MANAGING MY PREGNANCY: A GROUNDED THEORY OF PREGNANCY AND CHILDBEARING BELIEFS AND PRACTICES OF WOMEN OF MEXICAN DESCENT

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By

Lorena C. Guerrero, MSN, RN, FNP

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MANAGING MY PREGNANCY: A GROUNDED THEORY OF PREGNANCY AND CHILDBEARING BELIEFS AND PRACTICES OF WOMEN OF MEXICAN DESCENT

Lorena Consuelo Guerrero

APPROVED:

_____
Kay A. Avant, PhD, RN, FAAN
Supervising Professor

_____
Sara L Gill, PhD, RN, BCLC

_____
Norma Martinez-Rogers, PhD, RN, FAAN

_____
Brian Bayles, PhD

_____
Dorothy Ettling, PhD

_____
Date

APPROVED:

_____
Robert Lee Reddick, M.D.
Interim Dean

DEDICATION

First and foremost, this dissertation is dedicated to my mother and father, Sonia and Rigoberto Guerrero. Although my father did not live to see the completion of this work, it would not have been realized had it not been for my father's selfless decision to immigrate to the United States in search of better opportunities for his family. The memories of my parents' perseverance in this strange and new culture served as the catalyst that led me to complete this work – sometimes against all odds. Papa, your life was and always will be an inspiration to me. May the Lord bless you.

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A GROUNDED THEORY OF PREGNANCY BELIEFS AND PRACTICES AMONG PREGNANT HISPANIC WOMEN OF MEXICAN ORIGIN

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Lorena C. Guerrero, Ph.D.

The University of Texas Health Science Center at San Antonio

Graduate School of Biomedical Sciences

Supervising Professor: Kay Avant, Ph.D.

Abstract

Examples of pregnancy-specific health beliefs and practices of Hispanic women are found in the medical literature, but the findings regarding the beliefs and practices are often outdated, limited, mostly curative in nature, and are often dismissed as benign cultural practices of a mainly homogeneous cultural group. Hispanic women incorporate both conventional and biomedical practices with traditional medicine/complementary and alternative medicine in their treatment of illnesses. The findings from this study served to illustrate current pregnancy-specific health beliefs and practices of pregnant Hispanic women of Mexican origin.

The purpose of this study was to gain an understanding of the pregnancy-specific health beliefs and practices that pregnant women of Mexican origin engage in and to explore the decision-making process related to the adoption, alteration, or rejection of these beliefs and practices. Using grounded theory methodology allowed the emergence of a theory grounded in the lives of the women in this study. This theory emerged from the raw data, is consistent among all participants in the study, and describes the process in which pregnant Hispanic women of Mexican origins care for themselves during their pregnancies. Constant comparison, open, axial, and selective coding techniques were used to analyze the data.

A total of 16 participants were interviewed which produced 17 face-to-face interviews for data analysis. The interviews were conducted in Spanish or English, audio recorded, transcribed, and analyzed. Ten participants were born in the U.S. and five participants were born in Mexico. One participant self-identified as being Asian-Hispanic. The study took place in an inner city community health center in southwest Texas.

A substantive theory, the process of insuring a healthy pregnancy and infant, emerged from the data. A core category, or basic social process, *Managing my Pregnancy*, was identified. The core category, *Managing my Pregnancy*, described the process and interventions this group of Hispanic women of Mexican ancestry engaged in that led them to ensure they did everything possible to have a healthy pregnancy, a quick and uneventful labor, and delivered a healthy infant. This three-stage process included *Gaining Knowledge, Caring for Myself,* and *Constant Monitoring*.

The first stage of *Managing my Pregnancy* is *Gathering Knowledge.* Two subcategories of *Gaining Knowledge* were *Reading Information* and *Listening to What Others Say.* The second stage of *Managing my Pregnancy* was *Caring for Myself* and was demonstrated by the

participants engaging in the subcategories of *Trying to Choose Healthy Foods, Going to the Clinic*, *Being Carefully Active,* and *Controlling my Emotions*. *Constant Monitoring* was the final stage of the process of *Managing my Pregnancy* and included two subcategories; *Being Aware* and *Making Decisions*. Participants made decisions by relying on their intuition and knowledge of previous experiences to make decisions regarding which beliefs and practices to follow.

The findings from this study have implications for future research, nursing practice, education, research, and health care policy. Further research into the impact of the tightening and closure of our southern border on socioeconomic factors, use of the internet, knowledge of lead ingestion, use of traditional herbs, and the role of male family members during the prenatal period is needed. Implications for nursing practice include assessment of financial/immigration stressors and juice consumption during pregnancy. Nursing education may benefit from knowledge that women may or may not engage in traditional health care beliefs commonly associated with Hispanics. In conclusion, health care policy may be positively affected by encouraging government initiatives that educate women on the dangers of unidentified diseases on pregnancy as well as subsidizing passport fees.

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CHAPTER I: INTRODUCTION

Hispanics now constitute the largest minority population in the United States. The term Hispanic can refer to Spanish-speaking people living in the United States whose country of origin is from a Spanish-speaking country in either the north or south hemispheres (Hunt, 2005). The term Hispanic can encompass many people of Mexican, Cuban, Central or South American, and Puerto Rican origin (U.S. Census Bureau, 2005). Hispanics make up 14% of the U.S. population and it is estimated that, by the year 2050, this group will constitute 15% to 30% of the U.S. population (U.S. Census Bureau, 2008). The largest portion of this population is of Mexican ancestry and represents approximately 58% of all Hispanics (U.S. Census Bureau, 2004).

Two reasons for the continued rise in the Hispanic population are higher fertility rates, especially among Mexican-Americans (Bean, Swicegood, & Berg, 2000), and an increase in immigration rates (U.S. Census Bureau, 2004). In a recently published study, the U. S. Census Bureau reported that Hispanic women ages 40 to 44 had an average of 2.3 births and are the only group that currently exceeds the fertility level required for natural replacement of the U.S. population; currently at about 2.1 births per woman (Dye, 2008). This population is expected to continue its rapid growth (Ramirez & De La Cruz, 2002). Therefore it is imperative that health care providers be knowledgeable of factors that impact the health of this population. This knowledge may enable health care providers to understand cultural concepts and methods that promote health of childbearing women of Mexican origin (Galanti, 2003; Hartweg & Isabelli-Garcia, 2007).

In order to provide culturally competent maternity care to this growing and diverse population, health care personnel and researchers need to first understand pertinent health beliefs

and practices commonly found among childbearing women. It is incorrect to assume that childbearing beliefs and practices found among other groups, such as Black and non-Hispanic White women, are also shared by Hispanic women.

Pregnancy is a time when a woman is concerned about the health and well-being of the developing fetus (Lagana, 2003). Pregnant Hispanic women are encouraged to adhere to cold/hot beliefs and to satisfy cravings (Mattson, 2003). With this said, one might assume that during the pregnancy, Hispanic women may seek to follow more traditional health practices that their friends and family may be sharing with them. The present study is designed to better define and describe these concepts that pregnant Hispanic women may engage in and to develop a theory relating to the incorporation of these beliefs and practices into biomedical modes of care.

Pregnancy can be viewed as a time when the family can transform the pregnancy through the teachings of certain cultural practices (Williams, 2001). Jimenez (1995) indicates that Hispanic women may follow certain cultural practices or believe myths, even though they are counterintuitive to them intellectually and have no scientific basis. Hispanic women may follow these practices out of respect for their elders and their culture. Jimenez (1995) describes this phenomenon by stating that what Hispanic women may know in their heads at times may conflict with what they feel in their hearts they should do. Therefore, it is important to delineate the process that pregnant Hispanic women use in choosing to adopt, alter, or reject these traditional beliefs.

There is little data on the health beliefs and practices for pregnant Hispanic women residing in the southwest United States, especially for women of Mexican ancestry. For women of Mexican descent, past research shows that health information includes topics that would result in a healthy pregnancy and birth such as dietary intake and exercise (Lagana, 2003). For

example, Lagana (2003) identified using an herbal remedy to reduce stress among pregnant Hispanic women. Other examples of pregnancy-specific health beliefs and practices of Hispanic women can be found in the medical literature, but the findings regarding the beliefs and practices are shown to be outdated (Mendelson, 2003), limited (Gordon, 1994), mostly curative (Applewhite, 1995; Chesney, Thompson, Guevara, Vela, & Schottstaedt, 1980), and are often dismissed as benign cultural practices of a mainly homogeneous cultural group (Hunt, 2005). Researchers may falsely be attributing such cultural practices to all members of this group without truly understanding each individual subgroup's beliefs and practices.

Other research shows that Hispanic women are 10 times more likely to engage in traditional medicine/complementary and alternative medicine (TM/CAM) than other ethnic groups (Palinkas & Kabongo, 2000). TM/CAM beliefs and practices are defined by the World Health Organization (World Health Organization, 2006) as:

> Health practices, approaches, knowledge and beliefs incorporating plant-, animal- and mineral-based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being. (¶ 1)

Avila and Parker (1999) describe current day TM/CAM as a "blending together of the people, medicine, and hearts of cultures" (Avila & Parker, 1999). In particular for TM/CAM practiced among Hispanics this blending occurred among the beliefs and traditions of the Spanish, Moors, African slaves, Greeks, and Aztecs (Avila & Parker, 1999; Jimenez, 1995). Avila and Parker (1999, p.5) describe this blending by saying, "Latinos of the world continue, over the centuries, to meld their religious rites that are a combination of, 'Old World', and in part, 'New World'."

At the time that Spain settled into the new world, Spanish medicine was grounded in the humoral beliefs. These were beliefs that the body was made up of four body fluids: blood, phlegm, yellow bile, and black bile. These humors can be further subdivided into dualities of "wet and dry" and "hot and cold" which are still used to classify illness and wellness (Avila & Parker, 1999; Galanti, 2003). Many Hispanics believe that diseases and illnesses are either hot or cold and need to be treated with these concepts in mind. Pregnancy is thought to be a "hot" imbalance that requires treatment with "cold" foods that can help restore balance to the individual (Depacheco & Hutti, 1999).

During pregnancy Hispanic women are bombarded by a stream of health information offered by well-meaning family members and friends in addition to their health care provider's teachings and recommendations (Lagana, 2003). For example, a classic study conducted by St. Clair and Anderson (1989) found that 1 to 19 people (mean of 5 persons) in a woman's life will offer an average of 20 pieces (range is from 0 to 211) of pregnancy-specific health advice. Hollyer, Boon, Georgousis, Smith, & Einarson (2002) established that the most common source of information about pregnancy beliefs and practices are friends and family members. This advice can sometimes be in direct conflict with current medical treatments and, if followed, may harm the woman and unborn baby (Galavotti & Richter, 2000). This may be true for women of other ethnic groups such as Hispanic women of Mexican origin who have been documented as engaging in a variety of traditional culture-bound beliefs (Galanti, 2003).

It remains unclear if Hispanic women of Mexican ancestry have different or additional pregnancy-specific health information that may be offered by friends and family members. The need to explore the decision-making process involved in relation to the adoption, alteration, or rejection of pregnancy-specific health knowledge is an important concept that has not been

previously investigated. Understanding this decision-making process will enable health care professionals who work with this population to better understand these beliefs and offer culturally competent prenatal care that focuses on health promotion for this rapidly growing cultural group (Brach & Fraserirector, 2001). Brach and Fraserirector (2001) caution against viewing the delivery of health care as a one-size-fits-all approach. These authors state that doing so can result in unattainable health care goals for this growing and culturally diverse population.

Purpose of the Study

The purpose of this study was to gain an understanding of the pregnancy-specific health beliefs and practices that pregnant women of Mexican ancestry engage in and to explore the decision-making process related to the adoption, alteration, or rejection of these beliefs and practices. Unlike specific efforts directed toward curing certain diseases, the focus on maintaining or improving the general health of individuals, families, and communities has been described as health promotion (Edelman & Mandle, 2002). The beliefs and practices identified by this researcher and practiced by pregnant women of Mexican ancestry living in San Antonio, Texas can be considered health-promoting or health-protective.

Specific Aims

The specific aims of this study were to:

1) Identify and describe pregnancy-specific health beliefs and practices in pregnant women of Mexican ancestry living in southwest Texas.
2) Identify and describe the purpose of pregnancy-specific health beliefs and practices in pregnant women of Mexican ancestry living in southwest Texas.
3) Identify sources of health information regarding pregnancy-specific knowledge for pregnant women of Mexican ancestry living in southwest Texas.

4) Identify, describe, and explore the decision-making process that pregnant women of Mexican ancestry undergo in choosing to adopt, alter, or reject pregnancy-specific health information.

Background and Significance

The principal consumers of health care services in the U.S. are women (Cushman, Wade, Factor-Litvak, & Firester, 1999; Upchurch, et al., 2007). This remains true for both conventional biomedical practices and TM/CAM (Cushman, et al., 1999; Kronenberg, Cushman, Wade, Kalmuss, & Chao, 2006). Hispanic women incorporate both conventional and biomedical practices with TM/CAM to treat their illnesses and that of their families (Jimenez, 1995; Poss, Jezewski, & Gonzalez, 2003a). It is unclear which beliefs and practices pregnant Hispanic women of Mexican ancestry engage in and how these practices are intertwined with conventional biomedical practices. Knowledge about the transfer of these beliefs from family members and friends is limited in the current literature. This knowledge can help health care providers assess whether previously thought of low risk populations may be engaging in riskier behaviors not previously seen in that population.

In several national survey studies, the prevalence of TM/CAM usage among women ranges from 21% to as high as 75% (Palinkas & Kabongo, 2000; Pasky, 1979). The most recent findings from the National Health Interview Survey indicate 40% of women overall reported recent TM/CAM use (Upchurch, et al., 2007). Among Mexican-American women ages 18 and older, the prevalence of TM/CAM usage has been documented to be as high as 43% (Kronenberg, et al., 2006). Several studies have documented TM/CAM practices used by this group. Medicinal herbs/teas (Factor-Litvak, Cushman, Kronenberg, Wade, & Kalmuss, 2001; Kronenberg, et al., 2006; Lagana, 2003), spiritual healing, religion, and prayer modalities and

other traditional remedies (Palinkas & Kabongo, 2000; Upchurch & Chyu, 2005; Upchurch, et al., 2007); and visits to nutritionists and chiropractors (Factor-Litvak, Cushman, Kronenberg, Wade, & Kalmuss, 2001) are among a few of the chosen TM/CAM modalities reportedly used by all subgroups of Hispanic women.

Gaffney and Smith (2004) and Allaire, Moos, and Wells (2000) state that Hispanic women continue to use TM/CAM therapies to treat common disorders of pregnancy, although the exact percentage of use in this population is unknown. However, Kronenberg et al. (2006) call for the need to have more detailed information about women's use of TM/CAM throughout the life-span. This is true for TM/CAM practices during pregnancy, an area of research that is currently severely limited (Gaffney & Smith, 2004). This is even more so for Hispanic childbearing women of Mexican ancestry who reside in the southwest U.S., as they have not been the focus of previous research and may continue to use TM/CAM during their pregnancy since they live so close to the Mexican border. Previous research looking specifically at pregnancy-specific health beliefs and practices among Hispanic women focused on other countries of origin, such Puerto Rico and the Dominican Republic (Pearce, 1998). Pearce found that these women viewed pregnancy as a normal and temporary condition and they took care of themselves by eating well, resting, exercising, limiting bad habits and keeping a positive attitude. In addition, women in this study used TM/CAM in conjunction with western medicine and not as a replacement for western medical care.

Health Beliefs and Practices

All societies and cultures contain traditional health beliefs and ritualistic behaviors that incorporate religious, physical, and magical elements (Hufford, 1997). Hispanics rely on traditional health beliefs and practices to help cure, prevent, and/or alleviate a variety of ailments

(Kronenberg, et al., 2006; Pearce, 1998; Upchurch, et al., 2007). Previous studies have identified a myriad of folk beliefs and practices commonly used by Hispanics (Koss-Chioino, 1995; Koss-Chioino & Canive, 1993; Krajewski-Jaime, 1991a; Kramer, 1996; Poss, Jezewski, & Stuart, 2003b; Ruiz, 1985; Suarez, Raffaelli, & O'Leary, 1996). Some of these well-documented practices include the use of *curanderos* or folk healers (Kramer, et al., 2001), belief in the *mal de ojo* or a magical evil eye (Chesney, et al., 1980), and *susto*, a culture-bound syndrome precipitated by a traumatic event or fright (Baer, et al., 2003b). It remains unclear if these beliefs are of importance or somehow affect pregnant Hispanic women.

Most of the literature emphasizes curative factors, such as curing an upset stomach (Hollyer, et al., 2002), treating colic in an infant (Chesney, et al., 1980; Gordon, 1994; Zepeda, 1982), or relieving stressors (Baer, et al., 2003b), and not on health-promoting factors that may be used by pregnant Hispanic women. Even fewer studies have looked at this phenomenon during this population's pregnancy and none have looked at the decision process used when women choose to integrate these beliefs into their health promotion routines.

Although protective cultural factors seem to offer some protection against poor birth outcomes, they have not been well-described and other contributing factors have been implicated as possibly impacting these birth outcomes. Factors hypothesized to influence these statistics are: a) the healthy immigrant hypothesis, b) unknown cultural practices, c) lack of maladaptive health behaviors such as smoking, alcohol, and substance abuse, and d) healthier nutritional intake (Hunt, Schneider, & Comer, 2004). Although all these factors are important, the scope of this research focused on identifying "unknown cultural practices" that may be influencing these statistics. It remains unclear which specific cultural factors, beliefs, and/or practices women of Mexican origin may be engaging in during pregnancy that are responsible for such benefits. This

research study hopes to shed light on this cultural "black box". Studying these cultural concepts is vital so that health care providers can better understand and care for this large and diverse minority group.

Traditional Medicine

TM/CAM beliefs and practices continue to be used by many people and in varied cultures – regardless of their culture of origin and even in light of new advancements in technology and other medical breakthroughs (Hufford, 1997). The popularity of TM/CAM may be due to the increased exposure through media and magazines (Hollyer, et al., 2002). In addition, the decision to seek a TM/CAM treatment does not require a medical prescription and Hollyer et al. (2002) state that using TM/CAM may cause patients to feel they have increased control over their health care.

Often, the presence of such beliefs and practices is not discussed with care providers (Howell, et al., 2006). This may be due to previous experiences with traditional, western medical care where folk beliefs were often dismissed as old-fashioned and thought of as only old wives' tales (Hufford, 1997). This traditional type of knowledge is given little importance and often ignored as a contributing factor to current modes of care (Hufford, 1997; Pasky, 1979). This research focuses on identifying pregnancy-specific health beliefs and practices of pregnant Hispanic women living in the southwest that may contribute to the overall health of this group.

Folk Health Beliefs and Practices during Pregnancy

Culturally derived health beliefs and practices involving pregnancy have existed since the time of Hippocrates and continue to be passed down through generational lines by other women sharing their pregnancy knowledge with the pregnant woman (Lagana, 2003; Reiss & Ash, 1988). During pregnancy, women may be compelled to use TM/CAM out of a desire to avoid

taking medication during pregnancy and the misconception that TM/CAM modalities are natural and free of side-effects (Gaffney & Smith, 2004).

Previous researchers have stated that a common belief among Hispanics is that women must maintain harmony and balance with the universe and avoid emotional upsets and physical strains throughout pregnancy (Gonzalez & Kuipers, 2004). Pregnancy is viewed as a dangerous time for the unborn child (Lauderdale, 2003). Even natural phenomena, such as the light of a full moon, is regarded as potentially dangerous to the unborn child (Lauderdale, 2003). Perhaps because of these beliefs, pregnant Hispanic women have been shown to continue to use traditional health beliefs and practices during the prenatal period (Lagana, 2003; Lauderdale, 2003). Galanti (2003) documented some Hispanic women wearing a key suspended by a string belt or a safety pin over their abdomen to protect the unborn child from a potential deformity. This is just one example that demonstrates how Hispanic women integrate traditional beliefs into their pregnancy health-promoting activities. Although researchers frequently attribute such beliefs and practices to Hispanic women, little empirical research has been done demonstrating how widespread these beliefs are within the Hispanic population.

Generational Transfer of Folk Knowledge

The transfer of cultural knowledge regarding health beliefs and behaviors is called cultural inheritance (Guglielmino, Viganotti, Hewlett, & Cavalli-Sforza, 1995). The process of cultural inheritance is accomplished through informal behaviors and transfer of authority through life experiences that often go unnoticed by health care providers and are described as "invisible" by Hufford (p. 723, 1997). This process is described as a vertical pathway achieved through the use of verbal stories, shared lived experiences, and informal communications with family members (Guglielmino, et al., 1995; Hufford, 1997; Peedicayil, 2001). Vertical pathways have

been described as leading to the greatest transfer of knowledge from one person to another (Guglielmino, et al., 1995). Research shows that cultural knowledge is passed down generational lines (Guglielmino, et al., 1995; Hufford, 1997). One example of this continued transfer of beliefs was demonstrated by Tripp-Reimer (1983) who found that Greek immigrants residing in the United States continued to maintain the belief and practice surrounding the cultural belief of the evil eye even in third- and fourth-generation Greek immigrants.

