwife as your prenatal maternity care provider?*

Reasons for not having a midwife as a maternity care provider	N (%)
I didn't think that my health insurance plan paid for the services of a midwife	5 (21%)
I didn't think that a midwife could practice in a hospital	2 (8%)
I didn't think that I could have an epidural with a midwife	1 (4%)
I didn't know what would happen if I needed a doctor (for example, for a c-section)	11(46%)
Another type of maternity care provider was assigned to me	0
A midwife was not available	0
I needed a doctor because of health problems	2 (8%)
Other	3 (13%)

Figure 10. *Importance of having an Obstetrician rather than a different maternity care provider*



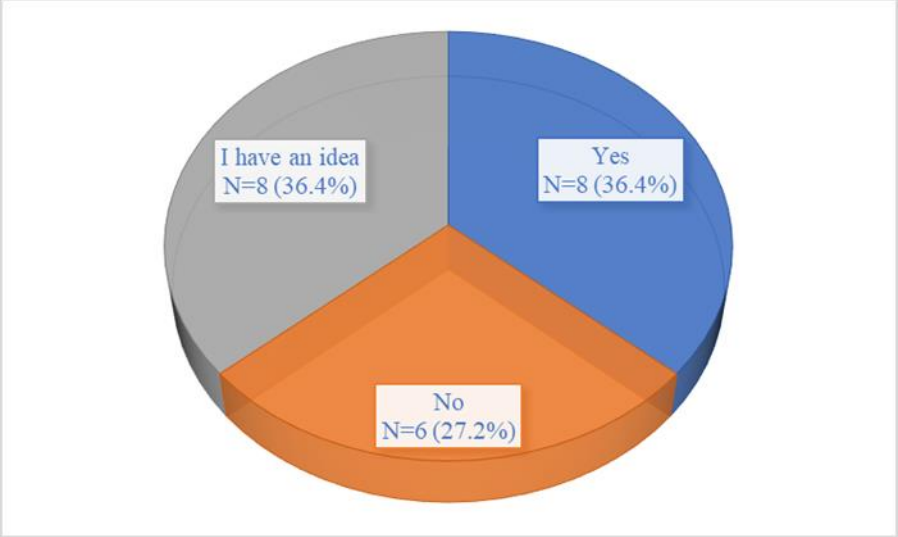
To understand what participants think about the experience of giving birth, they were asked how much they agree or disagree with the statement, "Childbirth is a process that should not be interfered with unless medically necessary." Forty-one percent of the participants agreed somewhat with the statement, 32% agreed strongly, and 18% neither agreed nor disagreed (Table 8). Participants were asked if they were familiar with the midwives' scope of service; 8 participants (36.4%) were familiar, eight (36.4%) had an idea, and 6 (27.2%) were not familiar

(Figure 11). The eight women (100%) who answered that they were familiar with the midwives' scope of service have confidence in their practice to provide prenatal and postnatal care. To evaluate if participants had the opportunity to see a midwife if they were interested, it was asked if there was a midwife practice or office in or close to their community; 64% (14) answered yes, and 36% (8) do not have an office in their community.

Table 8. *Childbirth is a process that should not be interfered with unless medically necessary.*

	N(%)
Agree strongly	7 (32%)
Agree somewhat	9 (41%)
Neither agree nor disagree	4 (18%)
Disagree somewhat	1 (4.5%)
Disagree strongly	1 (4.5%)

Figure 11. *Are you familiar with the midwife's scope of service?*



The results for the use of midwives for future pregnancies were as follows; would consider this (n=11, 50%), would definitely want this (N=7, 32%), and would definitely not want this (n=4, 18%). The 4 participants who were not open and would definitely not want a midwife were asked why not. Participants could choose more than one answer; six responses were received in which having already a maternity care provider (not a midwife) who they like, constituted the 50% of the responses (Table 9).

Table 9. *Why would you definitely not want a midwife to be your maternity care provider?*

Reasons to not want a midwife	**N (%)**
I think a doctor provides higher quality of care	0 (0%)
I think a doctor handles emergencies better	1 (16.6%)
I have health problems that are best handled by a doctor	1 (16.6%)
I know about doctors and don't know much about midwives	1 (16.6%)
I thought that midwives did not give care in hospital	0 (0%)
I already have a maternity care provider (not midwife) who I like	3 (50%)
Other	0 (0%)
No answer	0 (0%)

Of the 22 participants, 64% (14) answered that their last pregnancy was low-risk, and 36% (8) answered it was not. Among the 14 women who responded that their last pregnancy was low-risk, 71% do not want a different provider rather than an OB, but 85.7% are open to having a midwife for future pregnancies, 35.7% are familiar with the midwives scope of practice, and 64.3% have a midwife's practice/office close or within their community. Among the eight women who responded that their last pregnancy was not a low-risk, 62.5% do not want a different provider rather than an OB, but 75% are open to having a midwife for future pregnancies, 37.5% are familiar with the midwives scope of practice, and 62.5% have a midwife's practice/office close or within their community (Table 10).

