ABSTRACT

Impact of Native-Language, Group Prenatal Care on Spanish-Speaking Patients' Satisfaction with Care

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Hispanic individuals represent the largest minority group in the United States, and significant and creative measures must be taken to ensure that this population receives adequate, culturally sensitive medical care. This thesis examines the effectiveness of group prenatal care in improving Hispanic women's satisfaction with their care and in decreasing their perception and experience of cultural barriers in their care. Through the use of focus groups, Spanish-speaking women who had participated in the centering pregnancy program at the Family Health Center were asked to comment on their experiences in the centering pregnancy program. The participating women expressed appreciation for the additional opportunities for education and social connection that are afforded by centering pregnancy, and their cumulative comments indicated an overwhelmingly positive response to the centering pregnancy program. These results suggest that group prenatal care has the capacity to improve Hispanic women's satisfaction with their care and affirm the importance of supporting and expanding beneficial programs like centering pregnancy.

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CHAPTER ONE

Literature Review

Prenatal Care

The goal of prenatal care is to ensure the best possible outcomes for both a mother and her newborn. Providers work to meet these goals by providing ongoing assessment and education and by encouraging shared decision making to identify and mediate potential maternal and fetal risks. Prenatal care can be delivered using a variety of time frames, providers, and strategies, but traditional prenatal care includes between eight and sixteen office visits and covers a number of important educational goals relating to a mother's expectations about and preparation for her developing pregnancy, the birth of her child, and early motherhood (Lockwood & Magriples, 2018a).

One-on-one care, delivered by a family physician, obstetrician-gynecologist, midwife, or maternal-fetal medicine subspecialist, is the most common form of prenatal care. Over the course of several months, the expectant mother will visit her health care provider to monitor significant milestones, and her visits will become more frequent as her due date approaches (Lockwood & Magriples, 2018a). To prepare a mother for the birth of her child, care providers work to help her achieve a positive pregnancy experience: maintaining her physical and social health, effectively preventing pregnancy-related risks, preparing for an effective transition from pregnancy to the birth of her child, and helping her develop self-efficacy as a new mother (Downe, Finlayson, Tunçalp, & Metin Gülmezoglu, 2016).

The primary purpose of each prenatal visit changes as a mother moves from the first to the third trimester (Lockwood & Magriples, 2018b). Ideally, the first prenatal visit will occur before the tenth week of gestation (measured from the first full day of the mother's last menstrual period). Visits during the first trimester (1-12 weeks gestation) are important for establishing baseline measurements for a woman's weight and blood pressure and for obtaining laboratory results that may be relevant for women with chronic conditions (Lockwood & Magriples, 2018a). Ultrasound examinations can begin at this time as well and are useful for accurate determination of gestational age and estimated date of delivery. These early clinic visits are critical for establishing baseline measurements that serve as comparison benchmarks for evaluating fetal development (Lockwood & Magriples, 2018a).

Care providers use consistent monitoring of vital signs and other physiological data at each prenatal care visit to identify and respond to any negative changes in a mother's health. One of the most essential components of prenatal care physical exams is the measurement of blood pressure, which is critical for preventing the negative effects of hypertension (Nathan, Duhig, Hezelgrave, Chappell, and Shennan, 2015) In 2010, hypertensive illnesses were responsible for approximately 14% of global maternal deaths, 20% of global preterm births, and 25% of still births and neonatal deaths (Nathan et al., 2015). It is therefore important that blood pressure measurements be taken early and frequently throughout a mother's prenatal care to prevent these negative outcomes (Lockwood & Magriples, 2018a).

In addition to performing a thorough physical examination of the mother and the developing fetus at the first prenatal visit, the provider will ask the mother to complete a

questionnaire detailing her psychosocial, medical, obstetrical, and family history (Lockwood & Magriples, 2018a). This information is vital for identifying possible risk factors for the pregnancy and for determining additional preventative measures that are needed to mediate risks (Lockwood & Magriples, 2018a). If, for example, a mother has a genital herpes infection or is a carrier for an autonomic recessive disease, additional steps may need to be taken to protect the fetus. These steps can include treatment for the mother or a cesarean delivery to prevent the passing of infectious illnesses to the fetus or further testing of the fetus to determine the likelihood that they will have inherited a genetic disorder (Lockwood & Magriples, 2018a).

Additionally, if the mother reports social or relational threats or stressors (e.g., homelessness, abuse, lack of partner support), the healthcare provider can provide resources for support and intervention early in the pregnancy. Expectant mothers can also be screened for depressive symptoms and provided resources for counseling if needed (Lockwood & Magriples, 2018a). Finally, care providers should also educate expectant mothers, early in their pregnancy, about how to identify warning signs for potential complications. The goal of this instruction is to equip mothers with the knowledge to distinguish normal (though uncomfortable) symptoms from ones, such as premature contractions, vision changes, or vaginal bleeding, that warrant intervention (Lockwood & Magriples, 2018a).

Consistent prenatal care through the end of the third trimester is vital for monitoring the health of the mother and fetus, but recommendations for the frequency of prenatal care visits vary. The National Institutes of Health recommends that nulliparous mothers (first-time mothers) have a minimum of ten prenatal visits and that parous

mothers (who have already carried at least one child to term) have a minimum of seven prenatal visits ("Antenatal care for uncomplicated pregnancies," 2019). The World Health Organization, however, recommends a minimum of eight prenatal appointments for all expectant mothers (World Health Organization, 2016). Despite these recommendations, low-risk women in the United States attend an average of sixteen prenatal visits before delivering (Lockwood & Magriples, 2018b). Carter et al. (2015) recently completed a study examining more than 7,000 uncomplicated pregnancies that were carried to term. They found that attending greater than ten prenatal visits, although associated with an increase in the number of antepartum interventions employed, did not significantly impact neonatal outcomes (Carter et al., 2016). This finding suggests that a ten-visit schedule for prenatal care is an appropriate baseline for care for low-risk pregnancies. Additional visits, however, are often necessary for mothers with additional risk factors (Carter et al., 2016).

In her third trimester, the mother's prenatal appointments become more frequent and a set of routine assessments are completed at each of her visits. These assessments include the measurement of blood pressure and weight, assessment of fetal growth (by ultrasound examination and/or measurement of maternal fundal height), documentation of fetal heart rate, and assessment of any significant events in the mother's life (e.g. travel, sources of stress) that might impact her pregnancy (Lockwood & Magriples, 2018b). In addition, the mother is asked if she is experiencing symptoms that could indicate problems in the pregnancy including: vaginal bleeding or discharge, decreased fetal activity, any signs of preterm labor such as increased uterine activity, menstruation-like cramps, or vaginal discharge of clear fluids, or signs of preeclampsia such as

headache or vision changes (Lockwood & Magriples, 2018b). Documenting symptoms and any abnormal changes is important for identifying and addressing risks for mother and fetus that might arise during the pregnancy.

Outcomes and Benefits

Prenatal care varies around the world, but its significance and necessity are broadly undisputed (Davidson & Rastegari, 2013). Prenatal care can be delivered on a spectrum ranging from relatively few appointments to monitor the steady progress of low-risk pregnancies to frequent intervention and detailed testing for high-risk mothers or for those with a history of pregnancy-related complications. High-risk pregnancy risk factors include extreme maternal age (<18 or >35 years), low maternal body mass index, smoking, alcohol use or substance abuse, anemia, multiple gestation, and preexisting conditions such as diabetes mellitus, heart disease, HIV/AIDS, or other sexually transmitted infections, cancer, or chronic hypertension (Britannica Academic, 2018). Much of the literature emphasizes the importance of individualized prenatal care: care that is planned and delivered with a mother's specific concerns and strengths in mind, and the application of adequate, appropriate prenatal care can convey significant advantages to expectant mothers (Lockwood & Magriples, 2018a).

Determining the relationship between adequate prenatal care and the frequency of adverse health outcomes for the mother and the infant is a complex and often controversial process (Tayebi, Zahrani, & Mohammadpour, 2013). It is generally accepted that regular prenatal care, initiated in the first trimester and increasing in frequency as the due date is approached, decreases both the mother's and infant's risk for a number of adverse outcomes (Partridge, Balayla, Holcroft, & Abenhaim, 2012).

Providers disagree, however, on the appropriate frequency of prenatal visits for both high-risk and low-risk mothers. Studies have shown that ineffective prenatal care schedules can include both too many and too few visits or visits with too many or too few specific interventions and tests. Carter et al. (2016) compared birth outcomes of patients who attended up to ten prenatal visits to those patients who attended more than ten visits. They found no evidence that indicated that attending more than ten prenatal care visits significantly reduced the likelihood that patients experienced adverse neonatal outcomes, though these patients were more likely to undergo interventions such as labor induction and cesarean section (Carter et al., 2016). Prenatal care is generally accepted to be crucial for achieving positive birth outcomes, but excessive care (more than ten visits) in a low risk pregnancy may not provide significant benefits. Therefore, it is important to balance essential care with excessive care, especially for low-risk women (Carter et al., 2016).

The benefits of adequate prenatal care become even more apparent when comparisons are made between populations who attended far below the recommended number prenatal care sessions with those who attended an adequate number. Partridge et al. (2012) completed an analysis of 28,729,765 births and found significant disparities in the utilization of adequate prenatal care by different populations. They also discovered disparities in the frequency of negative birth outcomes for those mothers who received inadequate, intermediate, adequate, and adequate-plus care, as defined by the Adequacy of Prenatal Care Utilization (APNCU) index (Partridge et al., 2012). The researchers identified mothers under twenty years of age, black non-Hispanic and Hispanic mothers, and mothers who did not complete high school as groups who were especially likely to receive inadequate prenatal care. For those individuals who received inadequate prenatal

care, the researchers found that the risk of premature birth, stillbirth, early neonatal death, late neonatal death, and infant death increased significantly in comparison to patients who received adequate prenatal care (Partridge et al., 2012). These data represent serious disparities in prenatal outcomes for women in a number of at-risk populations (racial minorities, limited education, and adolescents), and they underscore the necessity of paying close attention to the risks faced by underserved populations and for creating programs that will improve prenatal care for these groups (Partridge et al., 2012).

