ON ACCESS AND EXCESS: BIRTH INTERVENTIONS FOR LATINAS IN THE U.S. – MEXICO BORDER REGION

An Undergraduate Research Scholars Thesis

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TABLE OF CONTENTS

ABSTRACT

On Access and Excess: Birth Interventions for Latinas in the U.S. – Mexico Border Region

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The United States southern border is expanding rapidly. Already home to over 7.2 million people, this region also contains two of the nation's top ten fastest growing cities (McAllen, Texas and Laredo, Texas) (DHHS 2009; USMBHC). Additionally, the border is culturally distinct from other places in the United States. Many border residents are Latino with low socioeconomic status and limited access to healthcare (USMBHC 2003). Latinas face particular challenges in this environment as individuals with at least two marginalized identities. Given our nation's history of forced sterilization, Latinas also have a history of coerced birth interventions made possible through gender, ethnic, lingual, and socioeconomic power differentials (Valdes 2016). Using Childbirth Connection's Listening to Mothers III survey, border Latinas' rates of birth interventions will be compared to two groups: 1) border non-Latinas and 2) non-border Latinas. The birth interventions of interest are cesarean section, episiotomy, epidural/drug-facillitated pain management, induction, and assisted delivery. Drawing upon intersectional theory, rates will also be compared according to private health insurance status and geographic region (border region versus non-border region).

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KEY WORDS AND DEFINITIONS

BORDER REGION	The land that stretches 100 kilometers north of the U.S.-Mexico border[1]
CESAREAN SECTION	A surgical option for delivering a newborn by cutting through the mother's abdomen
EPIDURAL	A regional anesthesia that blocks pain to lower spinal segments during labor and delivery
EPISIOTOMY	A surgical cut between the vagina and the anus made before delivery to enlarge the vaginal opening
INDUCTION	The process of expediting labor through the use of medication and medical techniques
ASSISTED DELIVERY	Vaginal delivery of a newborn assisted by the use of forceps and/or a vacuum

[1] This area of land was outlined by the La Paz Agreement in 1983. The Centers for Disease Control and Prevention utilize this definition when discussing border health issues.

INTRODUCTION

Historical and contemporary conversations about reproductive rights have centered one topic and one demographic: abortion (the termination of a pregnancy) and middle-class white women. These discourses have frequently neglected women of color and their desires in regards to carrying out a pregnancy. The United States' has a dark precedent of controlling women of color's reproduction through force and coercion, and it is important to understand if and how this historical context affects women of color's reproductive health today (PBS 2016; Krase 2014). Our Bodies. Analyses of women's health issues that do not include race, along with other indications of socioeconomic status, are incomplete

Further, when researchers include race in their studies of reproductive health, they usually work from a paradigm of a Black-White racial dichotomy. While well intentioned, the researchers who work from this restrictive paradigm exclude twenty percent of the United States female population: Latinas (Pandara 2015). Additionally, geography – specifically with reference to region (as opposed to urban/rural analyses) - is another variable often left out of these studies. The United States-Mexico border region is a truly unique area. The residents of this region often experience issues related to poverty and limited social mobility. Furthermore, this population experiences something most people don't: living adjacent to another country and living in areas with a minority-majority.

In this study, I compare the incidence of five birth interventions (cesarean section, episiotomy, epidural, induction, and assisted delivery) for three groups of women: Latinas in border regions, non-Latinas in border regions, and Latinas in non-border regions. By understanding how the birth outcomes of Latinas in border regions differ from non-Latinas in

border regions and Latinas in non-border regions, we can better address potential health disparities in the United States.

CHAPTER I

THEORY

Reproductive Justice and Human Rights

Women of color coined and popularized "reproductive justice", the term that sought to expand women's reproductive rights conversations beyond topics surrounding abortion (Smith 2005). Reproductive justice links sexuality and health to the rights and well-being of women, families, and communities. Reproductive justice advocates focus on individual and group social rights because women's ability to make decisions about their bodies, reproduction, and families are directly determined by their social location. Women who lack systemic and institutional power – women of color, poor women, undocumented women, queer women, women with disabilities, etc – lack the means to access comprehensive healthcare and services, thus constraining their ability to make informed decisions about their bodies, reproduction, and families. We must understand Intersectionality Theory in order to fully address these constraints.