Cultural Beliefs and Immigration

Cultural beliefs have been shown to affect the types of health behaviors, beliefs, and traditions that are practiced (Galanti, 2003). The immigration growth previously documented among Hispanics brings an influx of cultural knowledge into the U.S. for Hispanic women to use and adopt. This study was conducted in a large metropolitan city in southwest Texas in which the Hispanic population makes up over 61% of the entire population and is located approximately 150 miles from the Texas-Mexico border. Such close proximity to Mexico and the constant influx of immigrants may influence the conservation of certain cultural beliefs and practices. What remains to be seen is if women of Mexican origin living in this city retain a strong attachment to indigenous values related to health care and traditional health beliefs and behaviors during pregnancy (Boyle, 2003; Galanti, 2003). Among these health-related behaviors, beliefs, and traditions are alternative methods of healing and protective rituals that people use in their respective countries of origin. These protective methods and rituals are often used because they fit into peoples' cultural understanding and beliefs (Roy, Torrez, & Dale, 2004).

Significance to Nursing

Protective cultural factors are said to contribute to better birth outcomes among foreign-born women of Mexican, Arab, and other origins (Callister & Birkhead, 2002; Collins Jr. & David, 2004; El Reda, Grigorescu, Posner, & Davis-Harrier, 2007; Gould, Madan, Qin, & Chavez, 2003; Kelaher & Jessop, 2002; McGlade, Saha, & Dahlstrom, 2004; Morales, Lara, Kington, Valdez, & Escarce, 2002; Zambrana, Scrimshaw, Collins, & Dunkel-Schetter, 1997). Traditionally, birth outcomes have been measured in rates of low birth weight (LBW), defined as live births less than 2500 grams or 5.5 pounds, and preterm births (PTB), defined as live births under 37 weeks gestation (Peristats, 2005; San Antonio Metropolitan Health District, 2003). This finding is labeled an epidemiological paradox because despite sharing similar demographic and socioeconomic risks with other minorities, foreign-born Hispanic women have healthy pregnancies and lower rates of PTB and LBW than non-Hispanic Blacks (Acevedo-Garcia, Soobader, & Berkman, 2005; Lagana, 1996; Madan, et al., 2006; Zambrana, et al., 1997).

The rates of PTB in San Antonio for 2004 to 2006 are 13.3% for non-Hispanic Whites, 20.6% for non-Hispanic Blacks, and 15.4% for Hispanics. The rates for LBW in San Antonio are 7.9% for non-Hispanic Whites, 15.1% for non-Hispanic Blacks, and 9.2% for Hispanics. These statistics continue to be above the Healthy People 2010 goals of less than 7.6% of live births born prematurely and less than 5% of live births born with a designation of low birth weight (Department of Health and Human Services, 2004).

Some researchers have gone as far as to state that the Hispanic culture offers protective factors in itself (Acevedo-Garcia, et al., 2005). Other researchers have called for future studies to focus on epidemiologic, biologic (Gould, et al., 2003), and cultural (Callister & Birkhead, 2002; Morales, et al., 2002) risk factors that may determine perinatal outcomes such as PTB,

LBW, and infant mortality. Factors that contribute to this paradox or model have been hypothesized to include: a) the healthy immigrant hypothesis, b) unknown cultural practices, c) lack of maladaptive health behaviors such as smoking, alcohol, and substance abuse, and d) healthier nutritional intake.

The Hispanic Epidemiological Paradox of Birth Outcomes

Several researchers have shown that foreign-born Hispanic women offer a healthy model for pregnancy despite many demographic and socioeconomic risk factors (Acevedo-Garcia, et al., 2005; Lagana, 1996; Madan, et al., 2006; Zambrana, et al., 1997). This model is not well-described and attempts to identify causative factors have not worked (Acevedo-Garcia, et al., 2005; Gould, et al., 2003). Most troubling is that these so-called "protective cultural practices" that influence birth outcomes are lost with subsequent pregnancies and in later generations of U.S.-born Hispanic women (Beck, 2006; Gould, et al., 2003; Guendelman, Gould, Hudes, & Eskenazi, 1990; Madan, et al., 2006). Thus, future generations of Mexican American women may be at increased risk for PTB and LBW.

The scope of this research focused on identifying and exploring cultural beliefs and practices pregnant women of Mexican origin living in San Antonio. In addition, knowledge on the decision-making processes involved in the choosing specific health beliefs and practices during pregnancy offers health care professionals information about how to formulate future culturally specific, nursing interventions for this group that can assist this population in meeting the Healthy People 2010 goals.

Guiding Framework

For this study the researcher used grounded theory methodology to identify culturally specific health beliefs and practices of pregnant women of Mexican ancestry, as well as the

decision making process involved in choosing to accept, alter, or reject this knowledge. Grounded theory is a research method that identifies participants' problems and generates a theory that accounts for the processing of the problem (Glaser, 1998). Grounded theory (GT) was chosen as the primary method for this study to determine a theory about the process pregnant women of Mexican ancestry use to integrate pregnancy-specific knowledge and beliefs. This research added to current knowledge among health care providers, researchers, and educators working with pregnant, women of Mexican ancestry. The goal of this research was to develop a theory concerning pregnancy knowledge acquisition and use that may guide future nursing interventions and improve health outcomes with this group.

Organizing Concepts

Several key concepts have been identified as critical for this study. These concepts provide a basis for understanding the focus of the study and the chosen methodology. In order to understand the design of this research study, the following organizing concepts are defined: Hispanics, pregnancy-specific health beliefs and practices, acculturation, and decision-making processes relating to cultural phenomena. These concepts were chosen because they helped define health care beliefs and practices of pregnant women of Mexican origins.

Hispanic Women of Mexican Ancestry

Hunt (2005) calls for Hispanics to be viewed as a distinct and heterogeneous group. Hunt (2005) critiques the majority of researchers as viewing the Hispanic population as a homogeneous group. The term Hispanic can describe a variety of people from different countries or origin such as Mexico, Puerto Rico, Cuba, and other countries in Central and South America who, although they share several aspects of their culture, remain separate and distinct (Galanti, 2003). Researchers often erroneously assume that the Hispanic population shares one

set of cultural beliefs and behaviors that are somehow magically monitored through one's ethnic heritage (Hunt, 2005; Hunt, et al., 2004). Avoiding this trap is crucial if researchers wish to truly understand health behaviors of this large ethnic minority (Hunt, 2005). When reviewing previous research, if no Hispanic subgroup designation is made, the word Hispanic will be used to comprise all Hispanic subgroups. Data on the country of origin and generational status of the pregnant woman and her partner, as well as the parents and grandparents of both individuals, was collected to describe generational differences within the group.

Pregnancy-Specific Health Beliefs and Practices

Traditionally, women of Mexican descent have viewed pregnancy as a natural part of the life cycle that requires little, if any, biomedical care and intervention (Galanti, 2003; Pearce, 1998). The lack of adequate prenatal care for this population may come from this belief (Cunningham, et al., 2001). Therefore, viewing pregnancy health beliefs and practices from a health promotion or health protective viewpoint is an innovative way to address these beliefs. This will help researchers and providers understand which health care beliefs and practices are important to pregnant women of Mexican origin and will help formulate new interventions aimed at improving the health of this group.

Applewhite (1995) defines health beliefs and behaviors as a set of beliefs and practices derived from ethnic and historical traditions that have the principal goal of ameliorating, curing, and/or preventing psychological, spiritual, and physical ailments (Applewhite, 1995). For the purposes of this study, all beliefs and behaviors that pregnant women of Mexican descent describe and engage in during their pregnancy (to include TM/CAM and biomedical in origin) were defined as pregnancy-specific health beliefs and practices.

Acculturation & Generational Status

Acculturation is defined as the process of cultural change resulting from contact between two cultures (Berry, 1998; Hunt, et al., 2004). The acculturation hypothesis proposes links between health status, the environment, and cultural beliefs (Berry, 1997, 1998). One underlying belief in the acculturation hypothesis is that new immigrants bring cultural traditions, values and behaviors that may contribute to the entire group's overall health (McGlade, et al., 2004). However, several researchers have hypothesized that protective cultural factors found among foreign-born women of Mexican ancestry are lost in subsequent generations of childbearing women and may contribute to worsening of pregnancy outcome statistics such as low birth weight and preterm births in this population (Callister & Birkhead, 2002; Gould, et al., 2003).

It is unclear from previous research how acculturation and/or generational status influence pregnancy health beliefs and practices in women of Mexican ancestry. Past research in this field has not identified and explored current pregnancy-specific beliefs and practices among women of Mexican ancestry that may be passed down generational lines (Gordon, 1994). In addition, past research has also failed to illustrate the decision-making processes that pregnant women of Mexican ancestry make related to the use of such practices within the context of real life experiences.

It is this researcher's belief that as women of Mexican descent immigrate to the U.S. and/or are born to foreign-born parents, they are likely to make decisions based on their changing cultural beliefs and make decisions as to which health beliefs and practices they choose to subscribe to during pregnancy. This study explored current pregnancy-related health beliefs and practices of pregnant women of Mexican ancestry living in the southwest United States and sought to identify the decision-making processes related to the adoption, alteration, or rejection

of pregnancy specific beliefs and practices. Information on generational status and country of origin was collected in order to better describe the study participants. To better describe the study sample, generational status (which has been described as a way to gauge acculturation) was monitored by the use of a generational genogram (see Appendix A) (Hunt, et al., 2004). In addition, women were asked to describe the location where they grew up and may have learned pregnancy-specific health knowledge.

Cultural Decision Making Process

The decision-making process has been studied in a variety of different populations for topics such as breast-feeding practices (Hannon, Willis, Bishop-Townsend, Martinez, & Scrimshaw, 2000), abortions (Brown, Jewell, & Rous, 2000), amniocentesis (Browner & Mabel Preloran, 1999), abnormal uterine bleeding (Geller, Bernstein, & Harlow, 1997), and elective hysterectomy (Lewis, Groff, Herman, McKeown, & Wilcox, 2000). Differences in the decision-making process have been found among ethnic groups, with Hispanic women relying mainly on health care providers and family members to help make decisions about their health practices (Galavotti & Richter, 2000). However, no studies were located that investigated the decision-making process in relation to pregnancy-specific information for women of Mexican descent. For this study, all processes that women used in formulating the decision to accept, alter, or reject pregnancy specific recommendations were considered part of the decision-making process.

Assumptions

This researcher applied the following assumptions that framed the overall study:

- Cultural expressions, such as folk knowledge and practices, are found in all cultures.

- Cultural beliefs and practices are influenced by worldviews, language, religion, relationships, politics, education, technology, history, and environmental influences.
- Cultural beliefs and practices can be preserved, accommodated, or repatterned by the individual (Leininger, 2001).

Summary

Pregnancy-specific beliefs and practices are hypothesized to be used by women of Mexican descent (Kronenberg, et al., 2006; Upchurch, et al., 2007). However, the actual current practices of these women were not documented well in the research literature and there was little information found on the decision-making process that women of Mexican descent use to integrate new health care knowledge. The researcher for this study identified traditional health beliefs and practices among a group of pregnant women of Mexican origin living in a large metropolitan city in the southwest. The researcher developed a theory regarding the transfer and integration of pregnancy-specific health knowledge that was grounded and bound to the lives and experiences of these women. Findings from this study will inform health care providers about culturally specific health care practices of childbearing women of Mexican ancestry living in the southwest and illustrate the decision-making process these women use in integrating new pregnancy-specific health knowledge. This knowledge can be used in future studies to formulate interventional studies aimed at improving the health of this population.

CHAPTER II: REVIEW OF THE LITERATURE

Introduction

This chapter will highlight relevant literature regarding health beliefs and practices of childbearing women of Mexican origins. Topics that will be discussed are: a) cultural inheritance and transmission of health beliefs and how they may impact health practices, b) common cultural beliefs and practices found in the Hispanic population, c) pregnancy specific beliefs and practices for Hispanic women, and d) how generational status and acculturation may influence health beliefs and practices. The chapter ends by identifying gaps in the present state of the literature.

Cultural Inheritance and Transmission of Health Beliefs

Cultural inheritance is defined as the storage and transmission of information by communication, imitation, teaching and learning (Martin, et al., 1986; Peedicayil, 2001). Some researchers report that cultural inheritance occurs by the replication and transmission of basic cultural units called memes (Dawkins, 1976; Massimini & Delle Fave, 2000). Dawkins (1976) first used the term 'meme' to describe the basic cultural unit subject to replication and transmission to other individuals. Blackmore (2000) further defines memes as an idea, behavior, style or usage that spreads from person to person within a culture and can be a variety of everyday things such as singing "happy birthday" or shaking hands. Although the notion of memes is a controversial and highly debated idea among anthropologist and sociobiologists (Bloch, 2000), cultural systems today may represent such transmissions and replications of memes. These cultural inheritance systems are promulgated by means of social interactions through the use of verbal language, social learning, and cultural artifacts (Massimini & Delle Fave, 2000).

There are three known pathways for cultural transmission: vertical, horizontal, and oblique. The first pathway is the vertical pathway, like the one that occurs between parent and child (Guglielmino, et al., 1995; Martin, et al., 1986). Knowledge gained through vertical pathways has been described as the best way to ensure cultural transmission of knowledge (Guglielmino, et al., 1995). The second pathway is horizontal transmission, like that which occurs between siblings. And finally, the third pathway is the oblique pathway where a one-to-many transmission occurs; for example, that between teacher and student (Martin, et al., 1986).

Cultural inheritance is the process of transmitting information by communication, imitation, teaching (Peedicayil, 2001). Cultural inheritance is more rapid than genetic inheritance, occurs in other animals such as birds and mammals, is transmitted by the brain rather than genes, and is distinctly developed during human evolution with the emergence of language (Peedicayil, 2001). Peedicayil (2001) states that cultural inheritance does not lend itself well to measurement. Little research attention has been given to the phenomenon of cultural inheritance and in particular the process of decision-making during pregnancy among pregnant Hispanic women of Mexican ancestry. There is little information on how these women integrate new health information with their current health knowledge.

A concept similar to cultural inheritance is the cultural repatterning component of Madeleine Leininger's Cultural Care theory. This theory combines the theoretical perspectives from anthropology with nursing research and practice which offers researchers and clinicians a theoretical basis for studying cultural phenomena. Madaleine Leininger's Cultural Care theory is based on the belief that a culture's views, beliefs, knowledge, and experiences are important factors in the planning and implementation of health interventions (Leininger, 2001).

Cultural repatterning is described by Leininger (Leininger, 2001) as one way in which a health practice or belief is changed. Usually, this change occurs through education aimed at maintaining the cultural heritage of the individual (Leininger, 2001). It is believed that pregnant Hispanic women continue receiving health information from a variety of sources (Lagana, 2003; St. Clair & Anderson, 1989). These sources include, but are not limited to, their friends and families, health care providers, the media (such as the internet, TV, radio, etc.), and books. Although it has been documented that the information received from these sources can be in direct conflict with biomedical health knowledge (Galavotti & Richter, 2000), the individual must choose to accept, alter, or reject the health information being given to them. What remains to be seen is if and how health promoting practices change based on this decision-making process.

Choosing to accept, alter, or reject biomedical health knowledge and Traditional Medicine/Complementary and Alternative Medicine can be seen as an example of cultural repatterning. A qualitative study conducted by Gill, Reifsnider, Mann, Villarreal, and Tinkle (2004) looked at the breast-feeding beliefs among low-income Mexican-American women. Gill et al. (2004) found that the decision to breast-feed was not made solely by the woman but in consultation with family members; usually an older female relative (Gill, et al., 2004). Therefore, looking at information that family members give to pregnant women may be an important factor to consider in the decision making process for Mexican-American women.

One study conducted by Mendelson (2003) reported similar repatterning in a group of English speaking Mexican-American mothers. Mendelson (2003) investigated health producing and health seeking behaviors used to generate health within their family. The researcher conducted a qualitative, ethnographic study with 13 Mexican-American mothers (9) and

grandmothers (4), ages 26 to 53. Women in this study reported that although some advice given to them by well-meaning family members was valued, the women made treatment choices for their family based on the following: a) previous experience with recommended treatment, b) current attitudes toward health and healing, and c) other considerations such as drug-drug interactions and/or previous discussions with health care personnel. Women described how they listened politely to family suggestions regarding TM/CAM but did not follow such recommendations (Mendelson, 2003). Unfortunately, the author does not state the location where the study took place, nor does the researcher state if any pregnant women were included.

General Perceptions of Health

Several researchers have identified cultural beliefs for Hispanic women regarding health. One such study is a classic study in which a survey methodology was used to assess women's definitions of health. Researchers conducted the study in the northwest portion of the United States and interviewed a total of 528 women. Women ranged in age from 18 to 45 years, with a mean of 32.6 years. Although this sample was described as multicultural, only 19 participants were categorized as Hispanic, or of another ethnicity. Women identified four dimensions of health: clinical, role performance, adaptive, and eudaemonistic (health perceptions that have the capacity to produce happiness in the individual). Under the eudaemonistic category, researchers identified nine themes which included actualizing self, practicing healthy life ways, self-concept, body image, social involvement, fitness, cognitive function, positive mood, and harmony (Woods, et al., 1988).

Other studies which focused on women of Hispanic origin were found. These studies focus on older women's perception and meaning of health. For example, a qualitative study performed by researchers in Arizona used focus group methodology to interview 29 White and

Hispanic women. Hispanic women in this group were older (51 to 85, with a mean of 64.5 years). Half of the women in this study were born in either Mexico or Central America and the remainder were born in the United States. Researchers found that Anglo women described health as the absence of disease. Hispanic women focused less on their physical bodies, rather they spoke of holistic ideas with an emphasis on spirituality and that God was responsible for their health (McCarthy, Ruiz, Gale, Karam, & Moore, 2004).

Sanchez (2007) conducted a study that explored Mexican American women's ideas and behaviors outside the healthcare setting. This study was conducted in south Texas Rio Grande Valley along the U.S.-Mexico border. A total of 15 Mexican American women were interviewed which consisted of family triads (grandmother-mother-daughter). Ages of these participants were 20-103 with a mean of 53.8. Generational status for the participants ranged from first to fifth. Nine of the participants were born in the U.S. and the remaining 6 participants were born in Mexico. Participants in this study defined their health as holistic well-being that included a personal sense of mind-body-spirit harmony experienced even during an acute illness or disability. Other themes that the researchers discussed were having a positive mind-set and inner strength that allowed them to accomplish personal goals. Most participants cared for themselves using a combination of lay/popular, folk, and/or professional health practices (Sanchez, 2007).

beliefs. This list is not meant to be all-inclusive. However, these items were chosen because of the prevalence of these beliefs and practices in the health literature.

Traditional Beliefs and Practices

Traditional Medicine (TM) is described by the World Health Organization (WHO) as "health practices, approaches, knowledge and beliefs incorporating plant-, animal- and mineral-

based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being" (Bagozzi, 2003). In industrialized countries, adaptation of TM is called complementary and alternative medicine (CAM) (Bodeker & Kronenberg, 2002). In contrast to these types of medicine is conventional medicine, that consists of the modern biomedical and often dominant type of medicine (Bodeker & Kronenberg, 2002).

In the past decade, the use of Traditional Medicine/Complementary and Alternative Medicine (TM/CAM) has expanded and gained in popularity on both a national and global level ("General guidelines for methodologies on research and evaluation of traditional medicine," 2000; Upchurch, et al., 2007). This growth may be due to TM/CAM providing savings in cost and ease of access to this type of care (Bodeker & Kronenberg, 2002). The use of traditional, complimentary, and alternative medicine has been well-documented in developing countries. Countries such as China and Chile report approximately 40% and 71% of the population practicing some form of TM/CAM, respectively. In many African countries, a staggering 80% of the population has been shown to engage in TM/CAM (Bagozzi, 2003).

In the U.S., the World Health Organization (WHO) states that 158 million adults use some form of CAM with an annual expenditure of $17 billion in the year 2000 (Bagozzi, 2003). The popularity of TM/CAM in industrialized nations may be due to the affordability, availability, cultural familiarity, and in great part – family influence (Avila & Parker, 1999; Bodeker & Kronenberg, 2002). The WHO calls for the promotion of safe, effective, and affordable traditional medicine (Bagozzi, 2003; General guidelines for methodologies on research and evaluation of traditional medicine," 2000). This can be accomplished by

documenting traditional medicines, remedies, and beliefs and practices that are used by cultures around the world and in the U.S.

People continue to use TM/CAM regardless of factors such as access to primary health care (Chesney, et al., 1980; Pasky, 1979), presence or absence of health insurance (Upchurch & Chyu, 2005; Upchurch, et al., 2007), health care costs (Pasky, 1979; Upchurch & Chyu, 2005; Upchurch, et al., 2007), and novel medical breakthroughs (Hufford, 1997). Hufford (1997) describes the trend for many of these beliefs and practices not to be discussed with providers of medical care. This may be due to previous experiences with traditional, western medical care where folk beliefs are often dismissed as "old-fashioned" and "old wives' tales" thought to offer little contribution to conventional medical care (Hufford, 1997). Unfortunately, while some traditional TM/CAM health beliefs and practices have been received positively by practitioners, the majority of researchers and practitioners are unaware of the variety of TM/CAM and their associated beliefs (Bodeker & Kronenberg, 2002).

Chao, Wade, Kronenberg, Kalmuss, and Cushman's (2006) national survey study looked at reasons for TM/CAM use among non-Hispanic White, African-American, Mexican-American, and Chinese-American women. A total of 383 Mexican-American women reported use of CAM for a variety of reasons to include personal beliefs, dissatisfaction with conventional medicine, and social influences. Reasons that were categorized as personal beliefs are: CAM was consistent with the woman's health care beliefs (55.4%) and the woman sought a more natural approach to treatment (52.5%). Dissatisfaction with conventional medicine included the following: high cost of conventional medicine (27.3%), failure of conventional treatments (25.2%), and experiencing side effects from conventional treatment. Social influences were described as: family members recommended or used CAM treatments, doctor recommended

CAM, and media (TV, printed material, radio) influenced CAM use (Chao, et al., 2006). The mean age of participants in this study was younger (mean age of 37.5 years) than previously mentioned studies. The majority of the participants in Chao et al. (2006) study lived in the west (67.4%), had health insurance (64.1%), and made less than $20,000 a year (35.9%) (Chao, et al., 2006). Chao et al., (2006) warns that many populations may use TM/CAM as the standard of care and not an alternative to western medical care. This may apply to the Hispanic population who may visit these more traditional healers first or in conjunction with medical care.