Partridge et al. (2012) also highlighted the risks associated with excessive prenatal care. The researchers found that participants who received "adequate-plus" prenatal care had an increased risk of perinatal mortality. An important confounding variable for these data, however, was that the mothers who attended more prenatal visits were those who had been diagnosed with prenatal complications or were considered high-risk and thus were more likely to have negative outcomes (Partridge et al., 2012). The American College of Pediatrics and the American College of Obstetricians and Gynecologists (2012) reiterate the concern that both excess and insufficient prenatal care can be detrimental to mother and infant and underscore the importance of individualized care. According to the academy, some women may benefit from attending fewer prenatal visits, while others may require more frequent care. Regardless, the need for basic prenatal care that can be easily adapted for all women, especially high-risk or underserved populations, is clear (American Academy of Pediatrics & American College of Obstetricians and Gynecologists, 2012).

Adequate prenatal care has the potential to create positive outcomes, and therefore it is important to increase the proportion of the population that makes appropriate use of

this form of medical care. The Healthy People 2020 document includes evidence-based, ten-year goals designed to improve health in the United States, and several of these goals support the need for improved utilization of prenatal care. In 2007, for example, 70.8% of women who delivered live births initiated prenatal care in the first trimester, and 70.5% of women received "early and adequate prenatal care." The Healthy People 2020 target is a 10% increase to 77.9% and 77.6%, respectively (Maternal, Infant, and Child Health, n.d.). Beginning care early is necessary for establishing important baseline measurements and for beginning important preventative measures in the first trimester, which may improve the quality of prenatal care delivered in the second and third trimesters. It is for this reason that seeking creative means for delivering prenatal care, and thereby attracting populations who might be less likely to engage in early prenatal care, is important and necessary (Partridge et al., 2012).

Health Trends for Hispanic Women

Population Demographics in the United States

Hispanic individuals (those who can trace their heritage to Spanish-speaking countries) represent an increasingly significant percentage of the United States population. In 2010, this subpopulation comprised roughly 18% of the United States population, and, as a result, represented the largest minority group in the country (Facts for Features: Hispanic Heritage Month 2017, 2017). In the state of Texas, Hispanic individuals represent an even greater percentage, roughly 39% of the state's population, and in McLennan County, roughly 26% of individuals are of Hispanic origin (U.S. Census Bureau QuickFacts, n.d.). In addition, the Hispanic population is the second

fastest growing minority populations in the United States. Accounting for both immigration and new births in the United States, the growth of the Hispanic population between 2007 and 2014 reached approximately 2.8% (Stepler & Lopez, 2016). Since 2000, the Hispanic population has accounted for more than half of the population growth in the United States. In the last decade, although the growth of the Hispanic population has slowed, dropping to 2.0% between 2015 and 2016, Hispanic individuals continued to account for more than half of the nation's population growth (A. Flores, 2017).

Despite the substantial growth of the Hispanic population, many Hispanic individuals still struggle to access adequate medical care (Facts for Features: Hispanic Heritage Month 2017, 2017). The ability to obtain health insurance can significantly impact a person's health. Having health insurance creates significant improvement in quality of life, increases the likelihood that an individual will seek and receive adequate primary and preventative care, and reduces mortality, especially for those living with chronic conditions (Sommers, Gawande, & Baicker, 2017). Among Hispanic populations, however, health insurance coverage is lacking. In 2016, 9.6% of Hispanic individuals under the age of eighteen, 32.9% of Hispanic individuals between the ages of 18 and 65, and 4.7% of Hispanic individuals above the age of 65 were uninsured. These numbers fall short of the national average for insurance coverage and represent a potential source for significant disparities in health outcomes for the Hispanic population (Health Insurance Coverage Status by Age, 2016).

An interesting, and at times surprising, aspect of the health of Hispanic individuals in the United States is a phenomenon known as the Hispanic paradox. The term Hispanic paradox describes "the epidemiological mystery of why Hispanic

individuals in the USA live longer than their white counterparts despite generally lower socioeconomic status and health-care access" (The Hispanic paradox, 2015, p. 1918). This phenomenon is exemplified in general quality of life and life expectancy of Hispanic individuals as well as in more specific medical issues such as cardiovascular disease. Although Hispanic individuals tend to have a number of significant risk factors for cardiovascular disease, including low socioeconomic status, high rates of obesity and type II diabetes, physical inactivity, and lower levels of education, their rates of cardiovascular disease are significantly lower than non-Hispanic whites (Medina-Inojosa, Jean, Cortes-Bergoderi, & Lopez-Jimenez, 2014). Several theories have been proposed to explain these trends. The acculturation theory postulates that Hispanic individuals who have undergone less acculturation into United States culture maintain healthier behaviors and eating habits that contribute to their improved health (Medina-Inojosa et al., 2014). Other theories suggest that only healthier individuals from Latin-American populations choose to travel to the United States or that older individuals choose to retire or live the final months or years of their lives in their country of origin; both phenomena could skew the mortality rates for Hispanic individuals in the United States (Medina-Inojosa et al., 2014). Finally, credit has been given to the strong social units that are often characteristic of Hispanic communities; valuing family and community can contribute to both improved physical and emotional well-being, which can reduce mortality (Medina-Inojosa et al., 2014). Any of these potential factors, and any other potentially positive or negative cultural influences, are important to consider when developing care programs for Hispanic individuals.

Despite the benefits that appear as a result of the Hispanic Paradox, significant improvements are still possible in health care quality and availability for Hispanic individuals (Medina-Inojosa et al., 2014). Because of the Hispanic population's significant size and continuing growth, and in light of the population's limited health insurance coverage (Health Insurance Coverage Status by Age, 2016), it is essential that programs are created and strategies are employed that will ensure this population receives adequate medical care.

Hispanic Women's Utilization of Prenatal Care

The Healthy People 2020 document includes goals and objectives designed to reduce health disparities and improve the health of mothers and infants. In 2010, the Healthy People 2020 published statistics about prenatal care usage by mothers in the United States in 2007 (the baseline year for the 2020 goals) and grouped the statistics according to the mothers' race and ethnicity. The data revealed that 70.8% of all women in the United States began their prenatal care in the first trimester and 70.5% of the same population received "early and adequate prenatal care," while only 64.7% of Hispanic women initiated prenatal care in the first trimester and 65.5% were identified as receiving early, adequate prenatal care (Maternal, Infant, and Child Health, n.d.). These data represent significantly reduced rates of utilization of prenatal care by Hispanic women.

Disparities in prenatal care utilization are particularly significant for adolescent Hispanic women. Hispanic women in the United States have significantly elevated rates of teenage pregnancy, but studies show that these mothers are less likely than both black and non-Hispanic white individuals to seek prenatal care early in their pregnancy and to receive adequate prenatal care throughout their pregnancy (Torres, 2016).

Several important barriers exist that may contribute to Hispanic women's limited use of prenatal care services. These barriers include both institutional barriers and personal factors and expectations for respectful and culturally sensitive care. Institutional barriers are those that relate to the mother's experience at the clinics where prenatal care is provided including ease of communication with staff, time spent waiting to see physicians, and ease of scheduling appointments (Torres, 2016). The barriers are often associated with the Hispanic population's hesitancy to begin prenatal care. Torres (2016) surveyed 54 Hispanic women about the factors that influenced their decision to seek or not seek prenatal care during their pregnancies. The majority of the surveyed women cited long waiting times at the clinic, difficulty scheduling timely appointments, and a generalized dislike for visiting the clinic as significant deterrents to their interest in seeking prenatal care (Torres, 2016). Because prenatal care requires frequent visits to clinics, it is imperative that clinic administrators and individual care providers address these issues in order to improve Hispanic women's utilization of prenatal care.

Personal factors and expectations about effective and respectful care can also influence Hispanic women's choice to initiate or continue prenatal care. Baxley and Ibitayo (2015) interviewed 15 "women of Mexican origin" about their experiences with prenatal care in the United States. Evaluation of common concerns expressed by women who were interviewed revealed that Hispanic women's expectations about their prenatal care providers altered the likelihood that they would seek care during their pregnancy (Baxley & Ibitayo, 2015). The women expressed that their individual visits with their providers often felt short and rushed and that difficulties in communication across cultural and language barriers amplified their frustration with these brief visits. The

women desired physicians who were culturally competent and bilingual. Women shared that, when their providers understood their culture and spoke their language, they felt as if they were receiving more personalized care. (Baxley & Ibitayo, 2015).

Hispanic women demonstrate relatively limited utilization of prenatal care when compared to the national average. As a result, it is important that this population be targeted with interventions that seek to address the barriers that limit their initiation of prenatal care (Maternal, Infant, and Child Health, n.d.). New policies and practices at clinics can help reduce institutional barriers that Hispanic women face when seeking care, and training for care providers can be used to overcome concerns about cultural barriers between patient and provider (Baxley & Ibitayo, 2015). Advancements that seek to reduce and eliminate the barriers that contribute to disparities in prenatal care utilization (and disparities in maternal and fetal outcomes) can create strong positive impacts for the health of Hispanic women and children (Partridge et al., 2012).

Language Barriers in Healthcare

Data from the 2017 United States Census Bureau demonstrate that approximately 5.7% of the Hispanic/Latino population does not speak English at all and that 11.2% have a very limited ability to communicate in English (Medina-Inojosa, Jean, Cortes-Bergoderi, & Lopez-Jimenez, 2014). These percentages represent a significant proportion of the Hispanic population, and as the Hispanic population in the United States continues to grow, it is important to consider the significant effect that language barriers may have in areas such as education, social services, and health care. These individuals' inability to communicate in English may threaten the quality of the medical care they receive and

contribute, subsequently, to ethnicity-related disparities in healthcare (Jacobs, Chen, Karliner, Agger-Gupta, & Mutha, 2006).

Language barriers complicate medical care in a number of ways. On average, Spanish-speaking patients with limited ability to communicate in English are less likely to establish a consistent source of primary care and are less likely to receive consistent preventative care and health screening. In addition, these individuals are less likely to understand directions they receive during visits and are more likely to encounter problems with adherence to treatments and instructions from their physician (Jacobs et al., 2006). These disparities are significant because effective primary care is essential for managing and preventing the development of chronic conditions and for maintaining a patient's positive quality of life (Sokol, 2018).