Intersectionality

Intersectionality Theory describes intersecting social identities, particularly marginalized identities, and systems of oppression (Krenshaw 1991). Identities like gender, sexual orientation, race, ethnicity, immigration status, socioeconomic status, physical illness, and mental illness can create social contexts that either expand or constrain an individual's or group's life decisions, including decisions about their health and reproduction. Any study that explores reproductive justice topics should integrate concepts related to intersectionality to understand the nuance of potential findings. In this study, we investigate the intersection of three social locations: gender (women), ethnicity (Latinas), and geography (border region). However, before completing this

study, we must first understand the history of Latina reproductive justice issues in the United States.

Latinas and Reproductive Justice

The Madrigal v. Quilligan case is one prominent example of Latinas' experiences with constrained reproduction in the United States. In the 1970s, a group of Chicana women pursued legal action against Los Angeles County Hospital for denying them their civil right to have more children. When these women – many who were not native English speakers - gave birth at the county hospital, doctors coerced them into receiving tubal ligations through force, misinformation, and threats. The physician and government attitudes that underlined these procedures had remnants of past eugenic movements disguised as family planning. Despite the fact that none of the plaintiffs in the case were on government assistance, the argument for sterilization was that larger Chicano families would strain California's state budget (PBS 2016). This systemic elimination of "non-ideal" families through a common medical procedure - cesarean section – provides a backdrop to this study.

A similar case of population control occurred in Puerto Rico in the early-to-mid twentieth century. In 1907, Harry Laughlin (a superintendent for the U.S. Eugenics Record Office) utilized a Model Eugenical Sterilization Law to institute the mandatory sterilization of orphaned girls, women with mental and physical disabilities, or anyone else deemed "socially inadequate" in thirty states and Puerto Rico. By 1936, Puerto Rico adopted Law 116: a rule that made sterilization legal and free for Puerto Rican women. While the procedure was technically voluntary, the employment discrimination faced by women who did not get sterilized served to incentivize the procedure. Other women were coerced into sterilization through misinformation (telling the patient that the procedure was reversible, etc) and through the unavailability of

alternative forms of contraception. Law 116 was eventually repealed in 1960. In 1965, a survey revealed that about one-third of Puerto Rican women were sterilized and that about one-quarter of those women regretted their sterilization (Krase 2014).

These cases are similar in that they both involve the constraint of Latinas' reproduction (their ability to bear children). Dominant groups and figures in the United States frequently dismissed Latinas, and other women of color (particularly Black women and Native American women), and their families as "non-ideal" and undeserving of government assistance. Knowing this history, we utilize reproductive justice and human rights concepts to assess and understand how border Latinas' birth experiences differ – positively or negatively – from border non-Latinas and non-border Latinas.

Biopsychosocial Model of Health

The biopsychosocial model of health is a theoretical and practical framework that asserts that biological, psychological, and social factors all influence one's health and that physicians (and other healthcare workers) need to understand and attend to these factors when treating their patients. Theoretically, it posits that illness and disease are determined on multiple levels – from the cell to the community at large. Practically, it argues that physicians should seek to understand each patient's subjective experience and view these experiences as essential to the appropriate diagnosis and treatment of the patient (Borrel-Carrio 2004).

Contemporary proponents of this paradigm also advocate for the importance of relationship-centered care. In this model, the physician deviates from the older technical and paternalistic model and strives to foster mutual curiosity, trust, and understanding with their patient. In this new model, the physician understands that every patient is unique and has

different life circumstances. Thus, the physician must constantly reflect on their role and latent internal biases to prevent inappropriate – or possibly discriminatory – care.

In this study, I accept the claim that there are biological, psychological, and social factors that influence health and well-being. I argue that contemporary American physicians should operate from a biopsychosocial paradigm in their interactions with patients. Additionally, I understand that social factors – like access to prenatal care, insurance status, or income – may affect a patient's physiology, resulting in different birth experiences. I capture these differences in both the quantitative and qualitative portion of this study.