Use of TM/CAM and associated beliefs are not limited to those who are less educated or live in isolated communities (Bagozzi, 2003). Krajewski-Jaime (1991b) outlined that the role of the family in diagnosing and treating illness and the prevalence of many beliefs, symptoms, and regimens of healing that are common in the Hispanic population are important concepts to consider. Lopez (2005) mentions that Mexican-Americans have a unique situation because they are not only considered the oldest immigrant group, but also the most recent group due to their continued growth. This unique situation influences the continued renewal of cultural and ethnic beliefs and practices across different areas of behavior–one of which is pregnancy-specific health care beliefs and practices (Lopez, 2005).

Numerous researchers have reviewed TM/CAM prevalence practices in the U.S (Cushman, et al., 1999; Factor-Litvak, et al., 2001; Kronenberg, et al., 2006; Upchurch & Chyu, 2005; Upchurch, et al., 2007). Upchurch & Chyu (2005) surveyed American women ages 18 and older for the following TM/CAM practices: acupuncture, relaxation techniques, massage therapy, imagery, spiritual healing/prayer, lifestyle diets, herbal medicine, homeopathic treatment, energy healing, biofeedback, and hypnosis. Upchurch and Chyu's (2005) sample of over 17,000 women were mainly U.S.-born (87.4%), included few Hispanics (10%), had

incomes greater than $20,000 per year (76%), and 87.9% had health insurance. Of the variety of different TM/CAM practices that were practiced by women, the researchers conclude that over 30% of women use at least one form of TM/CAM and the most common practices are spiritual healing, prayer, and herbal medicines (Upchurch & Chyu, 2005). Women found to be more likely to engage in TM/CAM were described as older, more educated, in poorer health, and living in the West or Midwest (Upchurch & Chyu, 2005). Specifically looking at the Hispanics in the study, 22% of the Hispanic women surveyed declared using CAM in the past 12 months. Specific CAM therapies that were practiced by Hispanic women were: biologically based therapies (12.7%) which include non-vitamin, non-mineral, natural products, and diet-based therapies; mind-body interventions (11.9%) which are defined as biofeedback, meditation, guided imagery, progressive relaxation, deep breathing exercises, hypnosis, yoga, tai chi, and qi gong; manipulative and body-based therapies (7.4%) which include chiropractic or osteopathic manipulation, massage, and movement therapies; alternative medical systems (4.2%) defined as acupuncture, ayurveda, homeopathic treatment, naturopathy, and traditional healers; and energy healing therapies (0.8%) which include Reiki (Barnes, Bloom, & Nahin, 2008).

Chesney, Thompson, Guevara, Vela, and Schottstaedt (1980) conducted a study in Galveston, Texas, that investigated whether TM/CAM practices were culturally determined or occurred as a result of an inaccessible and disrespectful biomedical health care system (Chesney, et al., 1980). Chesney et al., (1980) interviewed 40 Mexican-American families. Although there is no listed age group for the participants in the study, demographic statistics for the group show that 65% of the families were employed, 77% had lived in Texas for more than 10 years, 75% had three or more people living in the household, 47.5% came from single-parent households, and 67% were educated in the U.S. These researchers demonstrated that 80% of families had

some sort of knowledge of folk illnesses and over half (67%) used both biomedical care and folk medicine. Most striking was knowledge that family members perform these TM/CAM cures and it was difficult to define which treatments were provided by *curanderos* and family members.

Cushman et al. (1999) explored the use of TM/CAM among African-American and Hispanic women residing in New York City. This pilot study included a total sample of 39 Hispanic women from Puerto Rican origin, ages 18 to 80 years. Demographic characteristic data for this group demonstrate that 37% reported incomes more than $50,000. Researchers used focus group methodology to discover that Hispanic women use a variety of TM/CAM therapies such as c*evo de flan* (ointment for the body), *empache* (boiled rice water applied to the body), *una de gato* (cat's claw), and *alcolado* (medley of roots). Unfortunately, Cushman et al. (1999) did not mention reasons for the use of the above listed therapies. This group of mainly Puerto Rican women was found to visit *curanderas* and *matasanos* (healers), but the reasons for the visits were also not listed. Cushman et al. (1999) illustrated that young women both used and passed down TM/CAM knowledge even in the light of growing skepticism of what was believed to be traditional and ignorant treatments of older female relatives. Mothers and grandmothers were accredited for teaching younger women about TM/CAM beliefs and practices.

Factor-Litvak and colleagues (2001) performed a study in New York City that recruited a total of 300 English speaking women, ages 18 to 80, who self-identified as Hispanic (33%), African-American (33.3%), or White (33.7%). Researchers analyzed two groups of women. Women 18 to 40 years old were selected so that women may be more likely to experience health concerns regarding menstruation, fertility, and pregnancy/childbirth. Women ages 41 to 80 years were selected so that women would be more likely to experience concerns regarding menopause and post-reproductive cancers. Overall, more than 50% of the women sampled used some sort of

TM/CAM. This study found that the majority of Hispanic women (56%) used TM/CAM and more than one third (39%) admitted to seeing a TM/CAM practitioner. Women in the younger age group were more likely to engage in medicinal therapies (47%) than manual therapies (24.8%), and mind-body practices (22.2%). The chief types of practitioner consulted were chiropractors and nutritionists. Although this study included Hispanics, there are no distinctions which Hispanic subgroup(s) the participants would have chosen.

Palinkas and Kobongo's (2000) study investigated TM/CAM practices in a community clinic setting in San Diego, California. Researchers surveyed a total of 542 patients attending family practice clinics for medical visits. This sample was younger in age since 53.9% of the sample was less than 40 years old; 67% were women. These researchers analyzed data by ethnicity and reported a diverse group of patients consisting of Whites (56.9%), Hispanics (23.3%), Asian/Pacific Islanders (6.9%), African-Americans (6.0%), and American Indians (0.9%). In addition, the authors reported that 69.8% of study participants were born in the United States. Palinkas and Kobongo's (2000) study demonstrated that 69.2% of the Hispanic patients in this family practice setting practiced traditional folk remedies (no definition provided), 17.6% performed self-care therapies (energy healing, meditation, prayer, dietary interventions, herbal remedies multivitamin supplements), 17.2% followed practitioner-based therapies (acupuncture, biofeedback, chiropractic, homeopathy, massage therapy, naturopathy), and 18.4% were nonusers of TM/CAM. Data on the demographic characteristics of this group of patients demonstrate that over 50% of the sample had household incomes above $50,000, 76.5% had HMO or other private insurance, and 51.7% were college graduates.

Most studies state that medical professionals are unaware of current TM/CAM beliefs and practices (Bodeker & Kronenberg, 2002). A survey study conducted by Mikhail, Wali, and

Ziment (2004) investigated frequency, reasons for use, perceived efficacy, safety, costs, sources of information, overall satisfaction, and subject-medical personnel interaction with respect to TM/CAM. Mikhail et al. (2004) reported that of 179 participants, 78.9% had never spoken to their medical provider about TM/CAM beliefs and practices. Stated reasons for the lack of discussion were that the medical provider did not ask for that information (45%) and some thought that the issue was confidential (15%). This study only adds to the body of literature that health care professionals do not ask about TM/CAM practices and that patients may not be sharing information regarding the use of such practices. It is uncertain if this trend also continues into the childbirth years and during pregnancy.

Several authors conducted research in TM/CAM practices during pregnancy (Fugh-Berman & Kronenberg, 2003). Fugh-Berman and Kronenberg (2003) reviewed over 90 randomized controlled trials that included TM/CAM use in women of reproductive-age. The authors found 45 trials that focused on pregnancy-related conditions. Data from these studies support the use of acupressure for nausea and vomiting associated with pregnancy and further testing of Vitamin B6 or ginger is needed to see effectiveness for this common ailment of pregnancy. Unfortunately, the authors did not document any ethnic differences among the subjects in this review.

In another study, researchers looked at TM/CAM practices for low-back pain during pregnancy. Wang and colleagues (Wang, et al., 2005) surveyed 950 pregnant women from the following ethnic backgrounds: White (80.1%), African American (4.6%), Hispanic (3.8%), Asian 8.5%), and other (2.5%). The percent of subjects using TM/CAM was greatest for Latin American women (39%) with African Americans (37%), Caucasian Americans (31.6%), Asian Americans (25.5%), and other ethnic groups (21.1%) also reporting usage. Demographic

characteristics of this sample of pregnant women included 96.9% who had an age of ≤ 40 years, 56.1% reported incomes above $50,000, 88.8% were married, 36.9% reported a college education, 29.1% reported a high school education, and 20% reported less than a high school education. The authors report that 53% of respondents reported using massage therapy, yoga, chiropractic care, relaxation techniques, acupuncture, herbs, or aroma therapy prior to pregnancy. Another 31.1% of women continued the use of massage, yoga, and sought the care of a chiropractor during their pregnancy. The only factor affecting TM/CAM use by women both before and during the pregnancy was education ($p = 0.015$) (Wang, et al., 2005).

The literature is marked with several beliefs implicated as being important for the health care beliefs and practices of Hispanic women. These beliefs are defined and any empirical research that relates to the belief is presented. Some authors include many of these health care practices and beliefs as part of TM/CAM modalities.

Common Hispanic Cultural Beliefs

The following health beliefs and practices were found in the health literature and they may apply to pregnant and childbearing women of Mexican origins. The topics chosen include: *envidia/mal de ojo*; *controlarse/aguantarse*; *susto/espanto*; *nervios*; *Santeria* and *Espiritismo*; *curanderismo*; *mal aire*; faith and prayer; herbal teas and remedies; and *antojos*/cravings.

Envidia/Mal de Ojo

Envidia is described by Romero (2008) as desire or jealousy resulting from dislike of or intense anger toward another person that results in a number of symptoms mimicking anxiety or a severe cold or fever. *Envidia* often precedes *mal de ojo* (evil eye) and can occur when a known or unknown person desires what another person possesses (Lopez, 2005). One of the common diseases that have a magical origin is *mal de ojo* (the evil eye). *Mal de ojo* usually affects small

children or adults who are in a weak or vulnerable state (Avila & Parker, 1999; Galanti, 2003; Jimenez, 1995). Hispanics believe that another person usually casts the evil eye either voluntarily or involuntarily through an admiring glance at an object or person (Avila & Parker, 1999; Cohen, 1979; Galanti, 2003; Jimenez, 1995). For example, people who admire an infant or pregnant woman with a strong glance may be casting the evil eye and thus causes illness in these individuals (Jimenez, 1995).

In order to avoid the effects of the evil eye, Hispanics may wear amulets or protective clothing (Avila & Parker, 1999; Galanti, 2003; Gordon, 1994). Also, a person who catches him or herself engaged in a profound glance at another person or item will inadvertently touch the person or object to break the magic and avoid the evil eye (Galanti, 2003). This is a reason why so many Hispanics will admire a baby and feel compelled to touch the infant; so as to break the magic that he or she may purposefully or inadvertently be casting (Jimenez, 1995; Lopez, 2005).

Reported effects on an individual who has been attacked by the evil eye may include listlessness, restlessness, weakness, diarrhea, insomnia, vomiting, and fever that usually occurs without warning or provocation (Applewhite, 1995; Avila & Parker, 1999; Jimenez, 1995; Lopez, 2005). Cures for the evil eye include herbs, drug store remedies, and magical treatments that include stroking or cleansing an affected patient with an egg to diagnose and draw out the evil (Avila & Parker, 1999; Jimenez, 1995).

Current literature describes *mal de ojo* as a belief that mainly affects children and adults (Galanti, 2003). However, it is unclear if pregnant Hispanic women believe that *mal de ojo* can affect them. According to Lagana (2003), pregnancy is seen as a state of vulnerability. It is not clear whether this perceived state of vulnerability is for the pregnant woman, the fetus, or both.

Controlarse/Aguantarse

Another concept of interest is the effects of the belief that a person should be able to *controlarse/aguantarse* (control him or herself) during a stressful or difficult time. Romero (2008) describes *controlarse/aguantarse* as a method for the regulation of behavior. Hispanics may use this concept in dealing with symptoms of anger, anxiety, and depression in different relationships between men and women and also in behavioral problems of children (Cohen, 1979). The concept of *controlarse/aguantarse* gives the Hispanic a venue for exercising discipline over unpleasant feelings, thoughts and moods that are caused by *disgustos* (unpleasant events) or *contrariedades* (troubles and upsetting situations). Cohen (1979) notes that Hispanics who modify their feelings through the use of *controlarse/aguantarse* help to hold back outbursts of feelings such as anger (*corajes*, *enojos*, or *rabias*) or the reactions of fear which result from an unexpected experience. The literature is unclear as to whether pregnant Hispanic women ascribe to this belief. For example, a pregnant woman may feel compelled to avoid getting angry at other family members for the sake of the fetus.

A similar concept to *controlarse/aguantarse* is *preocuparse*, or the act of worrying (Falicov, 2003). *Preocuparse* is seen among pregnant Hispanics as having a detrimental effect on the pregnancy and the fetus (Lagana, 2003). Lagana (2003) found that this belief is strongly enforced by family members–especially grandmothers. Pregnant women were often sheltered against upsetting news and family members who upset them were harshly criticized (Williams, 2001). Although Lagana (2003) describes the concept of *preocuparse* well, the author does not state what beliefs the pregnant woman may have regarding the effects on the fetus or on her body. Falicov (2003) describes *controlarse/aguantarse/preocuparse* as internal coping mechanisms that Hispanics use to deal with stressful situations.

Susto/Espanto

One of the most common folk diseases is *susto* (magical fright). *Susto* can be described as an unexpected bad experience that can affect both children and adults and is usually attributed to a single stressful event (Baer, et al., 2003a). Something causes what is perceived as a terrible scare that the individual cannot overcome. This can cause the individual to have poor appetite, become pale and thin, and/or have aches and pains. *Susto* can also affect pregnant women and thus cause the infant to become agitated and colicky once it is born (Baer, et al., 2003b). Jezewski and Poss (2002) found that Hispanics believe that *susto* was the original cause for the onset of type 2 diabetes mellitus. In another study, Hispanics were documented to be taking a variety of herbs and tonics to self-treat their diabetes that were often recommended to them by their family, friends, and neighbors (Poss, et al., 2003a).

Nervios

A person can be described as having an *ataque de nervios* or (nervous breakdown) when the person begins trembling, having a seizure-like convulsion, and enters a semi-conscious state. These findings usually have no physical pathology and are often attributed to continuous stressors (Baer, et al., 2003b). Several researchers describe this phenomenon as a way to cope with the social suffering that some Hispanics experience in life (Baer, et al., 2003b; Guarnaccia, Lewis-Fernandez, & Marano, 2003; Ruiz, 1985). These researchers do not make it clear if *ataque de nervios* affects Hispanic pregnant women and if so, how the symptoms differ from the non-pregnant state.

Santería and Espiritismo

Suarez (2000) describes *santería* and *espiritismo* as Afro-Cuban religious practices that emerged from the blending of Spanish colonialists' Catholic beliefs and African rituals and

world views. Healers who practice *santería* are called *santeros* and they provide advice, spiritual cleansing, and other services that may help decrease the stress a person is experiencing regarding their problem. Santeria may play an important role in influencing health beliefs and practices since good health is seen as a balance of mind, body, and spirit (Newby, Riley, & Leal-Almeraz, 2006). Conversely, illness is seen as a negative supernatural force that needs to be attended to by a *santero* (Newby, et al., 2006). These authors conducted a study in New Jersey that explored mercury exposure during *santeria* practices. A total of 22 supply store employees and practitioners of *Santeria and Espiritismo* were interviewed using qualitative methodology interviews. The authors report that 21 practitioners used mercury or mercury compounds in various forms of practice and service that were provided to their clients. Practitioners obtained mercury from local *botanicas* (herb shops) that catered to the local Hispanic population. Most of the practitioners commented that they were aware of the dangers of mercury. However, these practitioners were not aware that the most significant exposure comes from mercury vapors rather than through skin contact.

In *espiritismo*, an individual who is a medium or spiritual counselor (called an *espirititsta*) helps clients through exorcisms of spirits that produce illness and emotional distress for the individual (Suarez, 2000a). Another study describes a similar concept of *embrujado* (bewitchment) as a belief that a hex has been placed on the individual and is the root cause of mental illness (Koss-Chioino & Canive, 1993). None of the literature reviewed mentioned any of the above concepts as important TM/CAM that pregnant Hispanic women may follow.

Curanderismo

Another traditional belief that Hispanics may ascribe to is the use of a traditional faith healer or *curandero/curandera,* who is believed to be chosen and empowered by God (Avila &

Parker, 1999; Burk, Wieser, & Keegan, 1995; Galanti, 2003; Kramer, 1996). This person may be anyone who has the essential knowledge to treat the individual with herbs and other folk treatments (Avila & Parker, 1999; Clark, 1970b; Galanti, 2003). Other types of *curanderos* are *sobadores* (*curanderos* who heal by massage therapy) and *yerberos* (*curanderos* who heal through the use of herbs and teas (Burk, et al., 1995).

The treatment of numerous health ailments may be achieved through a combination of any of a variety of treatments. *Curanderos* administer various combinations of herbs and purgatives for ailments such as runny nose with congestion and earaches; topical application of liniments, oils and herbal mixtures; and massaging body parts (*sobadas*) with olive oil, lard or Vick's Vapor Rub are commonly performed by *curanderas* and *curanderos* (Avila & Parker, 1999; Clark, 1970b).

Curanderos and *curanderas* have been documented to use cupping (Lopez, 2005) techniques to draw out aches and pains in different areas of the body. Cupping is performed by using a small candle on top of a coin and resting it over the affected body part. A small vacuum is created when the candle is extinguished that serves to draw out aches and pains (Clark, 1970b). It is unknown if pregnant Hispanic women visit *curanderos*, or their associated counterparts *sobadores* and *yerberos*.

Mal Aire

Another condition, *mal aire* (bad air), is felt to be caused by either a disequilibrium between hot and cold or by evil spirits that possess an unsuspecting victim (Zepeda, 1982). *Mal aire* causes pain, weakness and/or paralysis of a body part in the individual. Finding and applying the appropriate cures, often a rub made with herbs, in a timely manner can minimize the

side effects of the condition (Clark, 1970b). The belief in *mal aire* is another health belief whose relation to pregnancy is not addressed in the present literature.

Faith and Prayer

Clark (1970a) describes the importance of faith in believing in positive outcomes of traditional practices. Family members who do not believe in the outcomes and have no faith in the traditional treatments often are either self-excluded or excluded by other family members. Through the use of prayer, personal sacrifice, and bartering, Hispanics believe that one can induce God to modify one's fate (Galanti, 2003).

Upchurch and Chyu (2007) national survey of over 17,000 American women ages 18 and older found that 40% of all respondents practiced TM/CAM. The study sample was made up of Whites (73.2%), Blacks (12%), Hispanics (10.8%), Asians 3.1%), and other (0.9%). The sample was analyzed for place of birth (U.S. vs. foreign-born) with U.S. born (86.2%) participants representing the majority of the sample. However, the authors did not designate which ethnic minorities were foreign born and thus the entire sample is included in these statistics. Over 77% of the sample had annual incomes greater than $20,000. Hispanics in this study were more apt to use prayer (55%), biologically based therapies (23%), and mind-body therapies (13%) as preferred TM/CAM modalities. However, only 3% of Hispanics in this survey reported using alternative medical systems. Upchurch and Chyu (2005, 2007) found that approximately 18% of the Hispanic population of women in their sample engaged in a form of prayer. However, there was no listing as to what these women were praying for.

Another interesting fact that may play a role in this study is that Hispanic women tend to have higher levels of attendance at weekly religious activities than Hispanic men (Stolley & Koenig, 1997). Stolley & Koening (1997) report that in San Antonio, 75% of a survey sample of

women reported attending a religious activity on a weekly basis. Yet, no information was included on the role of faith and prayer among pregnant Hispanic women.

Lopez (2005) found that although 71% of Mexican-American women rated themselves to be somewhat religious, 21% rated themselves as not religious at all. However, over 80% had some sort of religious artifact in the home, such as an image of the *Virgen de Guadalupe* (The Virgin of Guadalupe the Mexican patron saint) (76%), crucifixes (86%), lighted altars (36%), depiction of the Last Supper (54%), and other religious pictures or statues (80%).

Mikhail, Wali and Ziment (2004) report that out of 179 Hispanic male and female subjects who participated in their survey, 58.2% said that both prayer and other types of TM/CAM were important to their health. A third of respondents (33.6%) also said that both a doctor and spiritual adviser were helpful in treating diseases. However, when asked which is more important--prayer or medications prescribed by a doctor, 72% vs. 27% said that medications prescribed by a doctor were more important. It is necessary to note that the result for prayer vs. medication importance was a forced option on this survey since there was no option for the individual to choose "both" as equally important.