Language barriers can also affect Hispanic individuals' perception of the quality of care they receive. Spanish-speaking individuals in the United States are often cared for by physicians who are unable to communicate in Spanish. Further, Spanish-speaking individuals have been shown to be more likely to report reduced overall satisfaction with their care and increased concern for the general quality of the care they are receiving (Jacobs et al., 2006). Language barriers limit physicians' ability to provide care that is both culturally competent and patient-centered. These complications weaken the patient-physician relationship and contribute to poor care experiences (Ali & Watson, 2018).

Spanish-speaking individuals who are proficient in English are not free from the effects of language barriers. Navigating healthcare systems can be overwhelming, and the stress, exhaustion, and confusion that accompany serious illness can complicate even proficient patients' English communication. In these cases, many patients may prefer or

need to communicate in their native language despite their history of proficiency in English (Ali & Watson, 2018). Because serious illness can exacerbate already present language barriers, complications associated with communicating with non-English-speaking patients can increase as the severity of the patient's illness increases. This pattern is especially significant for patients who may need to follow complicated instructions for the management of their illness or condition (Ali & Watson, 2018). Pregnancy, for example, is a condition that may require a variety of interventions and behavioral changes for the patient, and these recommendations may be difficult to communicate when language barriers are present.

Not only do language barriers limit patients' ability to understand the instructions they are given, but it complicates their clear communication of symptoms and concerns and limits the provider's ability to successfully and appropriately treat the patient (G. Flores, 2006). When providers are unable to understand the patient's complaints, significant risks for misdiagnosis and inadequate treatment can occur. For example:

> A Spanish-speaking 18-year-old had stumbled into his girlfriend's home, told her he was "intoxicado," and collapsed. When the girlfriend and her mother repeated the term, the non-Spanish-speaking paramedics took it to mean "intoxicated;" the intended meaning was "nauseated." After more than 36 hours in the hospital being worked up for a drug overdose, the comatose patient was reevaluated and given a diagnosis of intracerebellar hematoma with brain-stem compression and a subdural hematoma secondary to a ruptured artery (G. Flores, 2006).

This case demonstrates the significant risks that are incurred when patients and physicians cannot communicate properly. It is for this reason that, under the Civil Rights

Act of 1964, which discourages discrimination on the basis of national origin, the delivery of substandard medical care based on language barriers is considered a form of discrimination (G. Flores, 2006). In response, many states now require clinics to have interpretation systems in place and to provide program funding for patients receiving Medicare or Medicaid (G. Flores, 2006).

Interpretation programs, however, are imperfect and far from universal. The use of untrained or unskilled interpreters produces an additional set of risks associated with language barriers in health care settings. Health care providers may be forced to rely on the patient's friends or family members (including young children), untrained clinic employees, other patients, or their own imperfect language skills for basic communication with their patients (Jacobs et al., 2006). These ad hoc interpreters are very likely to make errors in their translations, especially if they have limited or no training in medical terminology, and their presence threatens the confidentiality and comfort the patient (G. Flores, 2006). These issues are especially detrimental when sensitive subjects such as abuse, addiction, or sexually transmitted infections are being discussed. All of these factors may contribute to a patient's discomfort in communicating honestly with his or her physician and threaten his or her trust for the provider (G. Flores, 2006).

Clinic administrators have responded to these concerns in recent years by implementing programs that aim to improve physicians' capacity for communicating with non-English-speaking patients. Diamond and Jacobs (2010) summarized the potential positive and negative effects of varying educational efforts for physicians treating non-English-speaking patients. They recommended that physicians, especially those who

work frequently with Hispanic populations, be enrolled in courses that are designed to educate them about the effects of language barriers and the availability and use of interpreters. These courses were shown to both increase the appropriate use of interpretation and improve physician's satisfaction with the care they delivered (Diamond & Jacobs, 2010). Initiatives designed to improve physician's cultural competence had similarly positive effects, and in many cases, these efforts helped providers provide more culturally sensitive care (Diamond & Jacobs, 2010). Conversely, efforts to educate providers in medical Spanish were more likely to have negative impacts on language barriers. Physicians had increased confidence in their communication skills but still had limited proficiency in basic and medical Spanish. These interventions reduced the likelihood that physicians used interpreters and promoted imperfect communication between patient and provider (Diamond & Jacobs, 2010). This study demonstrated that, though not all strategies are beneficial, provider education and creative thinking about language and cultural barriers can have a strong positive impact on care for non-English-speaking patients.

Language barriers represent a significant threat to the quality and effectiveness of healthcare in any form. Improving communication between patient and provider will help both parties understand the concerns and instructions of the other more clearly and will allow for the formation of stronger and more fruitful relationships between doctor and patient (G. Flores, 2006). In light of this information, it is imperative that programs be designed and evaluated for their potential to mediate language barriers and therefore improve outcomes for non-English speaking patients (Diamond & Jacobs, 2010).

Group Prenatal Care

In the group prenatal care model, a "small cohort of women with similar due dates participate in a structured prenatal care program" (Magriples, 2018, para. 1). The model includes three primary components: provision of quality health care, interactive learning through group activities and active participation, and community building within and without the groups (Magriples, 2018). In group prenatal care, the caregiver acts as a facilitator, and the sessions are designed to focus on each woman's experience of pregnancy and on preventing and overcoming the challenges inherent in that experience (Andersson et al., 2013). The model was developed, in part, in response to concerns about increased patient loads for providers, lengthy wait times and short visits for patients, and limited opportunity for patient education (Committee on Obstetric Practice, 2018). Group prenatal care significantly reduces patient wait times, however, because participating women arrive for repeated sessions, at a consistent time. During these sessions the physician is also able to provide more information to a greater number of women in less time than if he or she had scheduled individual appointments (Committee on Obstetric Practice, 2018). Further, these changes reduce institutional barriers to care that often contribute to Hispanic women's reluctance to visit medical clinics and encourage earlier enrollment in and more adequate use of prenatal care (Torres, 2016).

Group prenatal care (GPNC) deviates from traditional prenatal care models. In the GPNC model, providers are able to provide additional educational and community-building components to patients while still monitoring maternal and fetal health (Committee on Obstetric Practice, 2018). These added components improve mothers'

self-efficacy and sense of community support. Providers are able to capitalize upon these changes to provide more thorough preparation for the changes and challenges that women often face during pregnancy, childbirth, and early motherhood (Committee on Obstetric Practice, 2018).

Centering Pregnancy Overview and Background

Centering pregnancy was developed by the Centering Healthcare Institute in 1993, and the program has become a primary source of standardized curriculum for the group prenatal care model (Committee on Obstetric Practice, 2018). In the centering program, mothers begin sessions near the start of their second trimester, and they are expected to attend ten 90 to 120-minute sessions, each with a focus on an educational goal addressing a different aspect of pregnancy, childbirth, or early motherhood (Committee on Obstetric Practice, 2018).

The inception of centering pregnancy occurred at a time when organizations such as the Institute of Medicine (IOM), a “nonprofit organization devoted to providing leadership in health care” (Institute for Healthcare Improvement, 2018, para. 1), were setting ambitious goals for the advancement of medical practice in the twenty-first century. The IOM named care for the mother, fetus, infant, and family as the four most basic objectives of prenatal care, and they expressed concerns that conventional care did not aptly address care for the family or other important social connections in a mother’s life. Centering pregnancy and programs like it were designed to fill this gap (Rising, Kennedy, & Klima, 2004).

Centering pregnancy encourages mothers to build strong community ties, share challenging experiences, ask difficult and relevant questions, and develop self-efficacy

for pregnancy, childbirth, and early motherhood (Committee on Obstetric Practice, 2018). Its popularity has expanded rapidly, with more than 700 providers using the model after its first ten years, and the program has been adopted by hospitals and community health centers and used to care for women of diverse ethnicities and within a wide range of childbearing ages (Rising et al., 2004).

Centering Pregnancy Sessions

Centering pregnancy sessions follow a consistent agenda, and educational goals change at each meeting. According to the Committee on Obstetric Practice (2018, p. 105), "each session begins with socializing opportunities, self-data collection, and a brief one-on-one interaction with the obstetrician-gynecologist or other obstetric care provider for individual assessment and solicitation of patient concerns." Time for socialization at the beginning of each session helps mothers become more comfortable with their peers so they might participate more actively in group discussions. Additionally, before the educational component of the sessions begins, the women help each other measure their own weight and blood pressure under the supervision of a nurse. This practice is designed to further increase the mothers' shared trust and to promote their active involvement in their care (Centering Healthcare, 2018).

Individual exams are provided for each woman at every session, and, if necessary, more specialized exams can be scheduled for just before or after a group meeting (Centering Healthcare, 2018). The individual exam is important for monitoring changes in each woman's pregnancy and screening for signs that could be indicative of conditions such as preterm labor, gestational diabetes, or preeclampsia. Concerns raised by the mother during the private exam can also, with her permission, be added to the group

discussion so other mothers can learn from her experience, question, or concern (Centering Healthcare, 2018).

Each individual session includes interactive activities that guide the women through one or several educational goals. In the first session, for example, faux food is used to practice building balanced meals while the facilitator discusses the importance of nutrition in pregnancy. Other sessions cover oral health, common changes in the body during pregnancy, the difference between expected signs and symptoms and those that warrant medical attention, and the many available contraceptive methods with their associated success rates and side effects. Session facilitators provide instruction in stress management and encourage women and their support systems to visualize and plan for how they would like to lead and structure their families (Centering Healthcare, 2018). As the mothers' due dates approach, session facilitators shift their focus to expectations for labor and new motherhood. For example, session 5 includes an activity during which the women grasp ice cubes in their hands to practice breathing through pain, and in session 8, the facilitator guides the women through discussion of the distinct signs of "baby blues," postpartum depression, and psychosis. These activities can be modified according to the needs of the mothers in the group (Centering Healthcare, 2018).

Centering Pregnancy Outcomes

In the last several decades, professionals in the medical field have sharpened their focus on evidence-based practice (Kamath & Guyatt, 2016). As a result, it is important that the potential benefits of a new program like centering pregnancy be repeatedly and clearly demonstrated. Adequate prenatal care is a significant factor for many positive maternal and infant health outcomes; it is associated with a reduced likelihood for infant

mortality, preterm birth, and low birth weight. Therefore, it is essential that any changes to the standard, individual prenatal care model (such as the implementation of group prenatal care) be carefully studied to identify any benefits or risks that would affect the health of the mother and infant (Tanner-Smith, Steinka-Fry, & Lipsey, 2014).