Table 10. *Low-risk and not Low-risk women's responses*

Low-risk and not Low-risk women's responses	Low-risk N=14 N (%)	Not Low-risk N=8 N (%)
Would you have preferred a different type of maternity care provider than an OBGYN?		
Yes	4 (29%)	3 (37.5%)
No	10 (71%)	5 (62.5%)
If you have a future pregnancy, how open would you be to having a midwife as your maternity care provider (with doctor care, if needed)?		
Would definitely not want this	2 (14.3%)	2 (25%)
Would consider this	9 (64.3%)	2 (25%)
Would definitely want this	3 (21.4%)	4 (50%)
Not sure	0 (0%)	0 (0%)
Are you familiar with the midwife's scope of service?		
Yes	5 (35.7%)	3 (37.5%)
No	3 (21.4%)	3 (37.5%)
I have an Idea	6 (42.9%)	2 (25%)
Is there a midwife practice/office in or close to your community?		
Yes	9 (64.3%)	5 (62.5%)
No	5 (35.7%)	3 (37.5%)

CHAPTER V DISCUSSION

5.1 Discussion

Although evidence shows the benefits of midwifery throughout the literature review, this study shows that obstetricians performed most childbirth. When we compared our results with the study conducted in California in 2016-2017 (Declercq et al., 2020), there is a similarity of a higher percentage of participants that delivered with an obstetrician or other provider rather than a midwife (86% vs. 88%). According to respondents, the study showed that participants preferred to have an obstetrician (68%) even though 64% of the participants have a midwife practice close to or within their community.

More than half of the participants (73%) had a choice to choose their maternity care provider; why not choose a midwife? This study showed several barriers that may prevent low-risk pregnant women from seeking midwives for their maternal care. One hundred percent of the participants have health insurance, from which 82% were provided through their job or spouse/relative's job. Data by Women's Health Policy (2022) showed that in Florida, 86% of the women between the ages of 19 and 64 have health insurance (52% Employer, 15% direct purchase, 12% Medicaid, and 3% other). Another important fact shown by the 2022 Florida Statutes stated that health insurance that provides maternal care must also cover midwifery services, including private insurance and Medicaid. Still, the lack of knowledge (86%) if a midwife service is covered or not is a critical factor that may affect their decision to seek their services. This barrier is also represented in the 33% of the responses of why participants did not want another provider rather than an obstetrician.

Another barrier is the lack of information allowing women to compare the different maternity care services. In this study, 45% of the participants responded that they did not have

this type of information. One of the participants shared through an open-text response that midwifery care was not an option presented to her. The Florida Senate Chapter 467 (2021) recognizes that women have the right to choose how to give birth. This finding confirms that there is not enough communication or education provided.

Participants' perceptions of a safe childbirth experience are a barrier that also needs attention. For example, the highest percentage (46%) of participants prefer an obstetrician because they do not know what can happen if they need a c-section (46%). In addition, the Florida Senate Chapter 467 describes the guidelines for midwives' scope of service, including complications during childbirth and the option to provide care to high-risk pregnant women in collaboration with a physician. It is important to remember that in Florida, midwives provide maternal care in collaboration with a physician who supervises their practice. Two participants also expressed safety/health concerns in the open-text option. To prevent this barrier in the future, there is a need for resources and tools to educate the community.

In addition, the study also showed that 50% are open to considering a midwife in the future, and 32% would definitely want this. On the other hand, in the Declerqc et al. study (2020), 37% of their participant were open to considering a midwife in the future, and 17% would definitely want this. Therefore, comparing both studies, the results showed an increase in women interested in midwives but still not choosing them. However, there is not enough evidence to conclude why participants are willing to change their minds after choosing an obstetrician as their primary care provider. Being part of the study may have generated curiosity about midwives, but it could be a not truthful answer being a limitation for this study. Another significant barrier in this study is women who are still unfamiliar with (27.2%) or only had an

idea (36.4%) regarding the midwives' scope of service. These uncertainties have existed since 1998 (Johnson, 1998).