Herbal Teas and Remedies

According to several national samples of TM/CAM usage, the most practiced TM/CAM modality is that of ingesting herbal preparations (Kronenberg, et al., 2006; Upchurch & Chyu, 2005; Upchurch, et al., 2007). Jimenez (1995) describes a variety of herbal remedies used by Hispanic women. These include *manzanilla* (chamomile) tea for nausea, upset stomach, diarrhea, and insomnia; *yerba buena* (peppermint) tea for nausea, upset stomach, headache, tension, insomnia, and lack of appetite; *canela* (cinnamon) tea for colds and flu (Jimenez, 1995); and *comino* (cumin) tea to stimulate labor (Burk, et al., 1995). Another study conducted by

Guenther, Mendoza, Crouch, Moyer-Mileur, and Junkins (2005) found that over 60% of Hispanic parents reported using herbs such as chamomile, cinnamon, mint, and oregano teas commonly to treat their children's illnesses. Participants in this study were significantly younger in age than their Caucasian counterparts and averaged 27.6 for mothers and 29.3 for fathers. The participants in the Guenther, Mendoza, Crouch, Moyer-Mileur, and Junkins (2005) study were of childbearing age and thus leads other researchers to question if these herbs continue to be used by women during their pregnancies.

One disturbing trend found in the literature is that women find the use of herbal teas and tonics to be safer than pharmaceutical drugs and they are often the first line of defense against common health complaints (Westfall, 2003). Specifically important are the following facts that women use in deciding to self-medicate with herbs: a) prior knowledge of the herb (32%); b) having a trusted source(s) of advice (56%) such as books, friends, family members, maternity care providers, herbalists, herb shops, and the internet; and c) relying on intuition (12%) (Westfall, 2003). The findings of this study that may apply to pregnant Hispanic women of Mexican origin is that the majority of herbal advice (69%) was received by word-of-mouth, to include a women's friend or family member (Westfall, 2003). Berry (1999) reports that Hispanic women were found to use a variety of different herbs such as *Manzanilla*/Chamomile, *Yerba Buena*/Spearmint, *Menta*/Mint, Anise, Oregano, and *Rosa de Castilla*/Rose Buds for a variety of gastrointestinal and other health problems. It is important to note that the use of herbal medicine, whether in the formulation of teas or as a dietary supplement, may result in herb-drug interactions and a variety of adverse side effects to include allergic reactions, nausea, vomiting, and sedation (Gallo, Einarson, & Koren, 2003). Gallo (2003) calls for further investigation into the safety of herbal therapies during pregnancy.

Nausea and vomiting during pregnancy (NVP) are known to affect two-thirds of pregnant women (Hollyer, et al., 2002). Hollyer et al. (2002) examined the prevalence of TM/CAM modalities in a group of 70 Canadian women, ages 20 to 45 years, suffering from NVP. These authors report the following demographic and ethnic variables: Caucasian 87%, Latin American 4.3%, Black 4.3%, other 4.3%, 79.7% had college level education, and 58.3% reported household incomes greater than $50,000. Almost two-thirds (61.2%) of the respondents reported using at least one form of TM/CAM to alleviate NVP. The most common treatment modalities were ginger teas or tablets (50.7%), acupressure/seabands (45.8%), and vitamin B6 (29.2%). Sources of information were listed to be family/friends (40.1%), health professionals (30.3%), TM/CAM practitioners (21.6%), and doctors/pharmacists (8.1%). These authors found that only NVP severity was associated with TM/CAM use to alleviate the NVP symptoms (Hollyer, et al., 2002).

Antojos/Cravings

Cravings, or *antojos*, are not a health belief found only in the Hispanic population. Burk et al. (1995) describes this belief as an infant exhibiting a characteristic of an object that the mother craves during pregnancy and did not get. For example, if the mother craved strawberries and did not eat them, then the child may be born with several birth marks or strawberry spots on the body. Berry (1999) carried out an ethnographic study of 16 pregnant, Mexican-American women undergoing care at a public health clinic in the Southwest U.S. Beliefs regarding food cravings included the belief that informants must satisfy food cravings in order to prevent fetal harm, mothers should not moderate their nutritional needs and were not concerned about their weight gain during pregnancy, and they were found to eat 3 meals a day (Berry, 1999).

Pregnancy Specific Beliefs

There are a variety of Hispanic beliefs that center on the prenatal, childbirth, and postpartum periods. This section will review some of the most common findings related to the Hispanic population that were found in the literature.

Prenatal Beliefs

Pregnant Hispanic women are expected to maintain harmony with the universe and avoid emotional/physical upsets throughout the pregnancy (Lagana, 2003). However, some researchers document that Hispanic women may also view pregnancy as a dangerous time since certain natural phenomena, such as the light of a full moon, are regarded as potentially dangerous to the unborn child because it could cause a cleft lip or palate (Berry, 1999; Burk, et al., 1995; Cohen, Fine, & Pergament, 1998). Even in the age of three-dimensional sonograms, pregnant Hispanic women can be found wearing a key suspended by a string belt or a safety pin over their abdomen in order to offer some level of protection to the unborn child (Berry, 1999; Burk, et al., 1995; Cohen, et al., 1998).

Another researcher analyzed the prenatal care delivered in a community health birth center setting located in Harlingen, Texas. Burk and colleagues (1995) examined prenatal care in the context of culturally sensitive prenatal care and identified prominent cultural beliefs and health behaviors common among pregnant Mexican-American women living in the Rio Grande Valley area (Burk, et al., 1995). Although this study offered several insights for medical professionals wishing to provide culturally sensitive care for pregnant Mexican-American women, the article is a literature review of research that predates 1995 and adds little, if any, new information to current health care beliefs and practices for this group.

Prenatal care (PNC) is underutilized among the Hispanic population and Hispanic women are more likely to seek prenatal care later in their pregnancy (Galanti, 2003; Lagana, 2003; Routine Prenatal Care," 2006). The common beliefs that pregnancy is a natural phenomenon and there is no reason to go to the doctor unless there is a complication with the pregnancy are another reason to delay or forgo prenatal care (Lagana, 2003). Inadequate prenatal care is defined as initiating prenatal care past the fourth month of pregnancy and having <50% of the American College of Obstetricians Gynecologists (ACOG) recommended visits (currently 8-11 visits) ("Routine Prenatal Care," 2006). Some reasons why women of all ethnic backgrounds may not seek prenatal care are: not being aware of the pregnancy, lack of insurance or other payment methods, inability to obtain an appointment, inability to obtain childcare for other children, lack of transportation to medical appointments, diminished importance for subsequent pregnancies (Cunningham, et al., 2001). In addition, several other authors found that for Hispanic women other reasons for seeking late PNC also included unplanned/unwanted pregnancies (Delgado-Rodriguez, Gomez-Olmedo, Bueno-Cavanillas, & Galvez-Vargas, 1997), fear of immigration status being discovered (Berry, 1999; Chavez, Cornelius, & Jones, 1986), and presence of prenatal depression (Torres, 2005).

Several studies have looked at this phenomenon to try to explain it and find ways to increase PNC delivery to this population. A review article by DePacheco and Hutti (1999) which focused on cultural beliefs and health care practices of childbearing Puerto Rican and Mexican-American women found several attitudinal reasons for lack of or having no PNC. These include the belief that their family and friends were giving them good advice regarding the pregnancy, lack of any known or identifiable health problems with the pregnancy, and having the belief that seeking prenatal care was not important for the women at that time (Depacheco &

Hutti, 1999). The review of the literature conducted by Depacheco and Hutti's (1999) includes research that was published prior to 1997. Although these researchers provide the reader with ample information about a variety of different cultural beliefs and practices of Puerto Rican and Mexican-American women during the prenatal, intrapartum, and postpartum periods, the authors call for further research to be conducted to see if women continue to hold on to these beliefs and specifically how acculturation to Western traditions influences the degree to which an individual follows these particular cultural traditions (Depacheco & Hutti, 1999).

An ethnographic study conducted by Domian (2001) interviewed women over a two-year time span in northern New Mexico. Domian's (2001) study focused on identifying the meanings of pregnancy and children to Hispanic women and their family members. A total of 20 women, their families, and community members were interviewed over the 2 year time-span and resulted in over 70 verbal transcripts that were used for analysis. The study found that Hispanics shared values that were important to participants that centered on keeping family values. Specifically, children were seen as a priority. Pregnancy was viewed as a positive experience. Respect within the family was seen as a key element in transferring values to the next generation. This study also found that participants shared a strong belief in God, the church, and God-ordained destiny. Domian (2001) describes generational bonding in which family members assist the pregnant woman with household chores, participating in encouraging conversations, and reminding the woman of future doctor's visits. Regrettably, Domian (2001) did not mention any other specific health beliefs and practices relating to TM/CAM and pregnancy in this population. In addition, Domian (2001) did not discuss the decision-making process that these women took in deciding which pregnancy beliefs and practices they would follow.

Pearce (1998) looked at Hispanic women's views on pregnancy and prenatal care. This study was conducted in the Northeast, and 21 women ages 15-32 were interviewed. Their sample included thirteen Puerto Rican, seven Dominican Republic, and one Central American woman. Pearce (1998) identified the core category "seeking a healthy baby". Women were found to achieve this central category by having a positive attitude, viewing pregnancy as normal, seeking education, eating healthy, balancing activity with rest, having good health habits, and initiating/continuing prenatal care (PNC). Participants were found to receive a variety of support from their social networks. Actions by their supportive social networks included: receiving advice, listening to problems/concerns, providing housing, babysitting, offering financial aid, and transportation. Although this study did not have any Hispanic women of Mexican descent, many of the findings have also been found in other literature that was reviewed and may apply to Hispanic women of Mexican origin.

Another qualitative study conducted in California looked at the experience of pregnancy from a Mexican-American viewpoint. This ethnographic study recruited 29 participants, ages 17 to 60, and included both U.S.- and foreign-born women. Findings from this study illustrated that many of the health beliefs reported in the 1970s and 1980s literature persist today. Pregnant women were expected to adhere to more traditional Mexican cultural beliefs. *No se preocupe* (don't worry) was a central theme that the woman's social network encouraged since it helped the woman avoid undue stress and promoted a healthy pregnancy.

Childbirth Beliefs

Childbirth is considered a natural and painful experience (Domian, 2001; Jimenez, 1995; Lagana, 2003). Mattson (2003) describes pregnant Hispanic women as being encouraged to cry out loudly during contractions so God will know that the woman is suffering. Again, there is no

further information on other dimensions of these beliefs as they relate to the pregnant Hispanic woman. However, it is unknown if the pregnant Hispanic woman uses TM/CAM to prepare for this experience. Allaire (2001) conducted a literature review to assess the state of the science for the efficacy and safety of TM/CAM therapies during the intrapartum period and the use for labor analgesia, induction, and augmentation. Allaire (2001) shows that a variety of TM/CAM modalities are used to include acupuncture, acupressure, transcutaneous electrical nerve stimulation (TENS), use of herbs/teas, homeopathy, and mind-body interactions (2001). Allaire (2001) found that 80% of respondents who used a form of herbal therapy used it for the purpose of inducing labor. Allaire's (2001) review of the literature did not include any information on ethnic differences that may have been described in the review of the literature. In addition, he describes the majority of the research on this topic as lacking: a) randomization to a control and treatment groups, b) comparable treatment and control groups, and c) tested outcomes that had true clinical significance (Allaire, 2001). Therefore, the use of TM/CAM in the intrapartum period has not been sufficiently studied to determine its efficacy and safety.

Berry conducted a qualitative ethnographic study in the southwestern U.S. in which she interviewed 16 participants (12 Spanish and 4 English) regarding Mexican-American pregnancy beliefs about PNC. All of the participants in Berry's (1999) study were born in Mexico and had immigrated to the United States between one and 18 years previously. Berry (1999) also included interviews from 34 other general informants or people such as the participant's family, friends, and clinic staff. Berry's (1999) study showed that Hispanic mothers believe that inactivity during pregnancy can lead to a difficult labor in which the baby can get stuck. Female fetuses were reported to be more at risk for this phenomenon since participants believed girls were lazy. Participants in Berry's (1999) study were found to take daily walks and avoided

napping in order to promote fetal activity. Women were also told to avoid lifting their arms over their heads as to avoid the umbilical cord from wrapping itself around the neck of the fetus. Heavy housework was to be avoided since it could hurt the back, make the baby come early, and be bad for the uterus.

Postpartum Beliefs

A common practice after childbirth is *la cuarentena*, a 40-day rest period during which the mother is meant to be in bed most of the time, getting up only to care for the newborn (Berry, 1999; Burk, et al., 1995; Jimenez, 1995; Zepeda, 1982). Family members are expected to help out around the house with household tasks such as cooking and caring for older children (Galanti, 2003). Both Berry (1999) and Jimenez (1995) describe the importance of preventing exposure to cold air, cold floorings, or cold liquids during this time. Should cold enter the body through any of the previously mentioned methods, it was believed that it could cause the monthly blood flow to come all the time, dry up milk supply, or result in foot pain or swelling of the stomach (Berry, 1999; Jimenez, 1995).

Another study conducted by Zepeda (1982) examined maternal care practices and umbilical cord binding of Hispanic mothers in Southern California. A total of 30, mainly multiparous, women of Mexican and Central American descent were interviewed. Zepeda (1982) found that 17 of the mothers practiced abdominal binding (*fajas*), 28 mothers did not fold the diaper down correctly to allow air to dry the umbilical cord, and the majority of mothers practiced *La cuarentena* (although 24 mothers who had other older children in the home found it difficult to follow the *cuarentena* strictly). Sources of health information were listed as no one (16 participants), relatives such as a mother, mother-in-law, or sister (10 participants), and neighbors (4 participants). This purposive sample had an average age of 25.9 years, was mainly

Spanish speaking, had an average of three children living in the home (including the newborn), and had an average period of U.S. residence of 5.17 years with a mode of 1 year. This study included little generational information (readers are to assume that study participants are either foreign-born or have traveled outside the U.S., since they had lived in the U.S. for approximately 5 years) and lacked any information on country of birth. Although the Zepeda's (1982) study is outdated, it clearly shows that Mexican-American women modified the custom of binding and observing *La Cuarentena* to conform with individual preferences and family practices.

Generational Status and Acculturation

Many researchers have looked at generational differences and acculturation differences in health care of pregnant women that may account for the worsening rates of preterm birth and low birth weight seen in later generations of Mexican-American women. For example, past researchers have implicated increases in the use of cigarettes, alcohol, and drug use during pregnancy for later generations of pregnant Hispanic women that (Jones, Hughes, & Bond, 1999; Lara, Gamboa, Kahramanian, Morales, & Hayes-Bautista, 2005). Other studies have shown that first-generation Mexican women have a more nutrient-dense diet than second (or subsequent) generations of Mexican women (Guendelman & Abrams, 1995). Of utmost importance when looking at generational status and acculturation differences is considering the fact that although acculturation seems to be diminishing many Mexican cultural traits, many behaviors continue to persevere through the sharing of oral traditions and folk practices in many areas of everyday life, including health maintenance (Lopez, 2005).

One survey study conducted by Lopez (2005) looked at the continuation of traditional folk beliefs and practices among a group of highly assimilated Mexican-American graduate and undergraduate social work students in southern California (approximately two hours from the

Mexico border). Lopez (2005) surveyed a total of 70 graduate and undergraduate Mexican-American students matriculating through a social work program. For this sample, a total of 53% of the participants reported having family in both the United States and Mexico and another 11% who reported family members primarily living in Mexico. The author shows that although the majority of women (77%) were born in the United States, 76% of the participants continued to have interactions with extended family members that were living both in the United States and Mexico. An overwhelming 87% of this population described themselves as tied to practicing Mexican traditions. This figure is noteworthy, considering that 74% of their sample self-identified as either upper or middle class Mexican-Americans. The sample in Lopez's (2005) study was relatively young (mean age of 28.8) and considered themselves to be healthy (63%).

Smoking, Alcohol and Substance Abuse

Several studies have documented that subsequent generations of Hispanics engage in increased rates of smoking, alcohol, and substance abuse (Jones, et al., 1999; Lara, et al., 2005). Jones et al. (1999) conducted a study with 382 English and Spanish speaking Hispanic women between the ages of 13 and 44 years old who frequented local community prenatal clinics. An overwhelming 89% of the sample in Jones et al. (1999) study was first generation immigrant to the United States. Jones et al. (1999) findings demonstrate that first generation immigrant women continue to use less tobacco, alcohol and drug use since less than 1% of the sample reported using these substances. Jones et al. (1999) reports that changes seen in other studies of the increase use of tobacco, alcohol, and drugs in subsequent generations may occur in response to increased stress in these communities (Jones, et al., 1999).

Another study conducted by Zambrana et al. (1997) found women who had higher acculturation status, higher levels of prenatal stress, higher levels of substance abuse, and lower

social support from family and friends had higher correlations with preterm delivery rates (Zambrana, et al., 1997). This study consisted of a large sample of 366 Mexican American women and 545 Mexican immigrant women between the ages of 17–35. Mexican American women were defined as women who had been born in either the U.S. or Mexico but who had lived in the U.S. since at least 10 years of age. Face-to-face interviews were conducted in community-based prenatal clinics in Los Angeles, California. Zambrana et al. (1997) found that 19% of the Mexican immigrant population reported ever using alcohol vs. 30% for Mexican Americans. The response rate for Mexican immigrant women who reported ever using drugs was 2% vs. 7% for Mexican-American women (Zambrana, et al., 1997).

Nutrition, and Dietary Patterns

Nutritional changes among second and subsequent generation Mexican immigrants have also been implicated in worsening pregnancy outcomes (Hunt, et al., 2004).

Data analyzed from the Hispanic Health and Nutrition Examination Survey included 1,373 Mexican-American women ages 16 to 44 living in the Southwest (Guendelman & Abrams, 1995). Diet of first generation pregnant women is said to be rich in protein; vitamins A, C, and folic acid; and calcium (Guendelman & Abrams, 1995). These results remain true for second-generation Mexican women who come from higher socioeconomic levels (Guendelman & Abrams, 1995). In addition, Guendelman and Abrams (1995) states that Mexican women from subsequent generations have diets whose nutrient intake resembles that of White non-Hispanic women (Guendelman & Abrams, 1995).

A recent study conducted by Athern, et al. (2004) investigated the nutritional practices of Hispanic pregnant and postpartum mothers living in Washington, Ohio, and Colorado. Focus groups were held with a total of 69 women (57 pregnant and 12 postpartum) that investigated

Hispanic women's food safety attitudes and beliefs that affect food safety selection, preparation, handling behaviors, sources of food safety information, motivators, and barriers to adopting current food service recommendations. This study showed that Hispanic women were not aware of risky food consumptions, such as consuming soft Mexican cheeses, uncooked hot dogs, or cold lunch meats that could affect the health of the developing infant through transmission of pathogens such as *L. Monocytogenes*, *T. gondii*, and *Salmonella* (Athearn, et al., 2004). However, women in this study showed an interest in obtaining valid information that might cause them to change their behaviors. This study clearly demonstrates that Hispanic women may be engaged in practices during their pregnancies that are deemed dangerous to the developing fetus. It is unfortunate that this study was not conducted in states closer to the Mexican border (such as California, Arizona, New Mexico, and/or Texas). Participants living in these states may have an opportunity to travel to visit family members living in Mexico, consuming food products made in Mexico and even bringing contraband food products back into the U.S.

Gaps in the Present State of the Literature

Much of the research that addresses health beliefs and practices of the Hispanic population in the U.S. focused on outdated information that may no longer apply to women living in southwest Texas. For example, most of the common Hispanic cultural beliefs that were listed such as *envidia, mal ojo, mal aire, susto,* etc. had little current empirical research studies that this researcher could locate. Yet, several recently published texts (Galanti, 2003; Romero, 2008; Spector, 2000) continue to disseminate these beliefs as common among the Hispanic population.

The current state of the science demonstrates that we know little about the current beliefs and practices specific to Hispanic women of Mexican ancestry of childbearing age. Although a

vast number of studies document changes occurring in the health habits of subsequent generations of Hispanics (Franzini, Ribble, & Keddie, 2001; Hunt, et al., 2003; Jones, et al., 1999; Lara, et al., 2005; The Latino paradox," 2003), they are not qualitative studies that can attempt to understand the health beliefs and practices of this group. The proposed study is a hallmark study that attempts to understand this process from the emic perspective of Hispanic women of Mexican ancestry living in southwest Texas.

Furthermore, we know even less about known TM/CAM beliefs and practices in the prenatal period, antenatal, and postnatal periods for this population. Several methodological errors were found in the literature that will be addressed. Among these flaws are chosen study locations that are not representative of Mexican-Americans living in southwest Texas, lack of distinct country of origin for foreign-born Hispanics, lack of identifiable Hispanic subgroups, socioeconomic variables representative of more affluent groups, lack of focus on TM/CAM during pregnancy and childbearing for Hispanic women.

Study Location

In general, Hispanics tend to live mainly in the southwest portion of the U.S (Guzman, 2001). The Southwest has a higher concentration of Mexican-Americans, yet few studies focused recruitment in Texas and the southwest. Palinkas and Kobongo's (2000) study investigated TM/CAM practices in a community clinic setting was conducted in San Diego, California. Burk and colleagues (1995) examined prenatal care in the context of culturally sensitive prenatal care and identified prominent cultural beliefs and health behaviors common among pregnant-Mexican-American women living in the Rio Grande Valley area (Burk, et al., 1995). The majority of the studies reviewed were conducted with populations in Connecticut, New York, New Jersey, Ohio, Colorado, Washington state, and Canada (Athearn, et al., 2004;

Factor-Litvak, et al., 2001; Pasky, 1979; Snow & Johnson, 1977). Although these states are populated by Hispanics, they tend to be mainly from Puerto Rican, Central American, or Dominican Republic origins (Guzman, 2001). Therefore, it is difficult to see if living in closer proximity to Mexico and other family members who live in Mexico has any influence on the beliefs and practices the women choose to ascribe to and implement.