Research comparing the outcomes of centering pregnancy to traditional prenatal care has become more frequent and focused as group prenatal care has gained popularity. Two important outcome measurements for the effectiveness of prenatal care are the frequency of very low birth weight and the frequency of preterm births. Tanner-Smith et al. (2014) demonstrated that women who attend centering pregnancy are at a lower risk for preterm birth and were less likely to deliver infants with very low birth weights than those who received traditional, individual care. The same study revealed that women who completed centering pregnancy were less likely to experience fetal demise (Tanner-Smith et al., 2014). Studies like these, with large and diverse sample populations, have begun to provide clear indications of the positive effects of the centering pregnancy model.

Preterm birth, which is defined as birth before 37 weeks gestation, is a commonly-studied prenatal outcome that remains a significant issue for mothers in the United States (Chen et al., 2017). In 2015, the rate of preterm birth in the United States was as high as 9.6% (Hamilton, Martion, & Osterman, 2016), but data from several studies indicate that group prenatal care (GPNC) that follows the centering pregnancy curriculum is associated with a reduced overall risk for preterm birth. Chen et al. (2017) examined prenatal outcomes for 316 women who received GPNC and 3,767 women who received individual prenatal care and found a significant decrease in the rate of preterm birth for GPNC women. Additionally, Picklesimer, Billings, Hale, Blackhurst, and

Covington-Kolb (2012) addressed preterm birth in a study of more than 4000 low-risk pregnant mothers. While controlling for several risk factors, the researchers also found that the completion of centering pregnancy curriculum significantly reduced a mother's risk for preterm birth.

A mother's race (white vs. non-white) is an important factor to consider when predicting the likelihood that she will experience a number of negative pregnancy-related outcomes, and distinct racial disparities exist in the frequency of preterm birth in different populations (Chen et al., 2017). A mother's enrollment in GPNC, however, has been associated with a reduction in race-based disparities. In their evaluation of prenatal outcomes for more than 4,000 women, Chen et al. (2017) noted a marked reduction in outcome disparities between black and white mothers who participated in GPNC when compared to those who had received individual prenatal care. Similarly, Picklesimer et al. (2012) found that the reduced risk for preterm birth for mothers who had participated in centering pregnancy was especially significant among black mothers. This marked improvement for black mothers reduced disparities and improved overall outcomes for the women completing the centering pregnancy program (Picklesimer et al., 2012). These results highlight centering pregnancy's significant potential for improving outcomes and reducing disparities for minority populations.

Adolescent women who become pregnant are another important high-risk population in obstetric care. For young mothers, especially those who did not plan their pregnancies, the prenatal care process can play an essential role in preparing them for motherhood, and centering pregnancy has been identified as a program that may also improve outcomes and preparedness for this demographic (Mazzoni & Carter, 2017). The

reinforced educational component of centering pregnancy and increased time with the provider can hold important benefits for young mothers with limited educational backgrounds. Additionally, the group setting strengthens the support system surrounding these mothers, which is especially beneficial for young women with unintended pregnancies (Mazzoni & Carter, 2017). The relatively low enrollment and poor consistency in attendance of young mothers enrolled in centering pregnancy can limit the potential benefits of enrolment in GPNC. Despite this, the importance of focused education and integrated social support in their care should not be undervalued (Mazzoni & Carter, 2017).

Several additional studies have demonstrated improved social and psychological outcomes associated with centering pregnancy. Chae, Chae, Kandula, and Winter (2017) highlighted significant associations between protective factors such as perception of strong social support and positive birth outcomes for mothers and infants. The researchers compared 120 mothers who completed the centering pregnancy program with 221 who completed individual care. Within this population, the researchers saw a significant increase in perceived social support and reported quality of life during pregnancy and immediately following childbirth for women who participated in centering pregnancy. The researchers also noted a significant increase in breastfeeding rates for women who completed centering pregnancy (Chae et al., 2017). In addition, Chen et al (2017) evaluated outcomes for 248 women identified as having inadequate social support early in pregnancy and found that the group prenatal care model provided significant improvements in "psychological outcomes" for the mothers. These included reduced

maternal prenatal distress and increased preparation for birth with an improved ability to cope with challenges faced late in the pregnancy (Chen et al., 2017).

Because centering pregnancy is still a relatively new phenomenon, research addressing outcomes associated with group prenatal care is still in its infancy. Preliminary results, however, have created excitement and hope that this innovative technique may both enhance the experience of prenatal care and improve outcomes for both mother and infant. This improvement in both the experience and outcomes of prenatal care have, in turn, been shown to be especially impactful for women from high-risk populations (Chen et al., 2017). As research continues to develop, and further details of centering pregnancy are explored and evaluated, it is hoped that further success and growth in prenatal care can be achieved.

Purpose

The purpose of this study was to investigate whether receiving prenatal care in a group setting affects participating Hispanic women's perception or experience of language and cultural barriers in their care. Studies have shown that one of the primary concerns of Hispanic women seeking prenatal care is that the cultural background and language of their provider is not compatible with their own (Baxley & Ibitayo, 2015). Centering pregnancy, however, provides women an opportunity to receive care within a community of women who share their language and cultural background. The various benefits of group prenatal have been thoroughly demonstrated by past studies, but there is still a paucity of research that shows how group care can impact care for populations, like Hispanic women, that commonly experience cultural or language barriers. This study

aimed to examine this relationship between care in a group setting and Hispanic women's satisfaction with their care. The following research question was developed to guide this study: does group prenatal care reduce perceived cultural and language barriers and improve Hispanic women's satisfaction with their care? I hypothesized that because these women receive care within a community of other women who share their language and cultural background, their experience of cultural and language barriers would be reduced and their satisfaction with their care would be improved.

CHAPTER TWO

Methodology

Participant Selection

A purposive sample was chosen for this project as it identifies participants who are best able to provide insight about Hispanic women's experience in the centering pregnancy program. Women who participated in the centering pregnancy curriculum at the Family Health Center in Waco, Texas between October 2017 and December 2018, who had attended at least 50% (>5) of the centering pregnancy sessions, and who were willing to participate in the focus groups were recruited for the study. Women were recruited from three different centering pregnancy groups by the principal investigator, and a total of nine women were enrolled in the study.

Information about patient age, gravida and para status (number of pregnancies and number of live births, respectively), prior participation in centering pregnancy, and attendance to centering pregnancy groups was gathered from the centering pregnancy program director. Permission to access this information was granted following the completion of a formal application to receive the data: Application to Release De-Identified Patient Data Research Set. The collection of the data was approved with the stipulation that the data set be presented in aggregate form in the paper and not tied to individual patients.

Study Design

A descriptive, qualitative research design with focus groups was used to answer the question, "Does group prenatal care reduce perceived cultural or language barriers for Hispanic women and improve their satisfaction with their care?" Focus groups allow participants the opportunity to give thorough responses to a series of questions posed by a moderator (Stewart & Shamdasani, 2015). In this study the questions were designed to generate detailed responses about participants' experiences with centering pregnancy. The majority of the questions posed during the focus group were open-ended and allowed the principal investigator to field a variety of thoughts and impressions from the participants.

Approval by the institutional review board (IRB) of Baylor University was sought by the principal investigator prior to the beginning of the study. The project was designated as "exempt" as a quality-improvement study that posed limited risk to human participants. The IRB decision can be found in Appendix A.

Protocol

Medical personnel used gestational age at enrollment in the centering pregnancy program to assign participants to specific centering groups. The participants were grouped with women who had similar due dates, and the groups met for ten sessions during a period of six months (26 weeks). Over eighteen months, the principal investigator observed three centering pregnancy groups and established trust and rapport with the participants. During the sixth session (week 18 of the program), each group of women was asked by the principal investigator to participate in a focus group that would

occur following either the seventh or eighth session (week 20 or 22 of the program, respectively).

The women were neither required no incentivized to participate in the focus groups. Before seeking spoken consent from the participating women, the principal investigator explained that the goal of the focus group discussions was to learn more about the centering pregnancy program so it could be improved or expanded upon in the future. The potential participants were told that their responses would not affect their care at the Family Health Center in any way but that their insights would be used to improve care for future patients. The principal investigator acted as the moderator of the focus groups and guided the women through a series of questions about their experience with the centering pregnancy program. The focus group questions were developed by the principal investigator and designed to elicit detailed responses from participants about their experience in centering pregnancy. A pre-established script (see Appendix B) was used to ensure fidelity across focus groups. To ensure clear communication, a translator, fluent in both English and Spanish, was present for each focus group.

Data Analysis

Each of the three focus groups was audio recorded (with the spoken permission of the participants). Following the completion of the focus groups, a research assistant who was fluent in Spanish transcribed the recording. The transcriptions were then translated into English and back-translated into Spanish by two independent, trained research assistants. The back-translations were compared to the original transcriptions by the principal investigator to ensure the accuracy of the translations of the participants'

responses. The transcribed data from all three focus groups were analyzed using a thematic analysis approach (Braun & Clarke, 2013). To ensure confidentiality, the participants were identified in the analysis by generic terms such as "woman one."

The transcribed data was read several times to develop familiarity with the data which allowed researchers to begin identifying common points of interest related to the research question. The principal investigator created several codes, which represented words, ideas, and phrases that were repeated in response to several questions and across several focus groups. The frequency of references to each of these codes (across the three focus groups) was calculated for each question. Similar codes were grouped into themes. These themes represent significant and commonly repeated ideas that participants shared about their experience in centering pregnancy. The total references for each theme across all questions and focus groups was also calculated. A total of 23 codes and 4 themes were identified.

The transcribed data also included the patients' responses about their English language proficiency and information about their health literacy. Participants' responses about their ability to speak and understand English were given on a 1 to 10 scale, and the average of these responses was calculated to demonstrate the collected English proficiency of the participants. Patients' responses to questions about health literacy were described in the results to provide additional context for the patients' involvement in the centering pregnancy program.