Latin(a) Paradox

The Hispanic Paradox, referred to in this study as the Latino Paradox[2], is the epidemiological phenomenon that describes Latino Americans average or better than average health outcomes despite their various societal disadvantages. While this paradox has been observed in trends regarding cancer, heart disease, and high cholesterol, it has also been noted in certain measures of infant outcomes. This Latin(a) paradox illustrates how despite Latina mothers' socioeconomic disadvantages, their infants have low incidence of low-birthweight and infant mortality. Explanations for this paradox include the healthy migrant theory and the role of cultural support networks. The healthy migrant theory proposes that we see this positive trend in Latino health outcomes because only generally healthy Latinos are able to emigrate from their nation of origin to the United States. This would explain why foreign-born Latinos have better health outcomes than U.S.-born Latinos. The cultural support network explanation describes how

[2] In this study, I replace the word "Hispanic" with "Latino" with regards to the "Hispanic paradox" and studies that use the word "Hispanic." Specifically, "Hispanic" refers to people with origins or ancestry in Spanish-speaking nations while "Latino" refers to people with origins or ancestry in Latin America. Since we are presumably assessing women with Latin American ethnicities (not Spanish ethnicity), Latino is a more correct term.

the values of familismo (the importance of family ties within Latino culture) and marianismo (the female gender role that emphasizes the importance of sacrificial motherhood) serve to connect women to supportive relatives, friends, and community members during their pregnancy. This networks serves functions related to emotional support and accountability, encouraging expecting mothers to maintain a healthy diet and abstain from alcohol and smoking (McGlade 2005; Franzini 2001).

As demonstrated above, the health advantages of the Latino paradox are not distributed equally among all U.S. Latinos. Different nationalities bear varying risks for disease and negative health outcomes. Additionally, the advantage seems to wane with each subsequent generation born in the United States (Franzini 2001). Also, the limited assessments Latina paradox (in relation to pregnancy and birth) have only applied the phenomenon to infant outcomes, neglecting maternal health outcomes entirely. In this study, I assess whether the Latina paradox holds true for Latina maternal outcomes in the U.S.-Mexico border region.

CHAPTER II

LITERATURE REVIEW

This literature review examines the existing body of knowledge for three elements of this study: the demographic and social context of the U.S.-Mexico border region, the incidence of the five birth interventions of interest, and the birth experiences of Latinas in the United States. The section on the U.S.-Mexico border region describes the ethnic and socioeconomic characteristics of this area and how these characteristics influence border residents' general health. The section on birth interventions discuss the potential benefits and risks of cesarean section, episiotomy, epidural, induction, and assisted delivery and their incidence among women (and Latinas, if the information is available) in the United States. The section on birth experiences describes U.S. women's – and specifically Latina's - satisfaction with their labor and birth.

The U.S.-Mexico Border Region

The U.S.-Mexico border region is defined as the area one hundred kilometers north of the border. This area comprises forty-eight counties in four states: California, Arizona, New Mexico, and Texas. This region is ethnically, and socioeconomically distinct from the rest of the United States. For instance, in 2000, forty-nine percent of the United States border population was Latino, mostly Mexican American. In fact, some areas have a Latino majority. Also, despite expanding economic and trade opportunities in this region, there are a greater percentage of border residents living below the poverty line compared to the national percentage – nineteen percent versus thirteen percent. The education level of the border region is lower than the national average (USMBHC 2010).

Border residents have very limited access to healthcare clinics and primary care providers. This limited access is largely due to two reasons: the region's lack of resources and the residents' lack of health insurance. In 2000, one-third of the counties in the border region were designated Health Professional Shortage Areas (areas where the ratio of the population to primary care positions is greater than three thousand-to-one). Further, in some parts of the border region, up to thirty percent of the population is uninsured. This high proportion of uninsured residents may be due to poverty and/or undocumented status in the country (USMBHC 2010).

This high rate of uninsured residents – along with the area's proximity to Mexico – contributes to another unique aspect of border life: the cross-border utilization of healthcare services. U.S. residents will seek out healthcare in Mexico due to a variety of reasons like reduced costs, convenience, or more lenient regulations on medicine and surgical procedures. Conversely, Mexican residents will use healthcare resources in the United States due to higher standards of care, particularly obstetric care (Byrd 2009). If a U.S. border region resident has not experienced healthcare in Mexico, they probably know someone who has. Thus, border region residents – particularly Latinas – have the ability to relate and compare their own healthcare experiences in the United States to those who have sought care in Mexico.