Lack of identifiable Country of Origin and Foreign vs. U.S. Born Information

Another problem is that these studies often did not differentiate among foreign- and U.S.-born Hispanics (Palinkas & Kabongo, 2000; Wang, et al., 2005). This is a significant problem since Hispanics who immigrate to the U.S. may be more likely to engage in more traditional practices and hold more traditional Hispanic beliefs when compared to their U.S.-born counterparts (Gould, et al., 2003; Lagana, 2003). The lack of properly identifying and reporting the Hispanic country of origin, if foreign-born, and the length of time living in the U.S. makes it especially difficult to see if research participants were recent immigrants or long time residents of the U.S.

Socioeconomic Variables

Several authors reported much higher affluence of Hispanic respondents. This is shown by the higher incidences of the Hispanic sample having private health insurance and incomes greater than $50,000 a year (Cushman, et al., 1999; Hollyer, et al., 2002; Palinkas & Kabongo, 2000; Wang, et al., 2005). From these findings, it is difficult to assume that undocumented Hispanics were included in the samples. It has been previously documented that the average income of undocumented Hispanics is approximately $300 a week or $15,000 a year (calculating for 50 weeks per year) (Kochhar, 2005). However, this figure is lower among women since it is reported that 74% of undocumented women make less than $300 a week (or approximately

$14,950) and over one third of undocumented women make less than $200 a week or approximately $9,950 a year (Kochhar, 2005). These figures are considerably lower than the 2005 federal poverty guidelines of $16,090 per year for a family of three and $19,350 for a family of four (Kochhar, 2005).

In the United States, health insurance is often tied into an individual's employment status (Lopez, 2005). Several authors report large segments of their sample as having private health insurance (Cushman, et al., 1999; Hollyer, et al., 2002; Palinkas & Kabongo, 2000; Wang, et al., 2005). A large portion of the Hispanic population works in the low-paying, service-oriented sector of our economy that usually does not offer health insurance (Ramirez & De La Cruz, 2002). As a result, a large segment of Hispanic families are living below the federal poverty line (Ramirez & De La Cruz, 2002). Also, undocumented individuals seldom have health insurance and often have difficulties accessing health care due to governmental cutbacks aimed at reducing expenditures for this population (Pearce, 1998). These facts may make it difficult for Hispanics to access western health care due to cost incurred and may lead the person to seek TM/CAM practices which are often less expensive and more available than biomedical care (Bodeker & Kronenberg, 2002). Therefore, studies that report large percentages of their study samples as having at least one type of health insurance such as the studies conducted by Kronenberg Cushman, Wade, Kalmuss, & Chao (2006) (95%) and Chao, Wade, Kronenberg, Kalmuss, & Cushman (2006) (78%) may not be a representative sample of the Hispanic population living in the United States.

Lack of Focus on TM/CAM and Pregnancy

Lagana (2003) and Pearce (1998) conducted qualitative studies that focused on Hispanic pregnant women; however, these studies show methodological problems. For example, Pearce

(1998) did not include Hispanics of Mexican origin in the sample; rather, the sample was representative of women from Puerto Rico, and the Dominican Republic, as well as one Central American. Lagana's qualitative study of women's pregnancy experience included women who were ages 17 to 60 years old, but did not include women who were currently pregnant. Rather, Lagana (2003) relied solely on recollection of pregnancy health beliefs and practices that may have occurred years earlier.

There is a poignant lack of pregnant Hispanic women in other studies and samples (Bagozzi, 2003; Factor-Litvak, et al., 2001; Palinkas & Kabongo, 2000; Pasky, 1979; Upchurch & Chyu, 2005; Upchurch, et al., 2007). Three research review articles describe a host of studies reviewed that looked at general TM/CAM use during pregnancy, TM/CAM use for nausea/vomiting, and TM/CAM use for low-back pain during pregnancy (Fugh-Berman & Kronenberg, 2003; Hollyer, et al., 2002; Wang, et al., 2005). However, none of the listed practices and beliefs pertained to those known to be practiced by pregnant Hispanic women. Therefore, researchers should question if the same definitions of TM/CAM hold true for this group.

Health care utilization in the U.S. is a multidimensional concept that should include both biomedical and TM/CAM practices. This is especially true for ethnic minorities who are more apt to seek these services due to lower cost and familiarity with these services. Many researchers did not evaluate generational status and few looked at differences in country of birth. The tendency to look at the entire Hispanic population as one homogeneous group with a set of common health beliefs and practices was evident in this literature review. Although this may be attributed to small sample size, researchers failed to provide justification for this trend.

Further research is needed to better understand ethnic differences in TM/CAM beliefs and practices. This is especially true among pregnant women since they have been relatively absent from previous work. Additional research in this area may lead to a better definition of TM/CAM practices among Hispanic women in general. This definition can be grounded in the most current practices of Hispanic women living in the southwest. It is the belief of this researcher that this goal can be accomplished by addressing the research questions in the proposed study.

The majority of the studies covering TM/CAM, the health beliefs and practices that were found were survey studies (Palinkas & Kabongo, 2000; Pasky, 1979; Snow & Johnson, 1977; Upchurch & Chyu, 2005; Upchurch, et al., 2007). Only two studies used qualitative methodology; however, their focus was not on TM/CAM during pregnancy but rather, overall health practices (Lagana, 2003; Pearce, 1998). Another deficiency that was found is the lack of information regarding the decision process that Hispanics use in adopting, altering, or rejecting TM/CAM practices. This may be important if health care practitioners wish to incorporate biomedical health knowledge with TM/CAM practices and hope to modify poor birth outcomes among subsequent generations of Hispanic women.

Many of the qualitative studies that looked at pregnancy-specific health beliefs and practices failed to include current TM/CAM beliefs and practices and/or were more concerned with the treatment of illnesses which pregnant women may not have. Whenever TM/CAM practices were reported for Hispanics, a focus on an illness paradigm and not on protective and health promoting factors was prevalent in the research (Cushman, et al., 1999; Hollyer, et al., 2002; Palinkas & Kabongo, 2000; Wang, et al., 2005). Perhaps Rodriguez's (1993) description of a broader definition of health can be applied to pregnant women. Therefore, health beliefs and

practices should be viewed more holistically and not as “complementary and alternative” for this group.

There is a need to study the process of decision-making in relationship to pregnancy health beliefs and to understand how TM/CAM practices are intertwined with conventional biomedical medicine. In particular, the importance of understanding individuals’ perception and behavior toward TM/CAM health prevention and health protective practices needs to be further researched (Upchurch, et al., 2007). This researcher believes that information gained from this study can better frame health education programs for Hispanic childbearing women of Mexican ancestry that maintain their cultural heritage.

Researchers have had a difficult time identifying factors responsible for the generational and acculturation differences in the samples of health-related behaviors mentioned above–even in light of research being done for more than two decades (Franzini, et al., 2001; Hunt, et al., 2003; Jones, et al., 1999; Lara, et al., 2005; The Latino paradox," 2003). Chosen health practices are often based on cultural values deemed important by the person. Cultural values are difficult to quantitatively measure and thus lend themselves well to qualitative inquiry. This study aims to identify cultural factors, beliefs, and/or practices relating to TM/CAM beliefs and practices for pregnant Hispanic women of Mexican ancestry living in the southwest. The importance of studying these cultural concepts is vital so that health care providers can better understand and care for this group of childbearing women. Future studies can use this information to not only increase the understanding of these practices, but also to support the positive culturally based health behaviors that foreign-born Hispanic women bring to the U.S.

There is a need to study cultural inheritance within a qualitative framework. For example, horizontal transmission of cultural knowledge can also apply to knowledge passed

from friends, other family members, or other peers. Also, the oblique pathway of cultural transmission where pregnancy-specific knowledge is transferred from one to many through a variety of printed health literature and public service announcements needs to be assessed to see if pregnant Hispanic women are following recommendations made by health professionals and through public health campaigns.

CHAPTER III: METHODOLOGY

Introduction

This chapter discusses the philosophical and theoretical basis for the method chosen to conduct this research. The aims of this study were to: a) identify and describe pregnancy-specific health beliefs and practices in pregnant Hispanic women currently living in the southwest United States, b) identify and describe the purpose of pregnancy-specific health beliefs and practices in pregnant Hispanic women currently living in the southwest United States, c) identify sources of health information regarding pregnancy-specific knowledge for pregnant Hispanic women living in the southwest United States, and d) identify, describe, and explore the decision-making process that pregnant Hispanic women undergo in choosing to adopt, alter, or reject pregnancy-specific health information.

Research Design

The most appropriate research method to address the study aims was grounded theory (GT). GT helps researchers understand social processes surrounding social interactions–such as pregnancy. It offers an inductive method of formulating theory about a phenomenon not well-described, such as a model of pregnancy-specific health beliefs and practices among Hispanic women of Mexican ancestry.

Grounded theory (GT) is philosophically rooted in sociology. GT is a qualitative research method that helps researchers understand how a group of people defines their reality through social interactions (Corbin & Strauss, 2007; Hutchinson & Wilson, 2001; Strauss & Corbin, 1998). GT is concerned with formulating theory for a phenomenon that has not been conceptually developed well enough to identify variables (Corbin & Strauss, 2007; Stern, 1980; Strauss & Corbin, 1998). GT approaches a problem from the ground up (from practice to theory)

using an inductive process, versus the traditional theory verification research methods where a linear (from theory to practice), deductive process predominates (Corbin & Strauss, 2007; Glaser, 1998; Hutchinson & Wilson, 2001; Strauss & Corbin, 1998).

Background of Method

GT was first developed in the 1960s by two sociologists, Barney Glaser and Anselm Strauss (Hutchinson & Wilson, 2001). Glaser and Strauss developed GT from the work of social psychologist George Herbert Mead and his student Herbert Blumer, who later coined the term symbolic interactionism (Blumer, 1969). Mead believes that human beings define themselves through social interactions with others by way of sharing social roles, expectations, and perspectives (Hutchinson & Wilson, 2001). Blumer later developed the following three classic premises of symbolic interactionism (Blumer, 1969): 1) human beings will act towards objects, institutions, situations, and other people, 2) the meaning is developed out of a social interaction that a person has with other human beings that are sharing the same experience, and 3) the meaning that people give to the act is changed by the interpretive process that occurs during the interaction.

Strauss and Corbin (2007; 1998) are known for the development of detailed instructions on how to conduct a GT project. Since this researcher is a novice in GT methods, the technique described by Strauss and Corbin (1998) and further developed and described by Corbin and Strauss (Corbin & Strauss, 2007) will be followed to construct a substantive theory.

GT involves the collection of data systematically gathered and analyzed through field research that involved observation and interviewing. The main object of GT is to arrive at a core category that describes the social process. A core category is described by Corbin & Strauss (2007) as the main idea or topic extracted from the data. The discovery of a core category is

made possible by the process of data coding during simultaneous data collection and analysis. This is accomplished by the use of the constant comparison method (Corbin & Strauss, 2007; Strauss & Corbin, 1998). In this study, the social process being studied is the decision-making process related to the use, alteration, or rejection of pregnancy-related cultural beliefs and practices. Strauss and Corbin (2007; 1998) state that GT methods lead to a unique understanding of social processes that can help develop a preliminary theory regarding this subject.

Constant comparison method is the primary method for data analysis in GT. Corbin & Strauss (2007) describe the constant comparison method as first beginning with open coding of interviews, then proceeding to the comparison of interviews, then to comparison of interviews with categories, and finally comparing category with category or construct with construct. Through this constant comparison, the basic properties of a category or construct are defined, differences between categories are illustrated, and relations among categories are clarified. This allows categories or constructs to emerge by allowing the researcher a method of searching for its structure, temporality, cause, context, dimensions, consequences, and relation to other categories (Corbin & Strauss, 2007; Strauss & Corbin, 1998).

The core category emerges from the data as the researcher analyzes the data and codes verbal text passages with descriptive phrases or words. Through peer debriefings, data coding is verified by another expert in this field and working hypotheses are generated as the data are being evaluated and noted in the analytical journal. The final goal of GT is to describe an emergent substantive theory pertaining to the process being investigated (Strauss & Corbin, 1998).

As data are collected and analyzed, they are integrated with saturation and theory synthesis (Corbin & Strauss, 2007; Strauss & Corbin, 1998). The theory that emerges from

doing grounded theory cannot be predicted or thought of beforehand (Corbin & Strauss, 2007; Strauss & Corbin, 1998). Key strategies used in GT are theoretical sampling, constant comparison, increasingly abstract consideration of data that leads to the discovery of a core category or basic social process that describes the human interaction (Corbin & Strauss, 2007; Strauss & Corbin, 1998).

Underlying Assumptions of Grounded Theory

In an attempt to move away from theory testing that predominated social science research and the positivist movement, Glaser and Strauss (1967) turned towards the inductive, theory generating methods of GT rather than the deductive research methods. Corbin and Strauss newer edition (2007) was chosen since it offered detailed instructions on how to conduct a GT project that helped in the development of a theory.

The following are the underlying assumptions of GT (Eaves, 2001):

- Inquiry is structured by discovery of social and psychosocial processes
- Data collection and analysis are performed simultaneously
- Both the processes and products of research are shaped from the data rather than from preconceived logically deduced theoretical frameworks
- Analytic processes prompt discovery and theory development rather than verification of pre-existing theories
- Theoretical sampling refines, elaborates, and exhausts conceptual categories
- GT methodology is not only aimed at studying processes, but also assumes that making theoretical sense of social life is itself a process
- The systematic application of GT analytical techniques leads progressively to more abstract analytic levels

Since the purpose of GT is to construct theory from raw data, the researcher needs to obtain solid, rich, accurate data to completely develop the concepts and the emerging theory. Data collection is influenced by the analytical interpretations and discoveries that the researcher makes. The researcher is guided by the emerging theory to continue data collection until the theorist can adequately explain all dimensions of the emerging process and is able to formulate a theory.

Setting

This research was conducted in a community clinic located in the inner city of a large metropolitan area of southwest Texas. The area that surrounds the community clinic is predominantly of Mexican-American origin. This part of San Antonio has a Mexican-American population greater than 95% that speaks a language other than English in approximately 78% of the homes (U.S. Census Bureau, 2000). In addition, the area has a higher percentage (24.8%) of families living at or below the poverty line compared to the national average of 9% (U.S. Census Bureau, 2000). The vicinity has a large number of locally owned Mexican restaurants and small family-owned businesses (U.S. Census Bureau, 2000). Family income for the area is approximately $16,000 dollars lower than the national average and has a higher family size of 3.96 vs. the national average of 3.14 (U.S. Census Bureau, 2000). The majority of the housing in the area was built prior to 1960, has a median value of $36,400 and is predominantly owner-occupied (U.S. Census Bureau, 2000).

Sampling and Recruitment Strategies

Sample

A total of ten participants were recruited from the obstetric/gynecology (OB/GYN) department at a local community clinic. Five additional participants were recruited from outside

the clinic through the use of snowballing techniques. Participants were selected based on a purposeful sampling strategy described by Corbin and Strauss (2007). Since little current information exists on the subject and the researcher was interested in learning about pregnancy-specific practices, sampling was limited to self-identified Hispanic women of Mexican origin who were pregnant, age 18 or over, and met the following inclusion criteria.

Inclusion Criteria

- Self-identified, pregnant or postpartum women
- Age 18 or over
- First, second, and third trimesters of pregnancy
- Able to speak and read in English or Spanish
- Consent to audio recording of interview

Recruitment

Most of the participants were recruited from the community clinic's OB/GYN department using a convenience sampling technique. All women who met the inclusion criteria were approached to participate in the study. This clinic serves a variety of patients with different funding mechanisms such as CHIP prenatal, Medicaid, private insurance, and uninsured. All of the participants recruited from the OB/GYN clinic were recruited on-site by the researcher after their prenatal visit.

The last five participants were chosen from the community at large through snowballing techniques. This researcher wanted to maximize any differences in beliefs and practices between participants attending the prenatal clinic and participants in the community. Further recruitment techniques centered on locating women who were in all three pregnancy trimesters and from a maximum variety of generational statuses to maximize the amount of pregnancy-

specific information that was gathered. The decision to continue recruitment was done in conjunction with two members of the dissertation committee who served as peer reviewers during data collection.

Data Collection

A brief chart review was conducted by the researcher before contact was made with the potential participant to ensure that the patient qualified for the study based on the inclusion criteria. The chart review was based on Hispanic surname, date of birth, and identifying the gestational age of the pregnancy at the time of the interview from the woman's last menstrual period date available on the clinic chart. Potential participants recruited from the community health clinic's OB/GYN department were approached by the researcher as they were being dismissed by the clinic staff and had completed the clinic's transactions for the day.

After the researcher had reviewed the study information with the potential participant, any questions that arose were answered by the researcher. Women desiring to participate were prescreened for the inclusion criteria and signed the consent form (see Appendix A). Most of the women who agreed to participate in the study and met the inclusion criteria wished to be interviewed immediately after their clinic appointment with a face-to-face interview.

A total of 5 participants who qualified for the study refused participation. Reasons for refusal were listed as having limited time to complete the interview because of childcare issues such as needing to pick up children from school on time, transportation issues such as having a family member or friend coming to pick them up at a set time that could not be changed, and/or simply lacked the interest to participate in the study.

Interviews

Interviews were conducted by the researcher in the participants preferred language and lasted approximately one hour. All interviews were audio recorded with a digital recorder. A total of 16 participants were interviewed. One participant could not answer the research questions and was eliminated from data analysis. Ten interviews were conducted by the researcher on-site at the OB/GYN clinic. These interviews were conducted by the researcher immediately after the patient's appointment but prior to the patient leaving the clinic. An unoccupied office or an unused conference room was used to conduct the interview.

One participant was interviewed twice and chose to be interviewed during her lunch breaks at work. Four participants chose to be interviewed in their homes. One participant chose to be interviewed at a coffee house in her neighborhood. The time, date, place, and language of the interviews were all chosen by the participant.

Data collection and interviews continued until there was no new data emerging for theory construction. At the end of the interview, participants were asked to complete the demographic form. A small incentive, in the form of a $10 Wal-Mart gift card, was given to all participants to thank them for their time and effort.

Demographic Data

Demographic information (see Appendix D) was collected in order to fully describe the participants and for maximum variation of data. The following demographic data were collected: date of birth; zip code; marital status; country of origin; highest level of education completed; last menstrual period; obstetric history to include number of total pregnancies (gravida), number of live births (para), number of abortions (spontaneous and terminations), number of living children; household composition; age when immigration to U.S. took place if

participant was not born in the United States; length of time living in the United States (if participant had lived outside the U.S); and place of residency.

In addition, a generational genogram (see Appendix D) was collected to determine the pregnant woman's generational category. The designation of first generation was given to women who were born outside the U.S. and immigrated to the United States. Second generation designation was given to women who were born in the U.S. but who had at least one parent who was born outside the U.S. Third generation designation was given to women whose parents were both born in the U.S. but had at least one grandparent that was born outside the United States. Fourth and subsequent generation designation was given to women whose grandparents were both born in the U.S. The generational genogram was completed at the end of the interview so that it minimized any interference with the face-to-face interview. The researcher was responsible for documenting the responses in the demographic and generational genogram forms. Two participants had difficulty completing the generational genogram since they did not know the father of the baby's family's information. When this occurred, participants were asked to give their best educated guess and fill in the information from what they did know about the father of the baby's family.

Interview Questions

Interview questions moved from general to specific in order to gather data that was fundamental to grounded theory such as dimensions, phases, properties, strategies, consequences, and context of behavior (Corbin & Strauss, 2007; Strauss & Corbin, 1998). The following is a sample of a beginning question:

- "Tell me how you take care of yourself during your pregnancy."

Subsequent questions were developed as the theory evolved and were guided by the emerging analysis (Corbin & Strauss, 2007; Strauss & Corbin, 1998). Probing questions were used to illicit further information from participants. Probing questions were focused on the causes, contexts, contingencies, consequences, covariances, and conditions of the situation that the participant described. For example, probing questions regarding types of care that were used in the later interviews were:

- "Tell me more about how you made the decision to (follow, change, or reject) the advice that you were given"

Corbin and Strauss (2007) describe the potential need for the researcher to ask different participants different questions as the analysis is progressing and the theory is evolving. This was accomplished by the use of additional questions and revisions of the interview guide. Questions were reviewed by two members of the dissertation committee prior to utilizing them in the interviews.

If the woman discussed information regarding health beliefs or practices, further probing questions were used that were grounded in what the participant shared with the researcher. The following are sample probing questions that were used:

- "Can you tell me more about [a specific beliefs and/or practice the woman is engaging in]?"
- "Can you tell me more about your decision to [follow, change, or reject] the advice that you were given?"

Member Checking

The researcher contacted one participant for two a second interview in order to clarify information that was said in an earlier interview and to see if changes occurred in the way this

participants cared for herself as she progressed through her pregnancy and into the postpartum period.

A total of five participants were selected at the end of their interviews for the purpose of member checking. Member checking was performed in person after the face-to-face interview was conducted and served to clarify information and validate the process and concepts that arose in the analysis of the data and aided in the discovery process. Of the 15 participants five were selected for member checking. This was done after the last five interviews were conducted. Immediately, after the interview, participants were shown the model of the theory and were given a short discussion that described each stage in the process of *Managing my Pregnancy*. All five participants stated that the model seemed to accurately describe their experience and agreed with the core category and the descriptions of the three stages. The other eleven participants could not be located to perform member checking due to disconnected telephones and/or incorrect mailing addresses. None of the participants withdrew from the study.