CHAPTER THREE

Results

Participant Demographics

A total of nine women participated in the study. The average age of participating women was 29 years, with a range of 18 to 37 years of age. The women's gravida (total number of confirmed pregnancies) and para (total number of births after 20 weeks' gestation) were varied. Three of the participating women were gravida 1 and para 1 (G1/P1), which means that this was their first confirmed pregnancy. Each of the other women had been pregnant between two and six times previously and had each had at least one previous birth after 20 weeks. Each of the women attended six or more centering sessions, and many women delivered before the completion of the ten sessions. None of the women had participated in centering pregnancy before (excepting one woman who had attended a single session during a previous pregnancy).

At the beginning of each focus group, the principal investigator asked each of the women to rate their ability both to speak and understand English on a scale from one to ten, with ten meaning they could speak or understand English fluently and one meaning they could not speak or understand English at all. The nine participating women rated their ability to speak English as an average of 1.78 out of ten on this scale. The women rated their ability to understand English as an average of 4.22 out of ten on this scale. These demographic characteristics are summarized in Table 1.

Table 1:

Age: Mean: Range:	 29 years 18 – 37 years
Ethnicity: Hispanic: Other:	 9 (100%) 0 (0%)
Gravida status: Mean: Range:	 4 confirmed pregnancies 1 – 7 confirmed pregnancies
Para status: Mean: Range:	 1.8 deliveries after 20 weeks 0 – 4 deliveries after 20 weeks
Number of sessions attended: Mean: Range:	 7.4 sessions 6 – 10 sessions
Ability to speak English (1-10 scale) Mean: Range:	 1.78 1 – 3
Ability to understand English (1-10 scale) Mean: Range:	 4.22 1 – 10

After information about English fluency was gathered, the participants were asked a few questions that aimed to gather basic information about their health literacy: their degree of comfort in communicating with physicians and navigating the healthcare system. Their responses to these questions are summarized in Table 2.

Table 2:

Question	**Code**	**References**
How comfortable are you discussing your health with your doctor? Do you feel that you can usually understand what your doctor is saying?	Understand well	8
	Concerns resolved	1
	Questions answered	2
	Comfortable asking questions	2
	Good experience at Family Health Center	4
	Instructions poorly explained	1
	Rude	1
	Like centering schedule	1
	Difficulty scheduling appointments	2

Are there things you find confusing about the health care system? Is it easy or difficult to schedule appointments? Choose a doctor? Decide when it is a good time to go to the doctor?	Difficulty communicating with physician	1
	Difficulty communicating over the phone	1

Many of the women expressed positive views of their care at the Family Health Center. There were eight separate mentions of being able to understand physicians well, and several women shared that they felt that their questions were answered, and their concerns were resolved in a timely manner. The women did, however, express two important concerns about their past experiences with healthcare. One woman in the third focus group shared that she had struggled in the past with medical care because she had felt that the physicians were "rude" and added that, "they treated us as if we had an infection or something, it was our own fault." Another woman added that she felt that in her past care instructions were not explained thoroughly enough. She described several instances of miscommunication in one-on-one conversations with physicians, in which, because they thought she already knew the information, "they don't take the time to explain it to you." These comments were consistent with common concerns expressed by Hispanic women receiving care in the United States (Torres, 2016).

Analysis Procedures

Goals for Analysis

This descriptive study was designed to answer the question: does group prenatal care reduce perceived cultural and language barriers and improve Hispanic women's satisfaction with their care? Following the transcription, translation, and back-translation

of each of the focus groups, the responses of the participants were carefully examined. Detailed analyses of the participants' responses to questions about their experience in centering pregnancy were performed to identify potential benefits or drawbacks conveyed to Hispanic patients by the group prenatal care model. Responses to introductory questions about English language proficiency and health literacy were also examined to gain more information about the participants.

Development of Codes and Themes

A qualitative coding process was used to identify emerging themes in the focus group discussions. For each question, participants' responses were examined and separated into distinct codes (or important ideas). Several individual codes were found to be repeated in multiple questions and across multiple focus groups. In total, 23 codes were developed and recorded in a code book. The principal investigator used the code book to code all participants' responses. An independent research assistant trained in coding also coded the participants' responses using the same code book. The frequency of references to each code across all three focus groups was tallied and compared between coders to establish intercoder reliability. An 85% agreement between coders was reached. The code references were then divided by question and recorded in Table 3.

Table 3:

Question	Code	References
What are some reasons that you chose the centering program for your prenatal care?	Greater attention to patients	1
	Personalized	1
	Improved access to or rapport with doctors	2
	Comradery/sharing	1
	Encouragement	1
	Active Participation	1
	Learning from others	1
	Advice and new information	1
	Personalized	1

Of these reasons, which is the most important? Why?	Comradery/sharing	4
	Active participation	1
	Comfortable	3
	Trust and safety	1
	Advice and new information	1
	Fun	1
	Good explanations/better understanding	1
	Learning from others	2
What has been the most helpful part of centering? Why?	Comradery/sharing	1
	Advice and new information	3
	Learning from others	1
	Review	1
What, if anything would you change about centering? Why? *positive responses, not things they would change*	Improved access to or rapport with doctors	1
	Comfortable	1
	Kindness	1
	Privacy	1
How would you compare centering to past experiences with medicine (and prenatal care)? Has it been more or less helpful? Why?	Improved access to or rapport with doctors	2
	Comradery/sharing	2
	Advice and new information	1
Would you recommend centering pregnancy to a friend looking for prenatal care? Why or why not?	Comradery/sharing	1
	Advice and new information	3
	Luxury	1
	Better retention	2
	Fun	1
	Not black and white	1
	Learning from others	1
Did you enjoy having group discussions with other expecting mothers? Did you learn from these discussions?	Comradery/sharing	2
	Comfortable	1
	Trust and safety	1
	Applicable	1
	Learning from others	2
Which lessons were most important for preparing you for changes during pregnancy?	Advice and new information	2
	Responsive to doubts	1
Which group activity was your favorite? Which was the most helpful?	Advice and new information	2
	Good explanations/better understanding	2
	Applicable	2
Describe a time you had a very good experience with Centering pregnancy.	Personalized	2
	Trust and safety	1
	Advice and new information	2
	Good explanations/better understanding	1
	Connections to other organizations	1
Before we finish, are there any final comments you would like to make about your experience in the program?	Better access to or rapport with doctors	1
	Active participation	1
	Comfortable	2
	Fun	2
	Responsive to doubts	1
	Good explanations/better understanding	1
	Looked forward to	2
	Confidence	1

The codes were condensed and re-evaluated to determine four emerging themes. Each of these themes was referenced at least once by each of the three focus groups, and the ideas included in these themes often appeared several times in each discussion. The themes each describe a significant facet of the participating women's experiences in centering pregnancy. The four themes are: *access to and attention from doctors*; *comfortable, safe, and fun atmosphere*; *sharing with and learning from others*; and *more information and better explanations*. The frequency of references to these themes across all questions and focus groups was recorded in Table 4.

Table 4:

Themes:	Codes:	References:
Access to and attention from doctors	Greater attention to patients	1
	Personalized	4
	Improved access to or rapport with doctors	6
		Total: 11
Comfortable, safe, and fun atmosphere	Encouragement	1
	Comfortable	6
	Trust and safety	3
	Fun	4
	Looked forward to	2
	Kindness	1
	Privacy	1
		Total: 18
Sharing with and learning from others	Comradery/sharing	11
	Learning from others	7
		Total: 18
More information and better explanations	Advice and new information	15
	Better retention	2
	Not black and white	1
	Good explanations/better understanding	5
	Review	1
		Total: 24

Access to and Attention from Doctors

The first theme, *access to and attention from doctors*, includes comments made by participants about their relationships with the physicians who facilitated the centering pregnancy sessions and their ease in accessing the physicians at appointments. Eleven total references were made to this theme. One of the two key facets of this theme is the idea that participating women received more attentive and personalized care than they had experienced in the past. Participants mentioned that they felt that their care was "more focused on [them]," that they received more personal attention (despite the group setting), and that they were asked more frequently to provide input on their own care. Of the nine women who participated in the study, three mentioned that they felt that they were receiving more attentive or personalized care. One woman expressed that she felt that her input was being sought more frequently when decisions were made about her care. When remembering her experiences in centering pregnancy sessions, she stated that, "it was the first time that they have asked me 'how do you want to give birth?'" Because she was being asked more frequently for her input, she felt that she was receiving more personalized care.

More than half of participants in the study made references to improved ease of access to their physicians. This idea grew, in part, from participants' impressions of how they passed their time in the clinic: they spent less time waiting for appointments and more time in sessions with physicians. Five of the nine participants referenced this idea, and it was mentioned in each of the three focus groups. One woman appreciated having appointments that occurred at repeated times, so she spent less time "just waiting there" in the clinic. Another woman shared that she was happy to have appointment times far in

advance, so she could arrange child care. She stated, “you already know when your appointments are, and you schedule with two-three weeks even up to one month to see who can take care of the kids.” These observations by participants communicate their appreciation for the consistency of the sessions in the centering pregnancy program, which allowed them easier access to their physicians.

Some women expanded on their appreciation for simpler access to physicians by commenting that they were grateful that centering pregnancy put them in contact with several physicians. One participant mentioned that, because “there are three doctors not just one” she had access to “more opinions” from her doctors. She added that, “in case that I have a question or something, I have three doctors available to ask.” Another participant, in a different focus group, echoed these ideas by saying she appreciated having access to “a team” of doctors.

Comfortable, Safe, and Fun Atmosphere

The second theme was that the centering program provided a *comfortable, safe, and fun atmosphere*. The participants made several different comments about aspects of centering pregnancy that made them feel comfortable in the group and excited to attend sessions. These comments included remarks that centering was comfortable, safe, fun, and private and that the physicians and other facilitators were encouraging, helpful, and kind. In total, this theme was referenced eighteen times by participants.

Comfort and fun were the most commonly referenced codes within this theme. Four of the nine participating women said directly that they felt “comfortable” either with the other women in their group or interacting in general in the centering sessions. A

woman in the first focus group stated specifically that she “did not feel anxious.” She shared that it was because of the atmosphere of the group that she felt comfortable expressing her concerns and asking questions. Three of the nine participating women referred to their centering sessions as fun, and two others stated that they looked forward to coming to their centering session or that they would miss attending the sessions when they were over. One woman in the first focus group elaborated that, “the information is given to you in different, fun ways” when describing why and how she would recommend centering pregnancy to a friend.