Birth Interventions

In this study, birth interventions are defined as any procedure or action taken by a birth attendant (such as a physician, midwife, or nurse) to intervene in the birthing process, particularly with the use of technology. The five birth interventions of interest in this study are procedures that have become common - if not routine - during labor and delivery. While technology has undoubtedly saved the lives of numerous mothers and infants, the routine nature

of these procedures can pose significant risks for mother and infant – especially because some interventions result in the need for additional, riskier interventions (Jansen 2013).

Cesarean Section

Cesarean section is the delivery of a baby through a surgical incision in the mother's abdomen. Sometimes this surgery is electively planned, but it is often recommended for women who have pregnancy complications (multiple fetuses, chronic health conditions, previous cesarean section) or labor and birth complications (baby is too big to pass through vagina, baby is in a breech position, fetal distress). While cesarean section has undoubtedly saved maternal and infant lives, public health entities argue that the procedure is overused in the United States.

According to the World Health Organization, it is unnecessary for developed countries to have a cesarean section rate exceeding ten to fifteen percent (WHO 1985). The current United States cesarean section rate is thirty-two percent (CDC 2015). This high rate is often attributed too side effects of other labor interventions, dismissing the possibility for vaginal birth, casual attitudes about surgery, incentives for physician and hospital efficiency, and limited knowledge of maternal and infant cesarean section risks and complications (Childbirth Connection 2016). Some of these maternal risks include infection, blood loss, blood clotting, injury to an organ besides the uterus, and death. Thus, most professional agencies recommend that birth attendants only utilize cesarean section when necessary.

Racial-ethnic and Socioeconomic Trends in Cesarean Section Rates

While cesarean section rates do not often vary greatly by race/ethnicity, general racialized patterns have been recorded over the years. Generally, Black women and Asian/Pacific-Islander women have higher cesarean section rates than white women and Latinas (Getahun 2009). In fact, Latinas have historically had either similar rates or lower rates of

cesarean section compared to white women (Edmonds 2013). And while cesarean section rates have increased for all U.S. women over the past few years, the respective increase in rates for Latinas and white women has been less prominent than the increase in rates for Black women and Asian/Pacific Islander women. Additionally, it has been demonstrated that women with private health insurance have significantly higher cesarean rates than women with public health insurance or women without health insurance (Aron 2000).

Cesarean Section on the Border

Few studies examine the affect of geographical region on cesarean section rates (except for studies that compare urban versus rural communities within a state or area). Even fewer studies examined cesarean section rates in the U.S. – Mexico border region. However, the sparse national and state studies that do focus on the border region conclude that cesarean section rates are higher for those who give birth in the border region than for those who do not give birth in the border region (McDonald 2013).

Episiotomy

An episiotomy is a surgical cut made in the muscle between the vagina and the anus to enlarge the vaginal opening before delivery. In the past, obstetricians routinely performed episiotomies on women because they believed that this intervention would promote faster healing and prevent incontinence. When research disproved these assumptions, professional agencies recommend that episiotomies not be done routinely. Instead, they should only be performed if the baby is very large, if needed for certain assisted vaginal deliveries, and if the baby needs to be delivered quickly. This is because episiotomies can potentially cause infection, bleeding, extended healing time, painful sexual activity, and incontinence. Episiotomy rates have

steadily decreased over the past decade with 17.3 percent of deliveries utilizing this procedure in 2006 to only 11.6% of deliveries utilizing it in 2012 (Friedman 2015).

Racial-Ethnic and Socioeconomic Trends in Episiotomy Rates

Similar to cesarean section studies, studies that examine episiotomy rates by race/ethnicity are few and far-between. Thus, I expand this portion of the literature review to include studies that record severe perineal laceration rates (both with and without episiotomies) by race/ethnicity. Studies on episiotomy use often find that race/ethnicity is associated with whether or not an episiotomy is performed during labor and delivery. White women, Asian/Pacific-Islander women, and women with private health insurance have higher episiotomy rates than women of other races (particularly Black women) and women with public health insurance (Friedman 2015). One study that examines severe perineal laceration demonstrates that Asian women are at the highest risk for third and fourth degree laceration after vaginal delivery – whether or not they received an episiotomy (Goldberg 2003). Latinas had similar severe perineal laceration rates (with and without episiotomy) to white women (Goldberg 2003). It seems that there has not been an episiotomy study on the U.S.-Mexico border region.