Data Redundancy

The researcher let the data and the emerging theory focus all interview questions and the type of participants that were recruited. For example, the researcher noted that no participants represented the first trimester in pregnancy, therefore recruitment focused on this criterion until it was met. Interviews continued until data redundancy was reached and no further new data was collected, a core category emerged from the data, and a theory had been developed that was meaningful and encompassed all aspects of the phenomenon. Data redundancy was reached after the first ten English and three 3 Spanish interviews were conducted. The three Spanish interviews did little to add to the emerging theory but did expand the data on family traditions.

An additional two interviews were conducted in order to ensure that data redundancy had been achieved.

Data Management

All audiotapes were transcribed in the original language and de-identified. A code number and fictitious name were given to the participant by the researcher. Participants were assured of confidentiality and all data was protected by maintaining written data separate from any identifying information. Only the researcher knew the true identities of the participants and the researcher was the only one that had access to the identifying information for the participants. Other members of the research team saw data after it had been transcribed and verified by the researcher and a pseudonym and code number had been assigned to each participant.

Field Notes

Immediate recording of data is critical to the success of the grounded theory generation. Field notes are described by Marshall and Rossman (2006) as additional notes that the researcher completes that describes the researcher's observations about the setting. Field notes were written immediately after the interview into the field note journal by the researcher. An identifying heading was added that included the place, date, time of the interview, and the participant's code number (Munhall & Boyd, 1993). Field notes provided important information regarding the interview, the setting, or any other important information that arose during the interview. Field notes also provided a way for the researcher to note emerging analytical insights about the behavior of the participant or observations that aided in the interpretation of the findings (Marshall & Rossman, 2006).

Memoing or Analytical Journaling

Throughout the study, data analysis and theory formulation continued with the aid of memoing. Memoing is a technique done in conjunction with data collection and analysis. Memoing was used by the researcher to quickly and spontaneously write down ideas that captured the initially vague and changing connections between data (Hutchinson & Wilson, 2001; Munhall & Boyd, 1993). Memoing, also called analytical journaling, was done by the researcher to show the decision-making process regarding analytical decisions that were taken in the conduct of the research (Marshall & Rossman, 2006). For example, the researcher was unclear as to how women made their health care decisions; the researcher wrote analytical notes describing their difficulties in describing this process. This aided the researcher in investigating intuition and cognitive decision making styles.

Memoing was used to provide an audit trail for other researchers to use and verify the soundness of the analytical decision-making while the research was conducted (Marshall & Rossman, 2006). Meetings with the dissertation chair and other members of the committee were scheduled periodically to serve as peer review of the emerging theory. Notes regarding these meetings were also kept by the researcher and served to guide theory construction by offering the researcher different points of view from which to approach the data.

Reflective Journaling

Daily reflective journals were kept by the researcher to record the researcher's personal feelings and reflections so as to sustain the heightened level of awareness required while conducting this qualitative study. This technique was aimed at assisting the researcher in bracketing values that may inadvertently influence the emerging theory (Strauss & Corbin, 1998). Journaling is another way in which the researcher can record personal feelings and

concerns and reflect on emerging ideas, and provides a medium for "thinking aloud" that can be traced. Entries into the reflective journal relate to information the women did not mention in the interviews such as concerns regarding lead exposure, theory formulation, and lack of attendance at prenatal classes.

Data Analysis

All the Spanish interviews were analyzed in Spanish. In addition, one member of the dissertation committee who is bilingual helped analyze the Spanish transcripts. Once the coding was completed, concepts emerged, and a core category had been determined, the researcher translated the findings for non-Spanish speaking readers. This method served to clearly show advantages over translating all the interviews since it keeps the majority of the phenomenon in the participant's own words for the longest period of time, thus serving to decrease translation errors and errors of omission.

Open Coding

Open coding refers to the analytical process that occurs when coding raw data into concepts and their associated properties and dimensions (Strauss & Corbin, 1998). Open coding is a process in which the analyst uncovers, names, and develops concepts or categories through opening up the text and exposing the thoughts, ideas, and meanings contained therein (Strauss & Corbin, 1998). Subsequent levels of open coding involved more abstract levels of analysis and result in grouping of items called categories (Strauss & Corbin, 1998). Categories and subcategories are described by Strauss and Corbin (1998) as important because they enable the researcher to reduce the number of open codes. Categorizing can also potentially explain and predict by describing attributes related to the codes (Strauss & Corbin, 1998). Sources of

categories are the raw data and known categories found in the literature (Strauss & Corbin, 1998).

Properties of categories are described as general or specific characteristics or attributes of a category (Strauss & Corbin, 1998). Dimensions of a category represent the location of a property along a continuum or range (Strauss & Corbin, 1998). Strauss and Corbin (1998) describe the importance of qualifying a category by specifying its particular properties and dimensions because the researcher can begin to synthesize patterns along with their variations.

Open coding will be conducted using a line-by-line analysis which usually yields the most data. This was accomplished using highlighting function and the use of Microsoft Word software. Concepts the researcher looked for related to thoughts, ideas, and meanings within the text of the raw data. Portions of each transcript were compared for similarities and differences as well as compared to other transcripts (Strauss & Corbin, 1998). Examples of open coding for Linda's interview include the following text that was open coded under the food & water category: "I don't eat heavy stuff; I get plenty of water; I still eat it, but not as much as I used to; my eating habits are different; I used to drink more soda; I drink a lot of water; my diet, I kind of tried to change it; I haven't had any problems with any foods that I eat; The sodas, not to drink as much; And of course to eat a lot of vegetables and stuff" .

Axial Coding

Axial coding is defined by Strauss and Corbin (1998) as a process that relates categories to their subcategories by connecting different categories at the level of properties and dimensions. The process of axial coding is to rearrange the data that was fractured during open coding into a meaningful explanation of the phenomenon (Strauss & Corbin, 1998). Axial coding offers the researcher a way to relate structure with process. By answering questions such

as when, where, why, and how, the researcher can see the structures that show how problems, issues, happenings, or events pertaining to a phenomenon are positioned or occur (Strauss & Corbin, 1998). The next step is where the researcher combines structure with process that will illustrate the complexity of life that surrounds the phenomenon. An example of an axial code is grouping all of the myriad dietary changes the participants spoke about and condensed them into the category of Trying to Choose Healthy Foods.

Selective Coding

Strauss and Corbin (1998) describe selective coding as the process of "integrating and refining the theory" (p. 143). Selective coding led to finding the core category. The use of memos was an integral part of this piece of the analysis since memos are used to code variables that are related to the central category. Memos in conjunction with categories and subcategories found through the process of open coding will be used to reassemble the data. This is accomplished by looking for the nature of relationships among the various categories and subcategories (Strauss & Corbin, 1998). Through selective coding, categories were interrelated into a larger theoretical scheme. This was accomplished by reducing data from many cases into broader concepts and sets of relational statements that explained what was happening with the phenomenon. Selective coding was used as the processes that lead to the emergence of a core category. An example of a selective code is grouping all of the physical interventions women did (Trying to Choose Healthy Foods, Going to the Clinic, and Being Carefully Active) and the psychological interventions (Controlling my Emotions) into Caring for Myself, which became the second stage in the process of Managing my Pregnancy.

Identifying a Core Category

Identifying a core category occurred through the use of the following coding families: causes, contexts, contingencies, consequences, covariances, and conditions. The use of coding families enhanced the description of the core category, which Strauss & Corbin say (1998) is achieved through the use of continuous reference to the data and rigorous analytical thinking.

A core category is described by Strauss & Corbin (1998), as having the following characteristics: 1) must be a central component, 2) reoccurs frequently in the data, 3) all other major categories can relate to it, 4) links the various data together, 5) explains much of the variations in the data, 6) gives implications for a more general or formal theory, 7) allows for the theory to grow in depth and explanatory power, and 8) permits maximum variation in analysis. The core category that met these criteria is *Managing my Pregnancy*.

The goal of obtaining a core category is to assist the researcher in finding a basic social process (BSP). BSP is described as a core category that clearly illustrates social processes as they change over time and in different contexts (Glaser, 1998). The identification of a core category allows the researcher to account for some of the variations in the phenomenon (Glaser, 1998).

Protection of Human Subjects

Prior to conducting any interviews, authorization was secured from the Institutional Review Board (IRB) at the University of Texas Health Science Center at San Antonio (Appendix B). Since the use of a transcriptionist was required, the transcriptionist was asked to sign a letter of confidentiality. All participants were given written and oral information about the study. The consent was available in Spanish and English and can be found in Appendix A.

Limits of Confidentiality

Because this research conducted some one-on-one interviews in the patient's home, the researcher was acutely aware of potential disclosure by the participant of illegal and reportable offenses such as child/elder abuse and neglect, illegal drug use, and/or other illegal activities. The participant was made aware through the consent process that such disclosure would have resulted in the termination of the interview and a report to the appropriate authorities. No illegal and/or reportable offenses were disclosed or discovered during the research process.

Safety Procedures

The main subject of this research was pregnant Hispanic women. Therefore, potential dilemmas were anticipated and planned for. These dilemmas included a) the ingestion of non-food substances (Pica), b) lack of prenatal care, and c) the discussion of anxiety producing topics during the interview if the participant is an undocumented immigrant. Procedures were implemented to ensure the safety of the participants. None of the participants disclosed Pica practices. All of the participants that were interviewed had previously initiated prenatal care. The researcher was aware that undocumented women may feel threatened that the researcher could have reported her undocumented status to U.S. authorities. For this reason, the participant's documentation status was not assessed during the interview. However, women freely volunteered their status during the interview.

Data Confidentiality and Safeguarding

In order to safeguard the data, all research materials and data were kept in a locked file cabinet in the research offices of the primary investigator at the University of Texas Health Science Center at San Antonio, School of Nursing. Although complete anonymity of the research participants could not be assured due to the qualitative nature of the research, all

identifying information was secured in a password-protected database that only the primary researcher had access to. Pseudonyms were used to identify individual participants in all publishable material and verbal transcripts. The true identity of the participants was only known to the primary researcher.

Rigor

Rigor is defined as the adequacy and appropriateness of the method to address the questions proposed and solidity of the research design (Morse, 2003). Without scientific rigor, findings obtained, even from good researchable questions, can become useless to other researchers and to the advancement of science. In conducting qualitative research, the interviewer is the primary instrument of data collection and must identify his or her preconceived ideas about the phenomenon in order not to contaminate the data or influence the participants. The technique of bracketing was used to identify and set aside the researcher's own thoughts, feelings, and beliefs about pregnancy beliefs and practices (Beck, 1994). The concepts of credibility (sometimes referred to as believability), transferability (sometimes referred to as generalizability), dependability, confirmability, and authenticity have been shown by Lincoln & Guba (1984) to be important factors to consider when one is designing a qualitative research study. Each of these ideas will be discussed in the following section.

Credibility/believability

Marshall and Rossman (2006) describe credibility as a method that shows that the research study was carried out in such a manner that assured the subject matter was properly identified and described. This researcher wished to investigate the pregnancy-specific health beliefs and practices of Hispanic women living in the southwest. To help ensure credibility/believability, the following techniques were implemented:

- The researcher conducted a thorough literature review before and after data collection.
- During the interview process, the researcher conducted interviews of approximately one hour with the study participants to offer a thick, dense, meaningful description of the phenomenon.
- A total of five participants were selected and shown the findings, final theory so that member checking could be completed.
- Revision of the findings was made as appropriate based on participants' feedback.
- Members of the dissertation committee performed peer review that added another dimension of credibility to this study.

Transferability/generalizability

Transferability is defined as the extent to which the research findings can be transferred or generalized to other settings, contexts, or populations (Marshall & Rossman, 2006). A rich description of the participants, the community, and their demographic data has been provided to assist readers with transferability.

Dependability

Dependability in a qualitative study rests on the researcher and refers to the researcher accounting for and describing the changing context and circumstances that are fundamental when one conducts qualitative research (Marshall & Rossman, 2006). In order to assure dependability, other members of the dissertation committee served as peer evaluators and were responsible for reviewing raw data, data analysis, and ensured similar coding and theoretical reasoning. An audit trail comprised of conversations regarding data analysis, chapter drafts, and transcripts

were kept as an audit trail for other researchers to use. In addition, a full description of the research methods used in this study has been provided to evaluate for dependability.

Confirmability

Confirmability refers to the extent that research findings can be confirmed or collaborated by other researchers (Marshall & Rossman, 2006). This can be accomplished through reflective journaling and providing a data audit trail. The researcher kept a reflective journal, process logs, and analytical logs during the conduct of the research. Process logs show auditors how the research was conducted and shows any changes that were made in the design or research process. This researcher kept analytical logs to show how analytical decisions were made regarding the data and show theoretical diagrams and memos regarding the analysis.

CHAPTER IV: FINDINGS

The findings presented in this chapter represent the core category or basic social process of *Managing my Pregnancy*. *Managing my Pregnancy* is a three-step process which includes the categories of *Gaining Knowledge, Caring for Myself,* and *Constant Monitoring*. *Managing my Pregnancy* is a process whose actions, interactions, and relationships are described in their context in order to address the specific aims of this study. The process of *Managing my Pregnancy* emerged from data gathered from this group of Hispanic pregnant and postpartum women.

The Sample

Sixteen participants were recruited for the study. Of these, 15 participants were able to complete the study. One interview was eliminated from data analysis because the participant had difficulty answering the research questions. In addition, one participant was interviewed three times. This produced a total of 17 face-to-face interviews that were used for data analysis. The findings described were derived from a constant comparative analysis of these 17 verbatim transcriptions, demographic questionnaires, field notes, open code notes, theoretical notes, diagrams, and operational notes. Table 1 offers a full description of the participants. Pseudonyms were used to ensure confidentiality of the participants.

Demographic Data

The mean age of the participants in years was 27.1 with a range of 19 to 36. The mean educational level was 11 years with a range from 7th grade to a baccalaureate degree. One of the participants, Tina, was enrolled in graduate school at the time of the interview. Ten of the participants had Texas Medicaid and/or Children's Health Insurance Program (CHIP) prenatal for health insurance. The remaining five participants did not qualify for Medicaid and reported

Table 1.

DESCRIPTION OF THE PARTICIPANTS

Participant	Brief Description of Study Participant
Linda	A 21-year-old, primipara. She was born in Mexico where she lived for 11 years. She's lived in the U.S. for a total of 10 years. She was interviewed a total of three times at 19 and 29 weeks gestation and 2 months postpartum. The interviews were conducted in English.
Susana	A 22-year-old, primipara. She was born in the U.S. and has lived in the U.S. all her life. She was interviewed once at 28 weeks gestation. The interview was conducted in English.
Flor	A 20-year-old, primipara. She was born in the U.S. and has lived in the U.S. all her life. She was interviewed once at 20 weeks gestation. The interview was conducted in English.
Diana	A 31-year-old, gravida 4, para 3. She was born in the U.S. and has lived in the U.S. all her life. She was interviewed once at 15 weeks gestation. The interview was conducted in English.
Tina	A 29-year-old, primipara. She was born in the U.S. and has lived in the U.S. all her life. She was interviewed once at 31 weeks gestation. The interview was conducted in English.
Maria	A 36-year-old, gravida 2, para 1. She was born in Mexico where she resided for 19 years. She has lived in the U.S. for 17 years. She was interviewed once at 24 weeks gestation. The interview was conducted in Spanish.
Ali	A 25-year-old, gravida 4, para 3. She was born in Mexico where she lived for 23 years. She has lived in the U.S. for 2 years. She was interviewed once at 26 weeks gestation. The interview was conducted in Spanish.
Georgina	A 32-year-old, gravida 2, para 2. She was born in Mexico where she lived for 17 years. She has been living in the U.S. for 15 years. She was interviewed once at 4 weeks postpartum. The interview was conducted in Spanish.

Table 1. (continued)

DESCRIPTION OF THE PARTICIPANTS

Participant	Brief Description of Study Participant
Carmen	A 19-year-old, gravida 1, para 1. She was born in the U.S. and has never lived outside the U.S. She was interviewed once at 10 months postpartum. The interview was conducted in English.
Natalia	A 28-year-old, primipara. She was born in the U.S. She has never lived outside the U.S. She was interviewed once at 18 weeks gestation. The interview was conducted in English.
Soniku	A 30-year old, gravida 7, para 6. She was born on an American air base in Japan where she lived until she was five years old. She was interviewed once at 41 weeks gestation. The interview was conducted in English.
Raquel	A 30-year old, gravida 6, para 4. She was born in the U.S. She has never lived outside the U.S. She was interviewed once at 40 weeks gestation. The interview was conducted in English.
Inez	A 23-year old, primipara. She was born in the U.S. She has never lived outside the U.S. She was interviewed once at 6 weeks gestation. The interview was conducted in English.
Carolina	A 31-year-old, gravida 3, para 3. She was born in the U.S. She has lived in the U.S. all her life. She was interviewed once at 10 months postpartum. The interview was conducted in English.
Sonia	A 26-year-old, gravida 4, para 4. She was born in the U.S. She lived in Mexico for six years as a small child. She was interviewed once at three months postpartum. The interview was conducted in English.

having private employer provided health insurance. Type of health insurance was used as a proxy for economic status. In Texas, a family of 3 can earn up to $17,600 and qualify for Medicaid/CHIP programs if household income ≤ 185% of the federal poverty line ("HHS poverty guidelines," 2008).

Six women reported being married. Length of marriage for these women was a mean of 8 years of marriage. Seven women were single, living alone. Two women were divorced or separated. Average household composition size was 4.7 with a range of 2 to 8 people living in the home.

All participants self-identified themselves as Hispanic. Eight participants reported a Mexican-American ancestry. Six participants reported a Mexican ancestry. One participant reported multiethnic ancestry; that of Japanese-Mexican. The mean length of stay outside the U.S. was 13.5 years with a range from 5 to 23 years. Table 2 describes selected participant demographic characteristics and generational status for both the mother and father of the baby.

The Core Category and Basic Social Process

In keeping with grounded theory methods, the core category occurs frequently, relates all major categories, links data together, explains any variations in the data, and has implications for a general or formal theory. The core category that emerged in this study reflects a basic social process of *Managing my Pregnancy*. This category was a central component in all interviews.

Managing My Pregnancy

Managing my Pregnancy is the process that this group of women engaged in as they navigated their pregnancy, learned to care for themselves during their pregnancy, and made decisions regarding which beliefs and health care practices they would choose to implement. *Managing my Pregnancy* describes their decision-making process regarding the adoption,

Table 2a.

DESCRIPTIVE STATISTICS – LEVEL OF EDUCATION COMPLETED

Level of Education	**Number of Participants**
< High School	3
High School/GED	3
Technical/trade school	5
Associate Degree	1
Baccalaureate Degree	3

Table 2b.

DESCRIPTIVE STATISTICS – MARITAL STATUS

Number of Participants	**Marital Status**
Single	7
Married	6
Divorced/Separated	2

Table 2c.

DESCRIPTIVE STATISTICS – HOUSEHOLD SIZE AND COMPOSITION

Participant	**Family Composition**	**Total Family Household Size**
Natalia	Husband	2
Soniku	Father	
Maria	Daughter, male friend (non-relative)	3
Inez	Brother and father of the baby	
Flor	Father, sister, father of the baby	4
Tina	Father, mother, father of the baby	
Carmen	Father, mother, daughter	
Diana	Husband, sons (2), daughter	5
Ali	Husband, sons (2), nephew	
Carolina	Husband, son, daughters (2)	
Raquel	Husband, sons (2), daughter	
Sonia	Husband, son, daughter (3)	6
Linda	Father, mother, brother, sister, step-sister, niece	7
Susana	Fiancée, mother-in-law, father-in-law, sister-in-laws (2), brother-in-laws (2)	8
Georgina	Mother, father, son, sister, niece, nephews (2)	

Table 2d.

GENERATIONAL STATUS FOR STUDY PARTICIPANTS AND FATHERS OF THE BABY

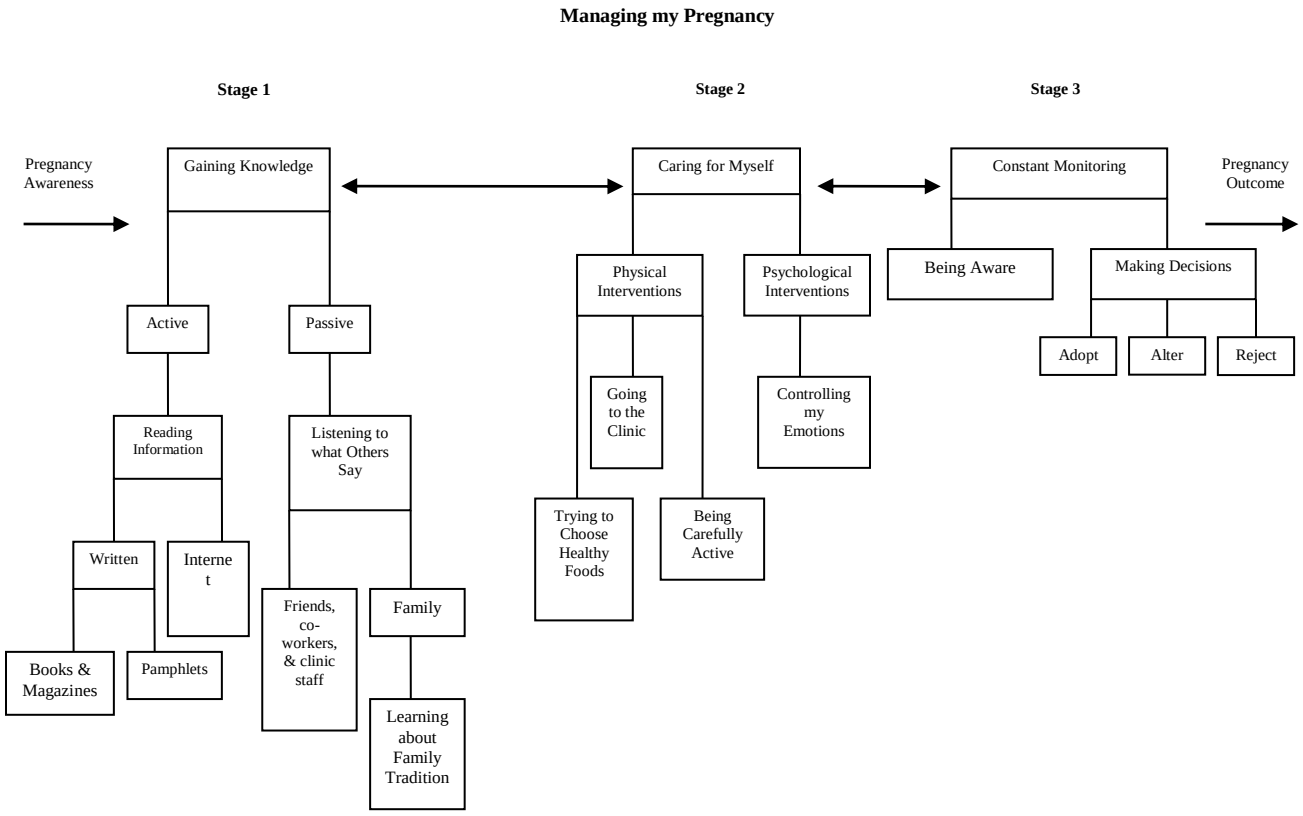
	Participant's Generational Status
1st Generation	Linda Maria Ali Georgina
2nd Generation	Sonia Carolina Inez Raquel Diana
3rd Generation	Susana
4th Generation	Flor Tina Carmen Natalia Soniku

alteration, or rejection of these beliefs and practices. *Managing my Pregnancy* is made up of three steps; *Gaining Knowledge*, *Caring for Myself*, and *Constant Monitoring*. The model for *Managing my Pregnancy* and the stages are presented in figure 1.