Safety and privacy were aspects of centering pregnancy that were also frequently described by the women participating in this study. Though the women received their care with a group of other women, none of the participants expressed concerns for their privacy, and one woman mentioned, “that from these four walls nothing leaves.” This statement expressed this participant’s trust that the specifics of their discussions would not be shared with anyone outside of the centering pregnancy meeting-place. In addition, three of the nine participants expressed that they felt safe in the group setting or that they felt confident that they could trust the doctors and other women. One woman described feeling especially safe in the group and in conversation with physicians because “there are witnesses” to the way she was being treated by physicians. This made her feel more secure. When another woman was asked to name her most important reason for choosing centering, she responded that she felt that it was care “with more trust.”

Sharing with and Learning from Others

The third emerging theme is *sharing with and learning from others*. This theme includes two codes relating to participants' interactions with other members of the centering pregnancy group: "comradery/sharing" and "learning from others." Participants referenced this theme on nineteen occasions. An appreciation for developing friendships and comradery and for sharing experiences was one of the most frequently mentioned of the 23 total codes. Of the nine participating women, seven mentioned that they enjoyed developing relationships with or sharing experiences with other mothers in the group. A woman in the first focus group commented: "I have an opportunity to meet more people that are going through the same thing that you are, and they are more relatable to your situation." Her sentiments were echoed by another woman in the third group who said, "during whichever moment, you are listening to the others and you remember, 'oh this happened to me' or 'ah I have that question' and it is a lot better and more comfortable." Each of these statements reflects the idea that the women were glad to be experiencing pregnancy with a group of women who were facing similar obstacles and challenges.

Five of the nine participants referenced opportunities for learning from other's experiences as a positive aspect of centering pregnancy. These opportunities to be consistently connected with other pregnant women are unique to group care, and the participants shared several positive responses to this aspect of centering pregnancy. When asked to name the most important reason that she chose centering pregnancy, one woman in the second focus group responded that she loved to, "listen to the other experiences of other moms that maybe have been through things that one hasn't or doesn't know about." Another woman in the first focus group commented that she would recommend centering

to a friend, in part, because of the opportunities for "hearing different experiences from other moms." These comments showed that the participating women did not consider that their education was limited to the information provided by physicians and other clinic staff, but that the majority of the participating women believed they had also gained information from the examples and experiences of other women.

More information and better explanations

The final theme, *more information and better explanation*, relates to the amount of information provided to the participating women and the degree to which they felt that they understood and retained this information. This theme was the most commonly referenced theme and was referenced twenty-four times by participants. Within this theme, the most commonly referenced idea was that participants in centering pregnancy received more information and advice that they would have received in the standard one-on-one care model. This code was the most commonly referenced of the 23 total codes with 15 references, and seven of the nine women mentioned that they felt that they had received more information because they were a part of the centering pregnancy program. In addition to having access to more information, two women mentioned that, because the information is presented through activities and in discussions, they felt that they retained the information more fully after their sessions. One woman stated that when recommending centering pregnancy to a friend she had told her "that if they offered her this luxury, I highly recommend it. She should come because the format they give us the information is very different and you retain more of it."

Other comments added more depth to the women's assertions that they valued the information they received from the centering pregnancy sessions. Five references were made to the idea that their understanding of the information delivered was better than it would have been had the same information been presented in a traditional one-on-one conversation between a doctor and a patient. Five of the nine participating women described information being delivered or explained more effectively in centering pregnancy sessions than it had been in their past experiences with medical care. Some women also made direct references to the activities in which they participated during centering sessions. One woman described an activity that the group completed that distinguished "baby blues," postpartum depression, and psychosis. She commented: "they explained it to us with cards in three parts. When it was something normal and when it was of concern. The manner in which she explained the material and what we should feel seemed very good to me." This theme touches on an important goal of centering pregnancy (education) and reaffirms that this added component is noticed and appreciated by participating women.

CHAPTER FOUR

Discussion

Centering Pregnancy: Benefits for Hispanic Patients

Relatively few data exist that provide insight into Hispanic women's experiences in group prenatal care. In this study, the participating women, all of whom were Spanish-speaking, made a variety of comments about their experiences with the centering pregnancy program. These comments provided insight into the positive impressions that the women developed with reference to the centering pregnancy program. In addition, many of the observations made by the participating women identified aspects of centering pregnancy that may have reduced cultural or language barriers in their care.

Access to and Attention from Doctors

Lengthy wait times in clinics, difficulty scheduling appointments, and other institutional difficulties associated with securing medical care are associated with significantly decreased patient satisfaction with care and with patients' damaged perceptions of the skill of their physicians (Bleustein et al., 2014). Studies have shown that these challenges in navigating the health care system are especially significant for Hispanic women. Torres (2016) surveyed 54 Hispanic women about the factors that influenced their decision to seek or not seek prenatal care during their pregnancies. The survey included 28 items (potential reasons that the women delayed initiating prenatal care), and the researchers asked women to rate each of these items on a scale from 1 (not at all difficult) to 5 (extremely difficult). Among these items, three were especially

significant to the women who participated in this study. According to the study's results, 93% of women rated scheduling child care as a 4. In addition, 59% of women rated scheduling timely appointments as a 4, and 15% rated the same barrier as a 5 (extremely difficult). Finally, 46% of participating women rated long waiting times as a 3, 22% rated this barrier as a 4, and 24% reported that the long wait times represented a barrier that was "extremely difficult" to overcome (Torres, 2016).

Results collected in the current study, however, demonstrate that group prenatal care, specifically centering pregnancy, is able to address each of these concerns. In Torres' study, long waiting times at the clinic was rated as "extremely difficult" by the greatest number of women. In the centering pregnancy model, however, wait times are eliminated for the ten scheduled sessions that expecting mothers attend. Because the sessions are scheduled for consistent, predetermined times, women are able to avoid waiting rooms and go directly to the meeting place to begin their physical exam. Several women involved in the current study commented about this improvement. One woman stated directly that because of the consistent appointment times in centering pregnancy she felt that she had spent less time "just waiting there" in the clinic. Another woman added that, "since I have been in centering they give us a 'schedule' and it is something good because I work a lot with schedule." In prenatal care, clinic visits become increasingly frequent and wait times are therefore especially significant. The women in the current study, however, did not express a concern for wait times and were appreciative of the consistent appointments that are standard in the centering pregnancy model.

The comments of the women who participated in the current study also addressed the concerns raised by Torres (2016) about the timely scheduling of appointments. Centering pregnancy sessions for a single group are all scheduled at the beginning of the group's time together, and, therefore, appointment dates and times are knowable by patients several months in advance. One woman in our study commented that, "you already know when your appointments are, and you schedule with two-three weeks even up to one month" in advance. She added that this was especially helpful, "to see who can take care of the kids." This observation addresses the final significant barrier identified in Torres' (2016) study. In that study, 50 of the 54 participating women rated organizing child care as a very important barrier to their initiation of prenatal care. Centering pregnancy sessions are scheduled at consistent times and far in advance, and greatly decrease this barrier for Hispanic women participating in group prenatal care.

Increasing the convenience of attending prenatal care appointments is especially important for Hispanic women who, when compared to the national average in the United States, are much less likely to initiate prenatal care in their first trimester (Maternal, Infant, and Child Health, n.d.). If, however, Hispanic women have access to prenatal care services that offer reduced wait times and increased ease in scheduling appointments when compared to the traditional, one-on-one care model this gap in prenatal care initiation may be reduced.

Baxley and Ibitayo (2015) went beyond institutional barriers and addressed Hispanic women's interactions with their physicians. According to their research, Hispanic women's expectations about effective and respectful care strongly influence their choice to initiate or continue prenatal care. The women who participated in this

study desired physicians who were culturally competent and bilingual. The women shared that their individual visits with their providers were often too brief and that communication challenges, across cultural and language barriers, amplified their frustration with these visits (Baxley and Ibitayo, 2015). Finally, the researchers commented that the participants wanted to feel that their care was more personalized and that their health care providers cared about them as people. Comments made by women in the current study, again, demonstrate ways that the centering pregnancy model is able to address concerns that are especially significant to pregnant Hispanic women.

Several of the women who participated in our focus groups commented that they felt the care they received through centering pregnancy was more personalized. The women felt this way, in part, because they had access to several physicians through the centering pregnancy program. One woman mentioned that she felt she had access to "more opinions" which made her feel her care was more personalized. Another woman commented that she felt the care was, "more focused on us" and a third woman described being asked more questions than she had in the past about how she wanted her care to be delivered. Centering pregnancy is designed to allow time for lengthy discussion between doctors and patients, and time is therefore made for these positive interactions that were noted by the participating women. The women felt, with the group care model, they had the opportunity not only to spend more time with their physician but to have more of their individual questions answered.

Each of these positive aspects of centering pregnancy directly addressed a concern frequently raised by members of the Hispanic population. Because concerns about navigating the healthcare system and receiving culturally competent care are

especially important for Hispanic women, they represent cultural barriers that can be overcome to improve Hispanic women's perception of the care they are receiving. The results of the current study demonstrate that centering pregnancy is successful in assuaging these concerns and reducing these barriers.

Comfortable, Safe, and Fun Atmosphere

Pregnancy is a unique condition within medicine. While requiring extensive medical attention, pregnancy can also become a positive experience for a woman and an opportunity for growth. Part of fostering this positive experience is ensuring that mothers feel comfortable and safe when they are receiving their care (Torres, 2016). Torres (2016) surveyed Hispanic women to discover which barriers to care were most significant in determining whether or when they initiated prenatal care. Of the 54 women who participated in this study, 11% reported that on a scale of 1 (not at all difficult) to 5 (extremely difficult) they felt that the phrase "didn't like going to clinic" to be a 5 and an additional 69% labeled this barrier to be a 4 on the 1 to 5 scale. The terminology here is slightly confusing, but these results indicate that a majority (80%) of Hispanic women who were surveyed reported that their dislike for visiting the clinic made initiating prenatal care difficult for them (Torres, 2016).