We can also see some contradictions in some responses, such as not wanting a different provider rather than an obstetrician (68%) versus 32% of responses stating that having an obstetrician was not at all important. In this study, eight participants considered their last pregnancy high-risk, of which 62.5% did not want a different provider rather than an obstetrician, but 75% are open to having a midwife for future pregnancies. Bias, misinformation, or what has been the normal standard for pregnant women could also be barriers to their decision for a maternal care provider.

The outcomes of this study confirmed barriers that include the lack of information provided to the women population regarding midwives and the lack of advocacy towards this practice. Midwifery awareness may provide some benefits not only for the patient but also for the healthcare system. Maternal care is one of the highest expenses (Peter, 2022). One of the midwives' benefits is more vaginal deliveries vs. c-sections contributing to fewer expenses ($7,745 vs. $11,917), less time in the hospital (48 hours vs. 96 hours), and faster recovery if there are no complications (Peter, 2022; Rivelli, 2023). According to Healthy People (2020), in 2018, Florida was the second highest c-sections birth rate at 29.6%, compared with states such as Washington (22.8%) and Oregon (23.4%), where midwives have an independent practice.

The mission of the American College of Nurse-Midwives (n.d.) is to pursue personalized care helping women to achieve optimal health. Women can benefit from this care model, where they can be more involved in their choices during their pregnancy and childbirth. Information that midwives can provide to clarify or close some of the gaps that can cause some of the barriers shown in the survey are the following:

- How to achieve a healthy lifestyle for mom and baby
- Health/medical insurance accepted
- Sharing experiences from previous patients
- How does their model of care maximize the patients' involvement during the prenatal and postnatal care
- How to find a midwife provider
- Collaboration with hospitals/physicians
- Options for the place of delivery: hospital/birth centers

Midwives can provide education and let them be known in the following forums:

- Mom/Baby Expos- Personalized orientation and educational brochures
- Women's Health Centers- Educational brochures
- Parenthood Centers- Educational brochures
- Social Media- Videos and posts

Midwives could develop outreach initiatives to provide education to women of childbearing age. They can be community-based facilitators to share information about their services, including gynecologic health, preconception care, how to make healthy lifestyle choices, promote individualized care, and their role in maternity care. To reach the women population, social networking is essential. Advertising their scope of practice and mission through social platforms could be an option in an era where technology makes information achievable in less time. Creating and developing relationships, for example, with Community Colleges, can be an excellent opportunity for midwives to be known by women from different ages and backgrounds. Education and awareness about their scope of service may require them

to be strategic, have more face-to-face activities, and participate in conferences designed for women.

5.2 Limitations

This study had some limitations. First, the sample size was small. Snowball sampling, where responses received may not be from the original sample. Some participants responded that their pregnancy was high-risk between the age of 18 and 34, not being an exclusion criterion for this study. The high-risk pregnancy was not defined in the survey for participants. There could have been reasons besides age that made them high-risk and excluded them from possible midwife care. Still, the survey did not include questions about any condition or disease experienced during their pregnancy.

The possibility of subjectivity and bias from the participants toward midwives and getting only a few free text responses is another limitation to determining if there are more barriers to why midwives are not selected as their maternal care providers. A limited literature review exists to obtain more information and provide comparisons and trends in using midwives. Even though of these limitations, the results provided important information regarding the research question.

5.3 Future Research

Future research is needed to evaluate and understand why the percentage of childbirth by midwives among low-risk pregnant women is still low. In addition, it would be beneficial to have more evidence regarding the different outcomes between obstetricians' and midwives' deliveries. These studies should be done in hospitals where both practices provide maternity care. It is pivotal to validate that outcomes such as fewer c-sections, fewer medications, and patient satisfaction can be some of the possible or existent midwives' benefits.

Research to identify if the midwives' utilization is higher should be considered between states such as Washington or Oregon, where midwives practice with autonomy, and Florida, where midwives need to be supervised by a physician can be helpful. Future research must also focus on comparative studies between obstetricians' and midwives' provision of care and their impact on the cost/expenses of the healthcare system as well as patient satisfaction. More studies and data can provide meaningful results that will allow a better understanding of the midwives' scope of service and their benefits in maternity care.

5.4 Conclusion

Based on the findings and results of the survey, it is confirmed that there is still no clear idea of the midwife's scope of service and if the health insurance covers this service being the primary barriers for these providers. From the participant's perspective, the study also showed how safety and possible complications during childbirth could be a barrier. Therefore, there is a responsibility to provide more information regarding midwives' care and outcomes/benefits.