In order to enter the process of *Managing my Pregnancy*, the woman had to be aware of her pregnancy so that she could begin to make the necessary changes she believed would result in a good pregnancy outcome. Linda summarized this by saying "once you are pregnant you have to change your whole life. You have to revolve around what is good for the baby". A missed menstrual period was the impetus that led the women to perform a urine pregnancy test and thus become aware of the pregnancy. This group of women seemed to be aware that they had missed a period soon after the date of their first missed period regardless of whether the pregnancy was planned or not. Thus, the antecedent to *Managing my Pregnancy* was an awareness of the pregnancy.

Once the women found out they were pregnant, they immediately entered into the process of *Managing my Pregnancy* and remained in the process, visiting and revisiting the stages as the pregnancy progressed and the need arose. The women stayed engaged in this process until the delivery itself and the women were able to see and hold their newborn infants. Once the baby was born, a healthy child was viewed as validation for the myriad of decisions and sacrifices the women made during their pregnancies. Delivering a healthy newborn was also proof that they had successfully completed the process of *Managing my Pregnancy*. All participants described how they managed their pregnancy on a day-to-day basis for the goal of having a healthy newborn. One of the participants, Flor, commented, "I will do the best I can for him [the unborn child]. I want to bring him into the world without problems."

Figure 1. Stages of Managing my Pregnancy



The first stage of this process is *Gaining Knowledge*. *Gaining Knowledge* is best described as the stage where the women found out how to best care for themselves during the pregnancy. During this stage, women gathered pregnancy-specific information from many different sources. *Gaining Knowledge* includes knowledge acquired from active and passive information gathering methods. The second stage, *Caring for Myself*, is the realization and implementation of their newfound knowledge gained in stage one. Women engaged in a variety of activities that were aimed at improving the health of the developing infant, avoiding pregnancy complications, and having a smooth labor and delivery. The final stage, *Constant Monitoring*, is the stage in which women monitored and evaluated decisions they made regarding the knowledge they had obtained in stage one and chose to implement in stage two. *Constant Monitoring* required a continuous awareness that the woman was pregnant and needed to do things differently than before she was pregnant. Although the process is described as stages, it did not flow in a linear fashion. Rather, women entered and revisited each of the categories according to individual circumstances and experiences.

Women used the process of *Managing my Pregnancy* as a way to maintain family traditions that were being taught to the women. *Managing my Pregnancy* also offered a way for the primipara pregnant women to be indoctrinated into the pregnancy role and learn about pregnancy specific health beliefs and practices that the woman's social circle wanted to pass on to the pregnant woman. For women who had previous pregnancies, *Managing my Pregnancy* offered a way for family members to reinforce important health beliefs and practices. Women described how they were indoctrinated into the pregnancy role through daily communications with people in their social circle such as mothers, grandmothers, aunts, friends, and even co-workers. Although some women felt uncomfortable with the amount of attention they were

receiving and thought that they were being treated like invalids, others cherished the extra care and attention that was given to the pregnant woman. Linda remarked, "They [speaking of her family] say don't do that, don't do that. I say, 'Mom, I'm pregnant, not disabled!' But, that's how they take care of one another, of each other." Although each participant had different living arrangements, the influence of well-meaning family, friends, and coworkers could be seen in their descriptions of their pregnancy related activities and knowledge that was shared with the pregnant women. Carolina commented "Everyone was telling me stuff, giving me advice. Like my aunt, everyone, even my brother (laughs)… and he doesn't even have kids!"

Stage 1: Gaining Knowledge

Gaining Knowledge is the first stage in the process of *Managing my Pregnancy*. As soon as the women were aware of their pregnancies, they entered into the process of *Managing my Pregnancy* by actively seeking out or passively receiving information about the pregnancy. Information was gathered on what women needed to do to successfully care for themselves during the pregnancy. All women sought out information about the pregnancy regardless of whether this was their first or a subsequent pregnancy. Information that was gathered included information about due dates, common complaints of pregnancy, and pregnancy complications.

Active knowledge acquisition describes the process the women took when they realized that they needed some sort of information about the pregnancy. The participants would immediately begin to seek out answers for their questions. In contrast, passive knowledge acquisition occurred when family members, friends, and co-workers offered advice and information about the pregnancy. Passive knowledge was not solicited by the women.

The knowledge gained in this stage was an antecedent to the second stage of *Managing my Pregnancy*; *Caring for Myself*. The information that was obtained led the women in this

study to become aware of how to care for themselves during their pregnancy. There are two sub-categories of *Gaining Knowledge*; *Reading Information* and *Listening to what Others Say*. Figure 2 depicts a diagrammatic representation of this stage.

Reading Information

Reading Information is the first subcategory of *Gaining Knowledge* that describes the active acquisition of knowledge that the women engaged in. Women either read written information in print or accessed the internet for information. The women learned about a variety of pregnancy related topics such as nutrition, growth and development of the fetus, pregnancy complications, sexually transmitted infections, and common pregnancy complaints. Reading written information was accomplished using a variety of written literature such as books, magazines, pamphlets, and internet sources to gain information about the pregnancy that they then shared with family members. This information was given to the women by their health care provider or by the staff at their local WIC office. Participants also commented that they were given pregnancy help books such as *What to Expect When You are Expecting* (Murkoff & Mazel, 2008). One participant, Raquel, described the difference in the purpose for reading information between her first pregnancy and her fourth pregnancy. Raquel stated, "The first time I read the book for information, this time I read it more for fascination, to remember and to tell the kids what is going on and tell them 'he's the size of a grapefruit now.'"

Women read information about their pregnancy questions on internet web sites. Participants did not mention any specific web site; rather, they used search engines such as Google to "surf" the internet and locate the information they were seeking. Women consulted the internet to learn what their estimated due date was before coming into the clinic for their first prenatal appointment. Those women that were able to consult internet sites said they enjoyed the

convenience and rapid answers they found on the internet. Spanish-speaking first generation women did not consult the internet due to its lack of accessibility. These women also commented that they were not aware of how to work with a computer or search the internet for information.

The use of the internet is an area where there were differences among first and subsequent generation participants. None of the Spanish first generation participants had knowledge or experience with computers, the internet, or how to navigate the internet. One first generation participant mentioned that she had no access to the internet either at home or through her job. Maria commented, "I don't have access to the internet… No, I don't do it… I don't have experience surfing the internet, or sitting in front of a computer." Yet, Linda, an English-speaking first generation participant, had access to the internet at her job and did use the internet to search for pregnancy related information while at work.

The internet was used to search for pregnancy-related information mainly by second through fourth generation participants, with the exception of Soniku and Linda. Soniku disclosed that she could not afford internet access, but was knowledgeable regarding how to conduct a search on the computer with the aid of search engines such as Google. All other participants from second through fourth generation participants had access to the internet either in their own homes or in their place of business. The internet was used to obtain additional information or to clarify information participants had received regarding the pregnancy. Diana commented, "That's right, if I have a burning question I look for it through the Internet. I mean any little pain, I'll look it up." Some women used the internet to search for information on diagnoses that they were given by their medical provider. For example, Susana was diagnosed with chlamydia, a sexually transmitted disease, and found information regarding her diagnosis

and potential complications to her developing child on the internet. "I went into the internet and - I looked it up. And then saw, what if I never knew about it, and I still had it. What would [the baby] have gotten from that. And that would have been horrible."

Participants found it convenient to access information quickly and implemented their newfound knowledge immediately after obtaining information from the internet. Some women used information that was found on the internet to prepare for labor. Diana said, "[I've read] about the…Kegels or exercises - something like that. You do those to help you prepare [for] contractions. Like contracting your muscles when you can. With the opening. [I read it] on the Internet." Often, women read information that served to reassure them. This happened when the information they found turned out to be a common complaint of pregnancy that was totally benign. Some of the participants verified the authenticity of the information they found on the internet with their medical provider during routine prenatal visits.

Participants described a wealth of information they obtained from reading written information about the pregnancy. For the most part, participants described reading pamphlets and health literature that the staff at the clinic or WIC office provided. Information that was obtained through reading included information about the pregnancy in general, sexually transmitted diseases (STDs), breastfeeding, complications of pregnancy, and nutrition. Susana said:

> I would read…what I should [be doing]… it said in the book what I shouldn't be eating, what I could eat. What I shouldn't be doing. How active, you know how long to be active.

Participants found this literature to be informative and useful for keeping them and their developing child safe. Two participants, Tina and Soniku, commented about reading on the

dangers of mercury ingestion for pregnant women. Soniku's knowledge was limited to tuna fish, while Tina's information also included shellfish such as shrimp and other seafood in her dangerous foods categories. Only one participant, Tina, said she received conflicting information from the staff at the WIC office and her physician regarding a safe level of consumption of fish and the dangers of mercury ingestion during pregnancy.

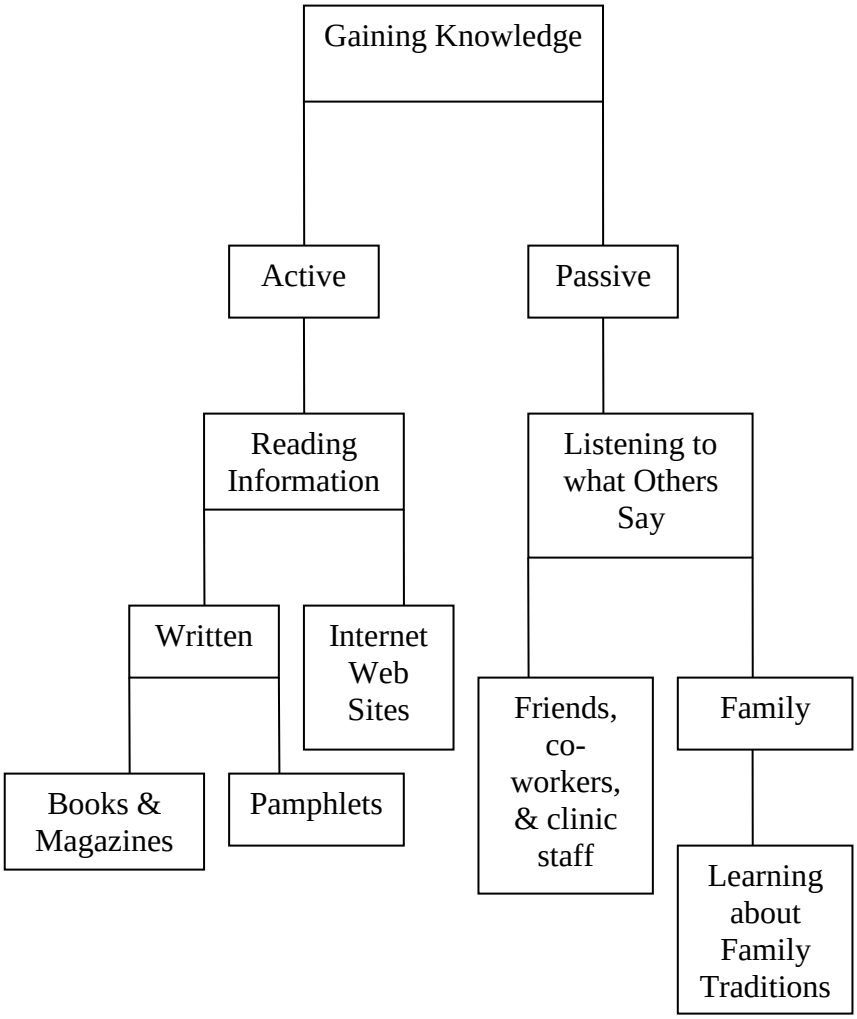
Tina was able to resolve the conflict by reading additional information that the WIC office had provided for her. However, she described an uncertain feeling when speaking about this conflict that she encountered during her *Gaining Knowledge* stage. Tina comments:

> Well, I've actually heard conflicting stories. I mean, when I first became pregnant, I was advised to stay away from tuna because of the mercury, and any, of course, seafood, shrimp, things like that. And, basically, I actually applied for WIC, because I'm doing my internship, so I'm not working, so I need help, (laughs nervously) and they encourage me to eat as much—not as much fish—but tuna, at least tuna once a week, fish once a week, because his brain is developing right now. And I'm like, Well, I was told not to. So, now it's just conflicting. I read what they had—they gave me paperwork on it, and I just read that. And, I mean, it <u>seems</u> ok.

Listening to What Others Say

Listening to What Others Say is the second subcategory of *Gaining Knowledge* that describes the process of passive knowledge acquisition. In order to obtain this passive knowledge, participants first had to disclose the pregnancy to others in her social group. Two groups of people provided pregnancy information to the pregnant woman. The first group was non-relatives such as friends, co-workers, and neighbors who were aware of the pregnancy.

Figure 2. Gaining Knowledge



The second group that provided pregnancy information to the pregnant woman was the woman's family members.

This information included knowledge on strategies that the women could use to care for themselves during the pregnancy. This type of information was not solicited by the women. This knowledge also included previous knowledge that the woman had learned about taking care of herself during the pregnancy before she became aware of her own pregnancy.

Listening to What Others Say describes how women learned about traditional health beliefs and family traditions that their social group felt were important to follow and adhere to. These practices provided a method for the women to be socialized into the pregnancy role. Expectations from the woman's social group were made clear to the women through face-to-face or telephone communications. Information that was provided centered on general expressions of care for the pregnant woman, teaching regarding avoidance of certain movements, and teaching regarding certain culture-bound traditions.

Listening to What Others Say occurred either by telephone or in face-to-face communication. This connection and flow of information occurred on a weekly basis for telephone conversations. Some women like Linda reported traveling to Mexico more often, even on a monthly basis. This contact kept them connected to their ethnic and family roots. For some participants, the exchange of information occurred through planned visits to see relatives who lived in Mexico. Those participants who could not travel to Mexico phoned their relatives and exchanged information via this method. When contact with family members occurred, it was with parents, grandparents, aunts, uncles, and first cousins who continued to live in Mexico. Linda describes this best when she said:

> You know friends, families are very together. They are always there for each other and stuff. So my family has always been there for me, is there for me. When I go to Mexico they are very caring. They are like "Oh, don't do this, I'll do it". And so they take pretty good care of me. And here [in the U.S.] is my Mom, my mom who takes care of me.

Friends, Co-Workers, and Clinic Staff. Non-family members who provided pregnancy information to the pregnant woman included friends, co-workers, and neighbors who were aware of the pregnancy. Close female friends who shared knowledge with the pregnant woman were referred to as *"comadres"*. Women who worked also said that co-workers shared their pregnancy knowledge with them and would watch over them at work monitoring their every move. Participants commented on the legitimate concern they felt from these people and that they would follow their suggestions or go to these individuals if they had any problems during the pregnancy. Linda commented:

> My mom's neighbor she's always going to the house and saying "oh, how have you been feeling today?" and I brought you this, a little caldito [homemade soup]. And stuff like that. So that kind of makes me feel good, that they are there for me too. And they kind of look out for me. And if I'm outside with the kids, they say "Oh, how are you feeling?" "And how's the baby?" The baby isn't even born and it's kind of cute and kind of nice that they worry about me and that they are there for me. They tell me, "if you have any questions, if you have any problems, you can call me and you know where I live and you know how to get a hold of me and stuff". So, if I ever have any time, I'd go to them.

When family members were not present, other female friends stepped in to offer advice to the pregnant woman and provided the information she needed to care for herself. This person was often a neighbor or a co-worker. Maria explained:

> [A worker] would tell me don't sleep with your face down, but I've never done that or that wasn't hard for me, but yes, she told me, try to sleep on one side, try to change positions, don't be lying down in only one position… on the same side try to move… find a comfortable [position] but also rest on your back.

Participants commented on how friends and co-workers were concerned with the health of the pregnant woman and that of the baby. This offered the participant a sense of belonging and community. Even when her family wasn't physically present, the women continued to learn about how to best care for herself from relationships with other individuals in her social and ethnic group. Relationships were formed often based on common ethnic heritage. Maria commented on how one Hispanic worker cared for her because they were both the only ones that were Hispanic and spoke Spanish at her place of employment.

> She was the only Hispanic worker when I worked there. When I arrived she was an older woman of about 60 years old, maybe more I think she had 70 years old. She would always say: no, no, no don't do that, I think I gained more experience from her than from my own mother or from anyone else, she was always after me not to do this, not to do that (laughter) you shouldn't do that.

Family Members. The family was seen by the pregnant and postpartum woman as the main source of support during her pregnancy. Support was given by family members in the form of information, encouragement, and tangible activities. Family members who provided information were usually female and older individuals such as a mother, mother-in-law, grandmother, or

aunt. The pregnant woman viewed this support as evidence that someone in her social circle cared and loved the woman and was there to offer help in any way they could. Support in the form of cleaning and cooking was also offered by mothers, sisters, or mothers-in-laws. A few participants mentioned male family members playing a role in the care of the pregnant woman by providing support. In particular, husbands, fathers and brothers were seen as caring individuals that reminded the pregnant woman of health rituals and/or offered transportation and even health information. Flor said:

> My oldest brother, he don't have no kids, but he pretty much knows what not to do. Like when I first found out I was pregnant I was real nauseated all the time. He said, "When you wake up maybe have some dry toast or maybe some crackers".

Learning about Family Traditions

All of the women received a variety of information from their family on how to care for themselves during their pregnancy. These family traditions centered mostly on foods, activities that needed to be avoided, and traditions regarding pregnancy and childbirth.

Women in the study were found to follow family beliefs that their families recommended. This was not influenced by their generational status. Often, the women would have good intentions to follow family recommendations and traditions. However, when the family wasn't around them, they would revert to their preferred ways and would not follow these recommendations. This was seen best with beliefs surrounding the lunar eclipse and the *cuarentena*.

The participants spoke of learning several beliefs relating to foods. They described family members who encouraged them to eat both on time and a greater quantity of foods now that they were pregnant. Family members were especially worried when the woman was not

seen eating enough quantities of foods and was seen skipping meals. Well-meaning mothers and grandmothers would even wake the woman up from sleep if they thought too much time had passed between meals. Waking up and eating breakfast, even a modest one, was seen as very important for the women to do. Linda reported:

> I had a cousin that lived with us when she was pregnant and stuff and she would sleep a lot. She wouldn't work. So for the whole day she would sleep. And I'd get home from work and she was asleep again. And she'd go sleep really, really early and she wouldn't wake up until later the next day. So they'd say you need to wake up and walk more, and do more exercise and stuff like that so that way your baby wouldn't get attached to the placenta.

A prominent belief that was found among the women was that of wearing a metal key on a safety pin during a lunar eclipse. The wearing of the key would offer protection to the developing fetus. It was believed that protection from the metal of the key would protect the baby from the effects of the lunar eclipse. One Spanish-speaking participant, Ali, mentioned the importance of wearing a piece of red fabric or ribbon on the safety pin instead of the key. This belief was described as being grounded in the Catholic Church and would also offer protection to the baby. While some women believed that the safety pin should be worn by the woman near her abdomen throughout the entire pregnancy, other women believed that this safety pin was only meant to be worn during a lunar eclipse. Women who wore the safety pin for the most of their pregnancies had a difficult time describing when lunar eclipses occurred, therefore they would protect themselves all the time. Women believed that the moon could literally take a bite out of the lip of the developing baby and cause a variety of visible birth defects such as cleft lip/palate, polydactyl, or sindactyl. Women were coerced into wearing the key by well-meaning

family members; often contrary to their own personal beliefs. The participants were not aware of the reasons for the protection that was offered by the key, the small piece of red fabric, or the piece of string that they hung from the safety pin, other than it was something that was done by all pregnant women in their families. Therefore, they too felt that they had to follow the tradition. Ali explained:

> One would wear a small red knot [tied on a safety pin]; you would put it in your underwear for… they say for… to watch over the baby. Because there is… there are children that are born with… that have missing pieces of a lip, tongue, nose… or of an ear. But, they say that it is because the moon eats it, the moon. And that is why that small thread/knot it's for avoiding that. I did that [in Mexico] but I don't do that now. Now, I don't wear anything.