Epidural

An epidural refers to the method of pain management during labor and birth in which a catheter is inserted into a space in the spinal column for medication to be dispensed as needed. It delivers pain relief to the lower part of the body while allowing the mother to remain awake and conscious. When utilized, epidurals are usually given upon the mother's request. Epidurals have multiple benefits including allowing the mother to rest during a long labor, reducing discomfort, and letting the mother focus on pushing rather than on pain. However, epidurals also pose some risks like sudden drop in blood pressure, difficulty pushing, nerve damage, and the need for other

birth interventions (assisted delivery or cesarean section). Over half of women who have vaginal deliveries in the United States have epidurals during their labor and birth (Osterman 2011).

Racial-Ethnic and Socioeconomic Trends in Epidural Rates

Racial and ethnic disparities in pain management are well documented, and most studies demonstrate that Black women and Latinas are less likely to have their pain taken seriously and less likely to receive adequate acute and chronic pain treatment. This trend is also present in the racial and ethnic patterns in epidural use. In studies that examine epidural rates by race/ethnicity, we find that white women receive epidurals significantly more often than both Black women and Latinas (Glance 2007; Lancaster 2012; Morris 2014)). Additionally, women with public health insurance are less likely to receive epidurals than women with private health insurance (Atherton 2004). It seems there has not been an epidural study in the U.S.-Mexico border region.

Induction

A labor induction is any technique or medication that a physician uses to speed up a mother's labor if it ceases to progress. Labor can be induced with oral, suppository, or intravenous medications or through manual manipulation of the pelvis and cervix. In the United States, one in five births are induced. Physicians will recommend induction when women are pregnant past their due date, when tests indicate that a woman's placenta is low-function, when there is too little amniotic fluid in the amniotic sac, or when a woman develops preeclampsia. Induction does carry various risks, however, including low heart rate, uterine rupture, bleeding after delivery, and the need for a cesarean section. As of 2012, 23.3 percent of all labors in the United States were induced. One should note that this percentage varies according to gestational age, with about 10 percent of preterm births being induced compared to over 30 percent of late term births (CDC 2014).

Racial-Ethnic and Socioeconomic Trends in Induction Rates

While more recent studies conducted after 2010 show small declines in the induction rate for all women, past national and state studies show that Black women's induction rates are often higher than other women's induction rates (Murthy 2008; Murthy 2011). Additionally, during periods when induction rates increase for all women, Black women's induction rates increase more drastically than those of other women (Yogev 2013). Historically, white women have had lower induction rates than Black women, and Latinas have had lower induction rates than white women (Murthy 2008). Another study found that although induction failure rates are similar across all racial groups, Black women have a higher rate of cesarean section after induction failure than white women and Latinas (Ethrenthal 2010). Most of these studies, however, focus on comparing white women and Black women; Latinas are often just peripherally mentioned. It seems that there have not been induction studies that examine the affect of insurance status or U.S.-Mexico border region.

Assisted Delivery

Assisted delivery refers to the use of forceps or a vacuum to gently guide the baby's head through the birth canal during a labor that has ceased to progress. Forceps – medical instruments shaped like tongs – are placed on either side of the baby's head as it descends the birth canal. During a vacuum extraction, a soft, plastic cup is placed on the baby's head and the birth attendant utilizes an electric or manual pump to pull the baby down the birth canal. An assisted delivery might be necessary due to maternal epidural use (epidural use can make it difficult for women to feel contractions), maternal exhaustion, or awkward baby positioning in the birth canal. However, both forceps and vacuum use pose risks for cesarean section and other maternal and infant complications. While forceps are associated with greater success in vaginal delivery

completion, they also pose higher risks for vaginal tearing and trauma. Assisted vaginal delivery takes place in only three percent of U.S. vaginal deliveries (ACOG 2016). Unfortunately, it seems that there have not been studies that have examined the affect of race, ethnicity, health insurance status, and U.S.-Mexico border region on assisted delivery rates.