The responses recoded from women participating in centering pregnancy at the Waco Family Health Center challenged these results and demonstrated that group prenatal care may help Hispanic patients feel safe and comfortable when they visit the clinic for their prenatal appointments. A number of women who participated in this study commented that they enjoyed and looked forward to their centering pregnancy sessions. One mother commented, during the first focus group, that centering pregnancy "helped

me a lot with my pregnancy because I would get excited to come to my consults." She enjoyed her visits to the clinic and felt that, as a result, she learned a lot from the experience. Another mother who was preparing to give birth to her first child stated, "I really liked it and I will miss it" when asked to make final comments about her experience. Finally, four women used the word "fun" when describing their overall experience with centering pregnancy. These women's responses, among others, indicate that, unlike the women surveyed in Torres' (2016) investigation, they found enjoyment in visiting the clinic and receiving their prenatal care.

The participating women's enjoyment of centering pregnancy was, in part, facilitated by their comfort and feelings of safety within the centering pregnancy program. Four women stated directly that they felt "comfortable" either with the other women in the group, with the physicians leading the group, or both. Another woman expanded on this idea and stated: "I did not feel anxious and I felt that I would be okay here." The environment within centering pregnancy creates a safe space where women can enjoy coming together to prepare for the birth of their children, and these factors contributed to the high satisfaction with their care that was demonstrated by the women participating in the current study.

These results are supported by several other studies that suggest that group prenatal care improves women's satisfaction with their care. Tandon, Cluxton-Keller, Colon, Vega, and Alonso (2013) compared prenatal outcomes for Hispanic women receiving prenatal care through centering pregnancy to those who received traditional, one-on-one prenatal care. They found that women receiving their care through centering pregnancy were significantly more satisfied with their care. Cunningham et al. (2017)

also found that women who received prenatal care in a group setting reported greater satisfaction that those who received one-on-one care.

Increased enjoyment of and satisfaction with care is significant for Hispanic mothers because they are significantly less likely than other populations within the United States to initiate prenatal care within the first trimester (Maternal, Infant, and Child Health, n.d.). Cunningham et al. (2017) found an association between satisfaction with prenatal care and attendance to group sessions. Whether one of those variables was a causal factor for the other was unclear, but this result does demonstrate that women's enjoyment of or satisfaction with their care is associated with improved attendance (Cunningham et al., 2017). If, as indicated by the current study, centering pregnancy is able to improve Hispanic women's satisfaction with care, it follows that improved attendance to prenatal visits may be expected from Hispanic women participating in the centering pregnancy program. This change would help to reduce disparities for Hispanic women in prenatal care initiation and attendance.

Sharing with and Learning from Others

Social support is an important protective factor during pregnancy, and women who are otherwise healthy can be considered high-risk if they lack social support during their pregnancy (Lockwood & Magriples, 2018). The strong connection between social support and health has been supported by numerous studies and several decades of research (Holt-Lunstad, Smith, & Layton, 2010). Further, social connections are considered to be especially significant within Hispanic populations (Medina-Inojosa et al., 2014). Strong support systems within Spanish-speaking populations have been cited as a potential explanation for the Hispanic paradox. The theory postulates that although

Hispanic individuals in the United States generally occupy a lower socioeconomic status and have lower rates of health insurance coverage, the strong social units that are a common facet of Hispanic culture contribute to improved health outcomes for this population (Medina-Inojosa et al., 2014).

The tendency for Hispanic populations to draw health-related benefits from social connection is deeply relevant to their care. Mulvaney-Day, Alegría, and Sribney (2006) examined the nature of the relationship between social support from family, friends, and neighborhoods and the health of Hispanic individuals. They found that, "the social support of unrelated, close friends is considered to exert a positive impact on physical and mental health…and has been found in some studies to have a more significant impact on mental health for Latinos than family support" (Mulvaney-Day, Alegría, & Sribney, 2006, p. 3). The researchers underscore the significance of the support of close friends for Hispanic individuals, and they name language (sharing the Spanish language) and sociodemographic factors as significant factors in the establishment and maintenance of these supportive friendships. These findings suggest that the most significant sources of social support for Hispanic individuals in the United States are close friends who speak the same language and share similar circumstances and experiences (Mulvaney-Day, Alegría, & Sribney 2006).

Centering pregnancy is designed to foster this kind of social support for Hispanic women participating in the program. The development of community between pregnant women was among the three original goals that defined the development of centering pregnancy more than twenty years ago (Magriples, 2018). In each session, women are given opportunities to develop relationships by helping each other measure weight and

blood pressure, by participating in group activities, and by contributing to group discussions (Centering Healthcare, 2018).

The social aspect of centering pregnancy was noted by participants in the current study; the participating women commented frequently, during focus group discussions, about their appreciation for the time they spent with other expectant mothers while receiving their prenatal care. When asked what influenced her decision to enroll in the centering pregnancy program, one woman commented that she had been excited to have, “an opportunity to meet more people that are going through the same thing that you are and they are more relatable to your situation.” In addition, when describing the aspect of centering pregnancy that was most important in her decision to try group prenatal care, another woman commented that, “during whichever moment, you are listening to the others and you remember, ‘oh this happened to me’ or ‘ah I have that question’ and it is a lot better and more comfortable.” This comment reflects the woman’s appreciation for the solidarity she felt with the other women in her group. The women shared challenges, questions, concerns, and doubts and were able to grow together to overcome them. In doing so, they developed a tight community and support system that they could rely on for encouragement during their sessions.

The benefits of social support in health are not unique to the Hispanic population (Holt-Lunstad, Smith, & Layton, 2010). The social aspects of centering pregnancy allow participants of all backgrounds to engage in a supportive and empathetic community during their pregnancy. Considering the especially strong association between the consistent support of close friends, and the physical and mental health of Hispanic individuals, however, the community aspect of centering pregnancy may provide

especially significant benefits to Hispanic women. The women in this study made eighteen total references, across three focus groups, to sharing experiences with and learning from other women, and the set a good example of the social benefits that Centering Pregnancy can convey to pregnant women.

More Information and Better Explanations

Education about pregnancy, childbirth, and early motherhood is a defining component of the centering pregnancy program. When centering pregnancy was initially developed, in the early nineties, education was one of the three key components to be included in the model (Magriples, 2018). Each centering session covers a different educational goal and facilitators use these opportunities for education to help mothers feel more confident and prepared as they approach the end of their pregnancies (Committee on Obstetric Practice, 2018).

These educational components are even more significant for pregnant Hispanic mothers. Following interviews of eight Hispanic women who had recently completed a full course of prenatal care, Fitzgerald, Cronin, and Boccella described three primary concerns that Hispanic women share when receiving prenatal care. One of these three concerns was a yearning or a “quest for knowledge” (p. 466) that was shared by the majority of the participating women. This yearning for knowledge accompanied a second major theme identified by researchers: a fear of the unknown. According to the researchers, Hispanic women are more likely to seek detailed education and reassurance during their prenatal care than other populations. They are likely to suffer anxiety when they feel that they do not know enough about the changes that their bodies are experiencing, and they are likely to seek opportunities for learning as much as possible

during the prenatal care process (Fitzgerald, Cronin, & Boccella, 2015). This finding was echoed by Baxley and Ibitayo (2015) in their study of pregnant Hispanic women's expectations for their health care providers. Women in this study stated that they wanted the providers to give them detailed information and to be transparent with any concerns. These observations further emphasize the importance of education and the clear delivery of information in prenatal care for Hispanic women (Baxley and Ibitayo, 2015).

Finally, Fitzgerald, Cronin, and Boccella (2015, p. 464) stated that, on average, "Hispanic women are less educated than non-Hispanic women (36% of Hispanic women have less than a high school education, compared with 10% of non-Hispanic women)." Based on this information, Hispanic women are not only more likely to crave educational opportunities during pregnancy, but they are also more likely to enter a new pregnancy with less education than the average non-Hispanic woman (Fitzgerald, Cronin, & Boccella, 2015).

The responses of the women in the current study both affirm these assertions about Hispanic cultural influences in prenatal care and demonstrate ways in which centering pregnancy helps to overcome these culture-specific concerns. The women referenced education in a number of ways. Several women stated simply that they enjoyed centering pregnancy because they had the opportunity to "learn more." Others provided more detail. One woman expressed that, not only did she feel that she was learning more from her centering sessions, but that she was retaining the information she was learning more effectively. She stated: "the format they give us the information is very different and you retain more of it." They noticed that information was well-explained, and they appreciated the usefulness of the activities employed for their

education during the sessions. Together, the comments of the women who participated in the study indicate an awareness of and an appreciation for the unique educational format available to them through the centering pregnancy program.

Results from the current study indicate that group prenatal care, and specifically centering pregnancy, is equipped to provide resources and techniques that satisfy Hispanic women's increased yearning for education in their health care. Centering pregnancy provides in-depth education to a population that is often especially concerned with the educational aspect of their care and, in doing so, creates opportunities to improve Hispanic women's experience of care.

Limitations

An important limitation in the study was the small sample size (N = 9). For qualitative studies, the requirements for sample size vary widely and are dependent on a number of factors (Malterud, Siersma, & Guassora, 2016). Malterud, Siersma, and Guassora (2016) described the quality of dialogue as a significant factor to consider in selecting sample size. The principal investigator established a strong rapport with the participants over a period of many months, and her conversations with the participating women generated a variety of detailed and thoughtful insights into the centering pregnancy program. While the sample size was small, similar comments were noted from participants across all three focus groups indicating that little to no new information was obtained after the third focus group. The ease of communication between the principal investigator and the participants and the achievement of saturation indicate that the

quality of dialogue in these focus groups was high, and, as a result, the small sample size was acceptable for this study. (Malterud, Siersma, & Guassora, 2016).

In addition, Malterud, Siersma, and Guassora (2016) stated that the goal of a study (whether the researchers seek general or very specific information) is an important determinant of necessary sample size. The aim of the current study was relatively broad but pertained to a specific population. The primary investigator aimed to understand Hispanic women's impressions about their experience in centering pregnancy overall as well as about specific aspects of the centering pregnancy program. In the current study, a purposive sample was used. Because the purposive sample targets a very specific population, it also allows that the sample used in a study be slightly smaller. Malterud, Siersma, and Guassora (2016) reaffirmed this idea, and stated that if participants have, "characteristics that are highly specific for the study aim" (p. 1755), the sample size can be significantly smaller. The sample in the current study was selected to provide a specific perspective on Hispanic women's involvement in group prenatal care programs, and the participating women were selected because of their involvement in Spanish-speaking groups in the centering pregnancy program. The purposive sample allowed sufficient, detailed information to be generated and for saturation of information to be reached despite the small sample size.