It would be beneficial if employers providing health insurance provided education to their employees on the maternal options available under their policy. Finally, employers, public health agencies, health insurance providers, lobbyists, obstetricians, and midwives should join forces to create more proactive initiatives to work toward expanding maternal health benefits and providing information about options available. According to the midwifery policy priorities (2023), the American College of Obstetricians and Gynecology (ACOG) recognize that women have the option and the right to decide on their maternal care provider. ACOG is supporting the integration of maternal care services that include credentialed midwives. This initiative can help to decrease barriers that affect the interest of low-risk pregnant women in seeking midwives as their primary maternal care providers, promoting better collaboration and care. Ultimately,

coordination and collaboration between obstetricians and midwives has potential to improve the quality of care in maternal services as well as address potential provider shortages present in rural and other areas.

The results of this study would provide an excellent opportunity for midwives to develop more resources for the female population to receive and know more about these providers. In addition, more awareness about the midwives' scope of service may help minimize the possible stigmas these providers have.

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Appendices

Appendix A: Survey Questionnaire

1. Was your last pregnancy between 2015-2022?
   a. Yes
   b. No

2. Do you live in Florida?
   a. Yes
   b. No

3. How many babies have you had?

   |__|__| babies

4. By "maternity care provider" we mean a doctor, midwife, or nurse practitioner who provided your healthcare for your most recent pregnancy and the baby's birth. Did you have a choice about which maternity care provider you had for your pregnancy care (prenatal care)?
   a. Yes, I had a choice.
   b. No, I had no choice; my maternity care provider was assigned to me.
   c. I did not get any prenatal care from a maternity care provider.

5. During your recent pregnancy, did you find any information to help you compare the quality of different maternity care services in your area?
   a. Yes, about different maternity care providers.
   b. Yes, about different hospitals for giving birth.
   c. Yes, about both maternity care providers and hospitals.
   d. No
   e. Not sure

6. Which type of maternity care provider most often provided your care during pregnancy?
    a. An obstetrician-gynecologist doctor (could be called OB or ob-gyn
    b. A family medicine doctor
    c. A doctor, but I'm not sure what type
    d. A midwife (could be called CNM)
    e. A nurse practitioner (NP) or other nurse who is not a midwife
    f. A physician assistant (PA)
7. How important was it to you to have an ob-gyn doctor rather than a different type of maternity care provider such as a midwife or nurse practitioner?
    a. Extremely important
    b. Very important
    c. Moderately important
    d. Slightly important
    e. Not at all important
8. Would you have preferred a different type of maternity care provider than an OBGYN?
    a. Yes
    b. No

9. If you answer yes to question 8, which type of provider do you wish you had?
    a. Family medicine doctor
    b. Midwife (CNM)
    c. Nurse-practitioner (NP) or other nurse who is not a midwife ("nurse practitioner")
    d. Physician Assistant (PA)
    e. Other

10. If you answer no to question 8, why didn't you have a midwife as your prenatal maternity care provider? Please choose all that apply.
    a. I didn't think that my health insurance plan paid for services of a midwife
    b. I didn't think that a midwife could practice in a hospital
    c. I didn't think that I could have an epidural with a midwife
    d. I didn't know what would happen if I needed a doctor (for example, for a c-section)
    e. Another type of maternity care provider was assigned to me
    f. A midwife was not available
    g. I needed a doctor because of health problems
    h. Other reason why you didn't have a midwife as your maternity care provider, please tell us: _____

11. We would like to learn more about your views and experiences of giving birth. How much do you agree or disagree with the following statement? Childbirth is a process that should not be interfered with unless medically necessary. Do you…?
    a. Agree strongly
    b. Agree somewhat
    c. Neither agree nor disagree
    d. Disagree somewhat
    e. Disagree strongly

12. If you have a future pregnancy, how open would you be to having a midwife as your maternity care provider (with doctor care, if needed)?
    a. Would definitely not want this
    b. Would consider this
    c. Would definitely want this
    d. Not sure

13. If your answer for question 12 was **option a**, please answer the following question: *Why would you definitely not want a midwife to be your maternity care provider? Please choose all that apply.*
    a. I think a doctor provides higher quality care
    b. I think a doctor handles emergencies better
    c. I have health problems that are best handled by a doctor
    d. I know about doctors and don't know much about midwives
    e. I thought that midwives did not give care in hospital
    f. I already have a maternity care provider (not a midwife) who I like
    g. Other. Please tell us: _____

14. At the time of your recent birth, what insurance did you have to pay for your maternity care?
    a. Private insurance through your job or the job of your spouse, partner or parent.
    b. Private insurance bought from a health insurance company
    c. Public Insurance
    d. I did not have health insurance

15. How old were you when your recent baby was born?

    |__|__| years

16. Which of the following best describes how you identify yourself? Please select all that apply.
    a. White
    b. Hispanic or Latino
    c. Black or African American
    d. Native American or American Indian
    e. Asian / Pacific Islander
    f. Prefer not to answer

17. What is the highest level of education you have completed or the highest degree you have received?

    a. Less than high school
    b. Some high school
    c. High school diploma or GED
    d. Some college, but no degree
    e. Associate's degree
    f. College (such as B.A., B.S.)
    g. Some graduate school, but no degree
    h. Graduate school (such as M.S., M.D., Ph.D.)