CHAPTER III

METHODOLOGY

Sample

This study uses data from Childbirth Connection's Listening to Mothers III Survey: a nationally representative survey of 2,400 women who gave birth in U.S. hospitals in 2011 and 2012. This online survey samples women between 18-45 years of age who gave birth to at least one child in a U.S. hospital between July 1, 2011 and June 30, 2012. The initial survey asks for demographic information as well as for information about the respondents' prenatal care, access to health services and education, and births. After this initial survey, Childbirth Connection sent these 2,400 participants a follow-up survey that includes open-ended, qualitative questions about the respondents' birth experiences. 1,072 out of the original 2,400 responded to this follow-up survey. Since this study seeks to contextualize quantitative findings with women's own words, we use the follow-up survey as our preliminary sample. It should also be noted that this sample is weighted according to pre-determined demographic groups' propensity to be online.

For our quantitative analyses, we defined the border region (100 kilometers north of the U.S.-Mexico border) and placed respondents into sub-samples (border region vs. non-border region) based on where they gave birth. Respondents who did not provide information on the location of their birth were excluded from the study. 961 women provided information about where they gave birth. In order to be included in quantitative analyses, however, respondents must have given a response for their ethnicity (Latina vs. non-Latina) and health insurance status (private vs. non-private). 937 women gave responses for location, ethnicity, and health insurance status.

Quantitative Analysis

In order to assess the multiplicative affect of being Latina and not having private health insurance, we created a dichotomous, interaction variable called "LatinaNoPrivIns." This variable is coded as 1 for respondents who are Latina and do not have private health insurance and 0 for respondents who are not Latina and do have private health insurance. The border region variable and dependent variables (cesarean section, episiotomy, epidural, induction, and assisted delivery) are coded similarly – 1 for whom the variable applies and 0 for whom the variable does not apply. Then, the rates of each intervention are compared between each group of interest (Latinas without private insurance and non-Latinas with private insurance who live in border regions and non-border regions). Respondents who are missing information for any independent variable (ethnicity, insurance status, birth location) are excluded from the entire study. Respondents who are missing data for a particular dependent variable are not included in analyses of that variable but are included in analyses of other variables for which they did provide information. Data management, descriptive statistics, two-way tables, and binary logistic regression were conducted on SPSS – a statistical analysis software program.

CHAPTER IV

RESULTS

Quantitative Findings

Descriptive Statistics

TABLE 1. *Descriptive Statistics by Region (%)*

	Border Region	Non-Border Region
Ethnicity		
Latina	60.6%	20.1%
Insurance Status		
No Private Health Insurance	64.5%	42.2%
Combined Statuses		
Latina & No Private Health Insurance	49.7%	11.5%
Non-Latina & Private Health Insurance	48.1%	85.9%
Cesarean Section Rate	42.8%	34.5%
Episiotomy Rate	16.9%*	12.0%*
Epidural Rate	67.8%	69.2%
Induction Rate	36.2%	38.3%
Assisted Delivery Rate	12.5%*	10.6%*

*more than 10% of data are missing

The results shown in Table 1 above corroborate previous studies on the border region's demography. We see that the majority of women in the border region are Latina and without private health insurance. This is a stark contrast to the non-border region where less than a quarter of women are Latina and less than half of women have private health insurance.

Additionally, it is evident that Latina ethnicity and socioeconomic status are somewhat correlated in the border region. About half of the women in the border region are Latinas without private health insurance, and the other half are non-Latinas with private health insurance. In contrast, only about one-tenth of the women in the non-border region are Latinas without private health insurance. The vast majority of women in the non-border region are non-Latinas with private health insurance. This strong overlap of Latina ethnicity and health insurance status – particularly in the border region - demonstrates the importance of using intersectionality theory to guide data analysis for this group of women.

The overall rates for each intervention do not significantly differ between the border region and the non-border region. Aside from the interestingly high border region cesarean section rate, these rates are consistent with contemporary research on the incidence of cesarean section, episiotomy, epidural, induction, and assisted delivery.

Birth Interventions in the Border Region

At least some literature on cesarean section, episiotomy, epidural, and induction has addressed racial and class patterns in the incidence of these interventions. In Table 2, we see that while the border region's epidural rate is consistent with the literature (Latinas are less likely to receive an epidural during labor and delivery), our findings for the incidence of cesarean section, episiotomy, and induction are opposite from what the existing literature suggests about the likelihood of Latinas without private insurance to receive these birth interventions. However, we temper our conclusions due to non-significance (although this may be due to the small border region's weighted sample size of 65). Logistic regression did not find significance for any variable.