A second limitation in this study is the lack of a control or comparison group, which limits the ability to generalize the findings. Direct comparisons could not be made between the responses of Hispanic women to group prenatal care and the responses of another sample from the same population to traditional, one-on-one care. The participants in the current study were asked, however, to compare their experience with centering

pregnancy to past prenatal care. Participants' responses to these questions provided some detail about how centering pregnancy varied from other methods of prenatal care. Very little is known, however, about the location, circumstances, or duration of the care the participants referenced in their comparisons, so only general inferences can be made about differences between participants' experiences with different prenatal care systems.

Finally, time constraints related to the focus groups limited the amount of data collected. Focus groups for public health research typically last between 90 minutes and two hours (Tausch & Menold, 2016), but because the focus groups in the current study were conducted directly after the centering sessions, several of the participants were unable to stay for more than thirty minutes. The women reported several time constraints including needing to retrieve children from school or needing to attend other appointments. Because of the limited time allotted for each group, extensive discussion of individual questions had to be limited so each question could be addressed before the allotted time had passed. In addition, participants may not have been able to recall details and impressions from sessions that occurred several weeks or months before the focus groups were held, although accurate details from more recent sessions and general impressions of the program were provided. The limitation of a shorter meeting time was partially offset by the moderator's familiarity and rapport with the participants. Typically, focus group moderators do not know the participants prior to the meeting and therefore devote a significant portion of the allotted time to establishing basic comfort and rapport with the participants ("The Focus Group," 2019). This was not necessary in the current study, and thus the allotted 30 minutes was devoted fully to gathering responses from participants about their experiences with the centering pregnancy program.

Recommendations

The centering pregnancy program appears to be an efficacious method to deliver prenatal care to Hispanic women. During focus group discussions, participants described their enjoyment of group activities and appreciation for the comradery they developed with the other women in the group. They also noted frequently that they felt they had learned much more during their centering sessions that they would have in traditional, one-on-one appointments.

While the current findings are encouraging and support the efficacy of this type of prenatal program, more research is needed to determine the effectiveness of centering programs to improve birth outcomes. Additional focus groups should be conducted at similar facilities to determine if there are specific components of the centering pregnancy program (e.g., the physician, the facility) that affect the participants' perception of the program. The management and delivery of group prenatal care may vary across facilities even with a shared curriculum from the centering pregnancy program. In additional focus groups, special attention should also be given to the social and educational opportunities afforded by the centering pregnancy program as these received the most positive attention for the women in the current study. Future studies should also include a comparison group of women who received traditional, one-on-one prenatal care.

Finally, I recommend an expanded version of the centering pregnancy program to include post-natal care. During the focus groups, several of the participants suggested that centering pregnancy be expanded to support mothers with newborns. In the first focus group, one woman commented: "I would like if they kept giving me class or somewhere

where I can come if I have any doubts." She continued to describe her interest in joining a group similar to centering pregnancy that would support her in early motherhood. Another participant in the third focus group commented:

> I would suggest a small continuation group for the first two to three months about how to care for your baby during the first days so she doesn't get scared. Because when it's the first time, if the baby coughs you think "What is happening? Is it suffocating?" and you don't know what is happening or if it's just crying. It's not that I would change anything, just suggest a continuation for at least the first two to three months because it's post-birth and many times we don't have family here and we do not have people to give us that support.

The mother who made this comment was not pregnant for the first time but remembered the challenges she had faced in caring for her first newborn and suggested this program for the first-time mothers in her group.

The idea of expanding group care to include early well-child visits is not entirely novel. The American Academy of Pediatrics (2019) recommends that infants and young children attend ten well child visits within the first two years of their lives. These visits occur at one week, one month, two months, four months, six months, nine months, twelve months, fifteen months, eighteen months, and 24 months (American Academy of Pediatrics & Bright Futures, 2019). Bialostozky, McFadden, and Barkin (2016) developed a framework for a possible form of group well-child care targeted specifically at Hispanic children. They commented that, "high-quality primary pediatric care includes cultural sensitivity, family centeredness, and shared physician-patient/parent decision making" (p. 1647), and they developed their framework with these goals in mind. The

researchers placed families with infants of a similar age in groups that met at a set time and day of the week. Like in centering pregnancy, each patient (child) received a physical exam and the parents were given time to ask the provider individual questions; the group then came together for discussion of a particular health topic (Bialostozky, McFadden, & Barkin, 2016). The researchers described their program in this way:

> It contains most attributes of the typical individual well-child visit yet allows for more discussion time, questions, and education and may bypass challenges of individual well-child checks including difficulties with scheduling and timeliness of visits, and limited time spent on counseling (Bialostozky, McFadden, & Barkin, 2016, p. 1647).

The group discussions included content relating to nutrition, sleep habits, language development, and behavior. The authors of this unique study have not yet released outcome-related results for the families that participated. The researchers were, however, encouraged by the enthusiasm of the families for the program, and they demonstrated the feasibility of this kind of care for newborns, infants, and young children (Bialostozky, McFadden, & Barkin, 2016).

Bialostozky, McFadden, and Barkin's (2016) pilot of a group well-child care program gives validity to the idea that the centering pregnancy program could be expanded to provide care to newborns and guidance to new mothers. I recommend that future evaluation of the centering pregnancy program include more specific questions related to the women's interest in a group well-child care program. The current study demonstrated numerous benefits that may be provided to Hispanic mothers who participate in group care: reduction in institutional barriers to care, increased access to

relevant, health-related information and guidance, greater enjoyment of the care experience, and additional social support from other participants in group care. These benefits should not be limited to prenatal care. Group care, especially for newborns, might provide additional educational and social support opportunities that would benefit traditionally underserved populations, like the Hispanic population, in the United States. I hope that the benefits of group care that were demonstrated in the current study might be recognized and applied to other forms of care in order to better serve the Hispanic and other populations and to create improved healthcare experiences for all pregnant women and their children.

APPENDICES

APPENDIX A

Institutional Review Board Exemption

BAYLOR
UNIVERSITY

INSTITUTIONAL REVIEW BOARD – PROTECTION OF HUMAN SUBJECTS IN RESEARCH

NOTICE OF EXEMPTION FROM IRB REVIEW

Principal Investigator:	Ruth Bonderant
Study Title:	Impact of Native-Language, Group Prenatal Care on Spanish Speaking Patients' Satisfaction with Care
IRB Reference #:	1168087
Date of Determination:	12/22/2017
Exemption Category:	45 CFR 46.101(b)(2)

The above referenced human subjects research project has been determined to be EXEMPT from review by the Baylor University Institutional Review Board (IRB) according to federal regulation 45 CFR 46.101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

The following documents were reviewed:

- IRB Application, submitted on 12/16/2017
- Protocol, dated 12/22/2017
- Consent Form, dated 12/22/2017
- Consent Form, Spanish, submitted 12/22/2017
- Letter of Support, submitted on 12/16/2017

This exemption is limited to the activities described in the submitted materials. If the research is modified, you must contact this office to determine whether your research is still eligible for exemption prior to implementing the modifications.

If you have any questions, please contact Deborah Holland at (254) 710-1438 or Deborah_L_Holland@baylor.edu.

Sincerely,

Deborah L. Holland

Deborah L. Holland, JD, MPH
Assistant Vice Provost of Research
Director of Compliance

OFFICE OF THE VICE PROVOST FOR RESEARCH

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APPENDIX B

Focus Group Script

1) Hello everyone, thank you so much for being willing to stay a little bit later with me today. I have been so grateful for the opportunity to observe and spend time with you through this process.

2) This is Dr. Lanning, she is a Baylor professor and will be observing our conversation. I will let our interpreter, Ariana, introduce herself.

3) Before we begin I wanted to clarify a few things:

> I am going to ask you questions about your experience in the centering pregnancy Program, and your responses will be completely private.
>
> We will be recording our conversation so that we can review what was said after today.
>
> You will each be assigned a number, and when I write about our conversation I will call you by this number and not by your names.
>
> The reason that I am asking these questions is so we can find ways to improve this program for the future, so other women can have the best possible experience.
>
> We want to have a better understanding of your experience in this program. None of what you say will be communicated to your physicians and it will not affect your care in any way.
>
> I am hoping to hear from everyone, and I want you to know that in this conversation, there are no right or wrong answers.

4) By being here, you are agreeing to have your responses recorded; you are not required to stay. Are you all willing to participate?

5) To begin, I am going to ask a couple basic questions:

> How would you rate your ability to *speak* English on a scale of 1 to 10; 1 meaning not at all, 10 meaning it is your first language?
>
> How would you rate your ability to *understand* English on a scale of 1 to 10; 1 meaning not at all, 10 meaning it is your first language.

How comfortable are you discussing your health with your doctor? Do you feel like you can usually understand what your doctor is saying? These is no wrong answer here.

Are there things you find confusing about the health care system? Is it easy or difficult to schedule appointments? Choose a doctor? Decide when it is a good time to go to the doctor?

6) Ok, now I want to talk about your experience with centering?

What are some reasons that you chose centering pregnancy for your prenatal care?

Of these reasons, which is the most important? Why?

What has been the most helpful part of centering? Why?

What, if anything would you change about centering? Why?

How would you compare centering to past experiences with medicine (and prenatal care)? Has it been more or less helpful? Why?

Would you recommend centering pregnancy to a friend looking for prenatal care? Why or why not?

7) I have a few questions now about specific aspects of centering:

Did you enjoy having group discussions with other expecting mothers? Did you learn from these discussions?

Did you feel that you could easily speak to and understand the doctor leading the group?

Which lessons were most important for preparing you for changes during pregnancy?

Which group activity was your favorite? Which was the most helpful?

Describe a time you had a very good experience with centering pregnancy.

Describe a time you had a bad experience with centering pregnancy. What might have been done to avoid this issue?

8) Before we finish, are there any final comments you would like to make about your experience in the program?

9)Those are all the questions I have to ask. Thank you so much for giving up your time today and for letting me be a part of this process. I will see you all at the next session.

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