18. Was your recent pregnancy low-risk?

    a. Yes
    b. No

19. What is your current employment status?

    a. Employed Full-Time
    b. Employed Part-Time
    c. Self-Employed
    d. Not-employed
    e. Prefer not to answer

20. Are you familiar with the midwife's scope of service?

    a. Yes

    b. No

    c. I have an idea

21. If your answer to **question 20** was **yes**, do you have confidence in the midwife practice to provide prenatal and postnatal care?

    a. Yes

    b. No

22. If your answer to **question 21** was **no**, can you explain why?

    _____

23. Is there a midwife practice/office in or close to your community?

    a. Yes

    b. No

24. If you have health insurance, do you know if midwifery care is covered?

    a. Yes

    b. No

    c. Not sure

Appendix B: IRB Letter of Exempt

MUSC
Medical University of South Carolina
Changing What's Possible

Institutional Review Board for Human Research (IRB)

Office of Research Integrity (ORI)
Medical University of South Carolina

South Park Plaza
1 South Park Circle, Bldg. 1, Suite 401
Charleston, SC. 29407
Federal Wide Assurance # 1888

APPROVAL:

This is to certify that the research proposal **Pro00125898** entitled:
WHAT ARE THE BARRIERS TO MIDWIFE SERVICE UTILIZATION AMONG LOW-RISK PREGNANT WOMEN IN FLORIDA?

submitted by: **Ileana Cruz**
Department: **Medical University of South Carolina**

for consideration has been reviewed by **IRB-I - Medical University of South Carolina** and approved. In accordance with 45 CFR 46.104(d), the referenced study is exempt from Human Research Subject Regulations. No further action or Institutional Review Board (IRB) oversight is required, as long as the project remains the same. However, you must inform this office of any changes in procedures involving human subjects. Changes to the current research protocol could result in a reclassification of the study and further review by the IRB.

Approval Date: **1/27/2023**
Approval Expiration: **1/27/2028**

Type: **Exempt**
Category: **2**

Administrator, IRB-I - Medical University of South Carolina
Kristin ZaksCIP∗

∗***Electronic Signature****: This document has been electronically signed by the IRB Administrator through the HSSC eIRB Submission System authorizing IRB approval for this study as described in this letter.*

Important Note: Approval by the Institutional Review Board does not, in and of itself, constitute approval for the implementation of this research. Other MUSC clearances and approvals or other external agency or collaborating institutional approvals may be required before study activities are initiated. Research undertaken in conjunction with outside entities, such as drug or device companies, are typically contractual in nature and require an agreement between the University and the entity.

Appendix C: Research Letter of Participation

Hello,

You are being asked to participate in a research study conducted at the Medical University of South Carolina because you are a member of American Daughters of Conservation. Your participation in research is voluntary.

If you live in Florida and gave birth between the ages of 18 to 34 within the last seven years (2015-2022) you meet the criteria to be part of this study. If you wish to participate your answers will be confidential.

The purpose of this study is to analyze and revise the barriers to midwife service utilization among low-risk pregnant women in Florida. Your responses may tell us what women know about midwives, perceptions about midwives, and the maternity care provider preference.

This survey will take 10 minutes to complete.

There is a risk of loss of confidentiality, so please do not reveal identifiable information when responding open-ended questions. You may skip any questions you do not wish to answer.

If you wish to participate, please click on or copy the link below on your smartphone, laptop, or desktop. Data/usage rates will apply if you choose to complete the survey on your mobile device.

Survey link: https://redcap.musc.edu/surveys/?s=9KDWCC8HT3C8YW4T

You can share this link with other women who meet the criteria and may be willing to participate. Your participation is greatly appreciated.

Choosing to complete the survey, implies your willingness to participate and confirms that you are at least 18 years of age.

If you have any questions about the study, please contact the lead researcher, Ileana Cruz, via email at cruzi@musc.edu.

IRB Number: Pro00125898

Date Approved: 1/27/2023