TABLE 2. *Intervention Rates in the Border Region by Latina Ethnicity and Private Health Insurance Status (%)*

	Latina & No Private Health Insurance	Non-Latina & Private Health Insurance
Cesarean Section	48.5%	35.5%
Episiotomy	27.3%	22.7%
Epidural	63.6%	71.9%
Induction	40.6%	29.0%
Assisted Delivery	33.4%	14.3%

Birth Interventions in the Non-Border Region

While still somewhat deviating from expectations, the non-border region's findings more closely resemble the patterns often found in birth intervention literature. Table 3 shows that while the "direction" of likelihood still contradicts previous literature, the differences are less stark than in the border region. Consistent with research on race, socioeconomic status, and pain management, Latinas without private health insurance are significantly less likely to receive an epidural during labor and delivery than non-Latinas with private health insurance. Similarly, logistic regression only found significance for the epidural variable.

TABLE 3. *Intervention Rates in the Non-border Region by Latina Ethnicity and Private Health Insurance Status (%)*

	Latina & No Private Health Insurance	Non-Latina & Private Health Insurance
Cesarean Section	34.0%	34.8%
Episiotomy	14.5%	10.3%
Epidural	48.1%**	71.5%**
Induction	41.7%	38.4%
Assisted Delivery	14.5%	15.8%

**P < 0.001

Comparing Birth Interventions between the Border Region and the Non-Border Region

Two-sample t-tests show that there are no significant differences in rates of cesarean section, episiotomy, epidural, induction, and assisted delivery for Latinas without private insurance in the border region and Latinas without private health insurance in the non-border region (Table 3). Once again, the small border region sample size may negate any possible positive inference of significance. However, it is noteworthy that Latinas without private insurance in the border region have higher rates of each intervention (except induction) than Latinas without private insurance in the non-border region. T-tests did not detect significance for any variable.

TABLE 4. *Intervention Rates for Latinas Without Private Health Insurance by Region (%)*

	Border Region	Non-border Region
Cesarean Section	48.5%	34.0%
Episiotomy	27.3%	14.5%
Epidural	63.6%	48.1%
Induction	40.6%	41.7%
Assisted Delivery	33.4%	14.5%

CHAPTER V

DISCUSSION

We note that the differences in most birth intervention rates between our groups of interest are not significant. However, utilizing a reproductive justice and intersectional framework, we can see that there are overlapping and emergent patterns in intervention use for Latinas without private health insurance in both the border region and the non-border region. Latinas without private insurance in the border region have higher rates of most birth interventions than both non-Latinas in the border region (exception: epidural) and Latinas in the non-border region (exception: induction). This is concerning for various reasons. In regards to the pattern found in the border region, high rates of a certain birth intervention have been shown to increase the risk of having more intervention (e.g. failed inductions and assisted deliveries frequently result in the need for cesarean sections). In regards to the pattern found in the non-border region, Latinas without private health insurance have a significantly lower rate of epidural use. While we do not know whether this is by the mother's choice or not, we know the U.S. racial and classed attitudes towards pain management for poor Latina and Black women, and we must further investigate this disparity in future research.

CONCLUSION

Limitations

The greatest limitation in this study is the small sample size for the U.S.-Mexico border region. As shown in the tables and graphs above, even though the rates of birth intervention for some sub-samples differed by ten percentage points or greater, we could not pick up significance for the vast majority of these differences. Childbirth Connection's Listening to Mothers III Survey, however, was a national survey and not one that focused solely on the border region.

Another limitation is the lack of access to qualitative data, which specifically asks about the women's experiences with these various birth interventions. This qualitative data is needed, given that what is written on medical charts may be incorrect or misleading. Further, while immigration status is a sensitive subject, we may be missing another essential variable that may explain these birth intervention patterns: undocumented status (and English proficiency).

Areas for Future Research

While we focused our study on patient-level variables, further studies should also examine the impact of provider-level and hospital-level variables on birth intervention rates for Latinas without private health insurance. Additionally, researchers should conduct a border region centered study with both quantitative and qualitative data in order to contextualize findings and understand differences in birth intervention rates. This qualitative data should be collected through participatory observation in hospitals or interviews with respondents.

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