Another of the Spanish-speaking participants told of wearing undergarments inside out as a way to offer protection to the developing infant from jealous onlookers, or people who could do you harm from the evil eye. For this participant, following the belief of wearing undergarments such as slips inside out was important since not following it could lead to a type of permanent brain damage or developmental delay for the infant once it was born. This was caused by other people's *envidias*/envy or jealousy that was directed at her pregnancy. None of the other participants shared such beliefs. Ali commented:

> The undergarments. I don't know if you are familiar with the undergarments that you put on under a skirt? We had to use them inside out. Normally, one would have to wear it right side, we had to turn it inside out. It's for jealousy, people's jealousy, people that may not like you, people that can harm you, in any way.

Comments as to why they continued with the family traditions were listed as the desire to learn family traditions that they would eventually pass down to their own child. Participants also felt that they could not say no since family members would force them to wear the item and would at times even put it on the woman. Women also felt that years of tradition couldn't be wrong. Therefore, the women performed the practice simply because they worried that something bad might happen to the baby if they didn't do it. They didn't want to be blamed for not following the family's recommendations if the baby was born with a deformity. Linda said:

> Well, my mom actually made me. I was, I wasn't thinking about anything, because I really don't go outside and do that stuff. So sure enough she came out with a key and she made me like wear a key from the house. I was like "what's going on?" and after that it was like "the eclipse is on! The eclipse is on!" So I was like "Ok Mom, sure Mom". Well, I didn't have to, but I wanted to. I thought she was telling me for a reason. And… I worried.

Regardless of generational status, women who maintained contact with their family in Mexico, seemed to ascribe to culture-bound traditional beliefs such as those related to the lunar eclipse and the *cuarentena.* All of the first generation women described contact with family in Mexico. Most of the women in the second through fourth generation had little contact if any with family in Mexico. Carolina, a second generation participant was the only exception. It is important to note that Carolina although born in the United States, lived in Mexico with her family for 6 years as a young child and had many relatives she sought out and communicated with.

For the most part, participants did not discuss these traditions with their medical professionals. Some women felt that these beliefs didn't need to be mentioned since they are

part of their cultural beliefs or set of traditions and were harmless. Only one of the participants, Linda, ventured to clarify information with her obstetrician on a particular belief her mother had shared with her about avoiding sleeping in a prone position due to fear of suffocating the developing infant. At first, Linda commented that she listened to the doctor and slept in this position even though her mother had told her not to.

> So when my mom said, Don't sleep on your belly too much, it affects the baby. I thought, you know. At first I thought, "My God, I'm suffocating my baby!" And that was my thought. And I went back to my doctor and said, "Yes, you can sleep on your belly as long as you can take it, as long as it's comfortable for you". And I thought nothing affects the baby? He said, 'Nothing is wrong with the baby, the baby is fine. The baby can still breathe.' So that kind of made me see things different."

A specific belief that was found more often among the first generation women and those women who had lived in Mexico for a specific amount of time was the belief in the *Cuarentena*. The *Cuarentena* is a period of seclusion that begins a few days before the delivery and lasts for 40 days afterwards. During this period of time women were expected to only do two things; rest and take care of the new baby. Family members would be responsible for taking time out of their day to go to the woman's house and help cook, clean, do laundry, and even care for other older siblings. Women felt that having family members help with household duties was a huge help for them and allowed them the luxury to rest and recuperate from their deliveries. Carolina explained:

> She [the mother-in-law] would just come and visit and help me clean. She would say, I know you're tired" and her just visiting and coming over, and stuff. I had a couple of dishes she would wash it or she would start cleaning when she would come to visit.

Summary of Stage One: *Gaining Knowledge*

The process of *Managing my Pregnancy* described the methods women used to gather information about the pregnancy. The two sub-categories of *Gaining Knowledge* were *Reading Information* and *Listening to What Others Say*. *Reading Information* describes the information women actively gathered from material either in print or electronically through the internet. *Listening to What Others Say* describes the passive information women received from friends, co-workers, clinic staff, and family members. *Gaining Knowledge* was an antecedent to the second stage of *Managing my Pregnancy*; *Caring for Myself* which will be presented in the next section.

Stage 2: *Caring for Myself*

The second stage in the process of *Managing my Pregnancy* is *Caring for Myself*. In this stage the women performed a variety of strategies they learned about during the first stage of the process of *Managing my Pregnancy*. Once the woman completed the first stage and felt she had enough information about the topic of interest, she engaged in several different strategies to manage her pregnancy. These strategies included both physical and psychological interventions. Physical interventions were activities that the women chose to implement in order to care for themselves and manage their pregnancies every day. Physical interventions included the following subcategories: *Trying to Choose Healthy Foods*, *Being Carefully Active*, and *Going to the Clinic*. Psychological interventions include the subcategory of *Controlling My Emotions*. Psychological interventions centered on decreasing the women's reaction to stressful stimuli from their environment or tapering their response to internal feelings such as anger or frustration. All of these subcategories contributed to the concept of *Caring for Myself*.

Caring for Myself is best described as activities women did that provided the safest environment for the developing child that was growing inside their bodies. Women in this stage of the process reminded themselves that the goal of partaking in these interventions was to have a successful and healthy pregnancy outcome. Figure 3 provides a diagrammatic representation of this stage.

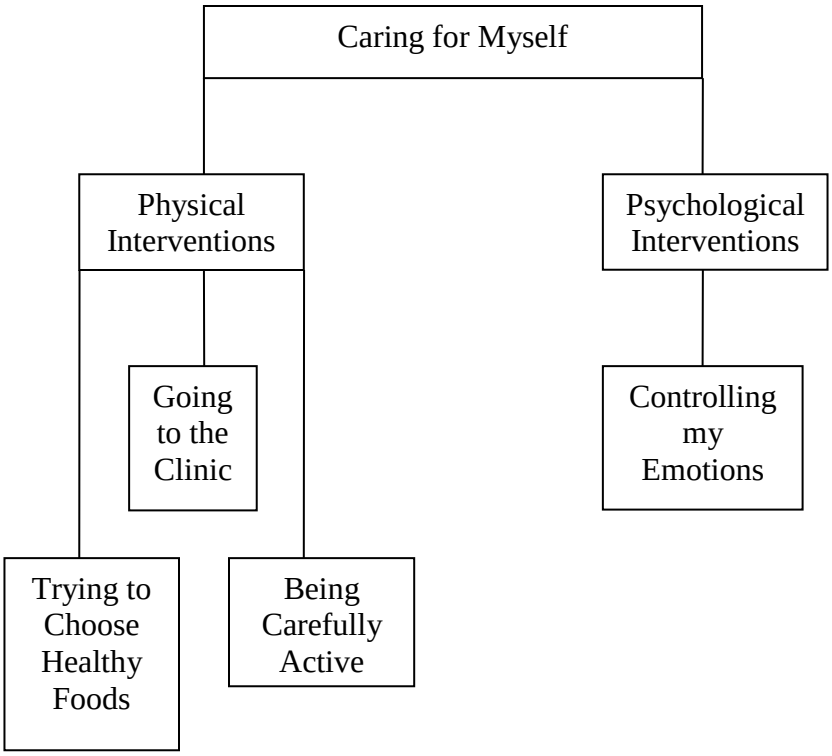
Trying to Choose Healthy Foods

The first physical subcategory centered on nutritional practices. *Trying to Choose Healthy Foods* describes the interventions these women used in their struggle to choose healthy foods that would help ensure the health of the developing infant and also helped minimize common pregnancy complaints such as heartburn. Fruits and vegetables were consumed for their nutritious qualities and were seen as helpful and needed for the physical development of the infant. Certain foods such as sodas and caffeine were avoided. These substances were thought to contribute to restlessness in the infant after the child was born that would lead to difficult parenting.

When asked, these participants mentioned that choosing healthy foods and eating healthy was their first intervention they initiated. The women described their understanding of the relationship between consuming healthy foods and having a healthy child. Tina explained:

> Just eating a balanced meal, and trying to stay away from all the sugars and excessive salts and things like that, and trying to incorporate a lot of fruits and vegetables in my diet, and…of course, I'm not perfect. I do have my, my sweets every once in a while. But I am aware that, you know, I, I actually do have a child growing inside of me, so I want to be, I want him to develop healthy.

Figure 3. Caring for Myself



Fruits and vegetables were primarily the choice of nutritious foods that the participants mentioned and believed to be healthy selections that would lead to their final outcome – ensuring a healthy infant. These changes would be initiated soon after they knew of the pregnancy. Women made a point to describe that they changed their diets to include fruits and vegetables even if they normally did not eat such foods prior to the pregnancy. Diana describes her dietary changes after she found out she was pregnant this way:

> I'm not big on fruit and vegetables; actually I'm not big on vegetables at all. I mean like I say, that was not part of my meals before pregnancy. But now, no. Now I've been eating oranges, I've been eating apples. What else? Vegetables, I'm eating vegetables.

Knowledge of the food pyramid and the need to increase the consumption of fruits and vegetables was demonstrated by all of the women. Georgina comments "I think that things like vegetables, anything green [has it]." They shared an understanding of basic nutrition facts such as knowing the importance of eating a diet rich in folic acid and the benefits of folic acid to the baby's development. Tina replied, "I've just always heard that folic acid is extremely important for a baby's development".

One way that women increased their consumption of fruits was by making their own *aguas frescas* (fresh fruit juice mixed with water and sweetened with sugar) or *liquados* (shakes made with milk and fruit). This was done to give the freshest nutrients to the developing child. Flor reported:

> I eat oranges, apples, grapes, bananas. Sometimes I'll make a little shake. I put in strawberries, or grapes, or something in there, and mix it together. It tastes good. It's like a little smoothie almost; I put a little bit of sugar and some milk.

Participants described that their diet changed and became more relaxed with subsequent pregnancies. Raquel describes this change in her diet as "I let go a lot of being so nutritious". During the last pregnancy, she admits to eating whatever foods she wanted and were available – even commenting that she indulged in sweets such as an entire piece of cake and drinking an entire can of soda versus avoiding sweets and drinking only a few sips of soda like she did in her earlier pregnancies. Raquel's positive past pregnancy experiences led her to feel that she didn't have to follow such a strict diet and could still feel comfortable that she wasn't harming the developing child. Raquel stated, "It's ok to not eat all the green beans… it's not going to kill me or her."

Women were concerned with maintaining an eating schedule. Women expressed a desire and physical need to eat at least 6 times a day. These meals consisted of breakfast, mid-day snack, lunch, mid-afternoon snack, dinner, and bed-time snack. Flor describes this as a positive experience, "They [clinic staff] told me that instead of eating 3 large meal of the day, eat 6 smaller ones. So that's what I've been doing, it's working out great. It's easier… I'm always hungry." Natalia also mentioned the importance of frequent meals and snacks to avoid nausea and vomiting. "I was really, really, really sick at the beginning…I would throw up every single morning – sometimes at work! I had to eat every 2 hours or I would be nauseous." Eating regularly was also seen by Natalia as a way of avoiding irritability that was caused by going too long without any snacks. She comments, "I had snacks at work… I have to eat all the time, if not I turn into this crazy woman (laughing)! I was mean. I snapped easily. Even people at work could tell… give her something to eat! Then I'd eat and I was fine. It was instant." These eating schedules were followed by all of the participants.

Drinking water or juice and staying hydrated were important factors that were mentioned as another way women cared for themselves during the pregnancy. Women commented on their desire to drink fruit juice and water several times a day. This was different than before the pregnancy when they would only drink water when they were thirsty. Linda comments, "I was drinking water, but before it was like Oh I'm thirsty let's drink water – when I was thirsty. Now [that she was pregnant] I drink more water and I don't want to have any problems. I want the baby to be… healthy". Women revealed that their families and the medical providers at the Women Infant and Children (WIC) office asked about their consumption of water and juice. Participants were more inclined to drink more juice and water because they felt that it was important for the health of the developing baby if other people in their families and professionals were asking about their consumption of these drinks. Women also stated that they drank juice and other liquids because the staff at the WIC office encouraged them to drink these items. Georgina states "They told me at the WIC office...the juice...to drink them in the morning". Another participant, Ali, also states that she consumes bottled juice because it was offered to her through the WIC program, "We are in the WIC program they give us bottled juice". Women commented that they would drink more water so that the baby could be healthy and avoid any pregnancy complications.

Participants mentioned that they would drink milk in an effort to give their forming child the best nutrition they could. Milk and fruit juice were also said to be more nutritious and were preferred over water or other drinks for the feeling of fullness they created. Women preferred milk and juice due to the perceived differences in energy that come from these sources. Women described this energy as a quick revitalizing feeling that was expended quickly. Participants reported that energy from soda seemed to burn up quicker and did not last as long as their

perception of the energy they received from milk and juice. Women also believed that juice was superior to soda and Kool-Aid since it offered vitamins to them and their developing child. Soda and Kool-Aid were viewed as lacking any type of nutrition for the developing child. Maria commented:

> I decided to drink [juices]. I feel that [juice] is better than a soda. I feel that it could… it has more vitamins… it gives me more energy than a soda, for me. Other times I could have more energy. But it will be a type of energy that it will burn off more rapidly than that of the juice. I think that everything in excess is bad, but the sodas, it's too much… sugar, gases, and things… well, really nothing very nutritious.

In addition, milk was used as a healthy snack and a treatment for heartburn. Participants were aware of the importance of including milk in their diet in order to have a healthy pregnancy. Maria commented "the milk... I know that it has vitamins that it has things that it gives me and the baby to develop well, but… I drink it because it's nutritious and safe for me and my baby". Maria drank milk because it was also provided to her through WIC.

The women spoke of many other beliefs related to foods. For example, women thought that eating foods high in sugar content such as soda or foods that had caffeine in them would cause hyperactivity in the mother during the pregnancy or the child after it was born. Susana commented regarding the pregnant woman's response, "Women during their pregnancy, they're hyperactive because they're drinking a lot of soda – they don't cut down."

If women did not monitor the amount of sugar, soda or caffeine that was being consumed, it was feared that the child would grow up to be a hyperactive, restless, mischievous or "ornery" child that would be difficult to parent. This belief was true even for Soniku who self-identified as Hispanic from her father's heritage but whose mother was Asian. Ali stated:

> The coffee well, it has... here they say that it has more caffeine or that is what it has, what makes the children… restless, very hyper it's because there are many children that are very well… restless, they are mischievous (ornery). That is what they say causes all of that. The soda, the Coke [Coca Cola]… that [is what makes] those children very restless.

Mothers attempted to minimize their exposure to such items through avoidance or limiting techniques. When the women limited their intake of caffeine and high calorie drinks, it was to a few sips or less than one or two caffeinated drinks or sodas a week. Participants reported that this self-imposed limitation was less than the amount of caffeine and soda they consumed before the pregnancy.

The last behavior that women reported was related to fluids that participants consumed. Women drank home brewed teas that were recommended by family members. Women specially mentioned drinking *Te de canela* (cinnamon tea) and *Te de comino* (cumin tea). These teas were recommended as a catalyst for initiating labor contractions, helping to dilate the cervix, and to help the women have an overall easier and shorter labor. One woman who was interviewed postpartum commented on how she believed these items actually worked because she had achieved small amounts of cervical dilation without any knowledge that she was in labor and/or pain. Sonia reported:

> I remember I went to my last appointment, I had no contractions, but I was already 4 cm dilated! So I went back home and she gave me [more] te de ….. (pause thinking)… comino! And she told me that that would help me deliver quicker. It took a little long, but I was already 4 cm dilated.

Not following dietary recommendations was viewed as a way of being selfish and taking additional risks that could potentially harm the fetus or the health of the child at a later time. Participants commented that other friends and relatives were not as careful as they were being with their diet. Susana said:

> "I had a cousin who had nothing but snacks in her bag and she was like ready to go – I guess she took advantage of it - and she'd eat whatever…But then here, I just feel like ….if I do that, I don't want to harm my baby. So, that's just me. Me being cautious."

Certain foods, mainly spicy, *picante,* or hot foods such as hot Cheetos and *picante* sauce were thought of as having the potential to be bad for the health of the pregnant woman since they would cause heartburn. Participants believed that hot, spicy foods would not only affect them, but could affect the developing child and would make the developing infant suffer by causing similar heartburn symptoms in the fetus. Susana commented:

> Throughout the whole pregnancy, I've had heartburn twice. And it was ugly. Once was because of the chorizo – it got to me because it's too spicy. It's the spicy food that's just not [good]… a lot of spicy foods is not good. The hot Cheetos and the chorizo – it was really spicy. It can get to you or to the baby. So you have to be careful of that. The heartburn it can affect the baby".

Women noted that other people did not follow all of the recommendations that were given to them and they still managed to have a healthy infant. Participants often gave this as a reason to relax their strict dietary practices. Inez describes this when she declared, "Sometimes it may be genetic, and sometimes it may be that I didn't have enough folic acid… I've known people that had done drugs during their pregnancies and they [mother and infant] are fine. It's hard to be good and healthy all the time." Nevertheless, this group of participants followed the

dietary recommendations that were given to them. Some participants regretted not being able to continue their previous nutrition practices. Inez comments, "I tried so hard to eat healthy and not drink Coke, but now I'm cheating a bit and I feel like I'm letting my baby down."

The participants would attempt to find a balance between their mounting cravings for foods they considered to be bad and their desire to avoid any harm to come to the developing child. With *picante* being described as a type of condiment for food almost as important as salt, the women found that avoiding it was an extremely difficult task. As previously mentioned, the women would revert to eating the foods, but in smaller portions; in an effort to avoid harming the child.

Family members also played a role in this stage by monitoring the pregnant women's dietary habits. If the women were seen having something they shouldn't be having (such as caffeine, *picante*, or sodas) the family members spoke up and told the woman to watch what she was doing and reminded the woman that the baby could be harmed. Family described this harm as hyperactivity and heartburn in the mother or infant either before or after it was born. Participants believed the teachings from family members and would try to curtail or reduce their consumption of these foods.

If the woman did not stop the offending activity, family members voiced their opinions and strongly objected because the women were not following their guidelines. The woman either stopped the activity or would continue to have what she craved but would hide the offending activity from her family and would have smaller amounts. The role of the family was an important influence in trying to minimize the amount of unhealthy foods that the pregnant woman had. People that lived or worked with the pregnant woman were described as offering gentle reminders to the woman of her need to avoid eating these foods. Eventually, the desire

would grow and the woman would eat smaller amounts of the forbidden items or even sneak a taste when the family wasn't watching. Linda describes a situation that occurred when she was eating at home and there was *picante* sauce available.

> "I'd be pouring the hot sauce to my plate and they would be like 'Stop, don't be eating too much', and I'd be like OK. Then I'd be making conversation and make them turn around so that I'd pour more on they would be like 'that's bad for the baby and this and that and you know it'. So I try not to do it."

Other practices regarding foods related to cravings. Although the woman initially was not aware she was having a craving, family members served to teach the woman that she was indeed having a craving for a particular food item. There was a need to make certain that any cravings that the pregnant women had were satisfied quickly. The women described their family as being overly attuned to their needs. Women complained that family members would encourage them to eat whatever they mentioned that they wanted or were thinking of; even if mentioned in passing or as an afterthought. Some family members would go out of their way to buy the food in the craving and would go as far as to cook something especially for the woman to eat and satisfy her craving.

Not fulfilling a craving was said to cause the infant to take on characteristics of the food that the woman wanted or could potentially result in a spontaneous abortion. For instance, if the woman craved shrimp and did not eat any, the child would be born with some physical characteristic that resembled a shrimp. Another participant believed that the baby would be born with a protruding tongue as if it were hungry all the time if the mother did not fulfill her cravings. Georgina stated that her family thought her cravings had to be filled because the baby was inside the womb waiting for food with its mouth open as if it was ready to eat the item she

was craving. Georgina commented, "My family would say... if one gets a craving you have to eat it. Eat whatever craving you have or your child, they would say, would be born with its tongue out."

Participants did not give a lot of credibility to the beliefs surrounding cravings. Linda commented "I've never seen a baby banana or anything. That's just a saying. But I think they overreact... that's just a saying and it's just like an expression." However, participants followed the practice of fulfilling their cravings because they believed the practice was harmless and it satisfied their personal needs at the time.

Going to the Clinic

The second subcategory that emerged in the stage of *Caring for Myself* was *Going to the Clinic*. Women mentioned that they valued the care that was being provided to them by their medical provider. Medical help was seen as a way to ensure that the baby was developing and growing well. The medical provider was reported to provide expert information to the pregnant woman on confirmation of due dates, nutrition, exercise, appropriate weight gain as well as monitor the health of the baby and the pregnant mother. Diana commented, "every time I come here, they, you know, they stress the importance of good nutrition, and not gaining too much weight." Of importance to the women were sonograms and testing for diseases such as STDs and gestational diabetes. Their understanding of these disease processes as being dangerous for the developing fetus was often given as a reason they were glad to seek prenatal care. However, they often did not know they had the disease until they were seen by the medical provider. It was not until the women received their STD testing results during a prenatal visit that the women learned of the dangers to the developing child from STD infections. Susana said:

> I was afraid that the baby was going to carry it [STD infection] on; that the baby would be unhealthy. I was afraid that I needed to…well…the sexually transmitted disease I had was curable; which I was happy for, because most of them are not curable. But it was curable with one dosage; which is great. But there are some women who have a disease and it last throughout their pregnancy. And I was told if I had gone through that same situation the baby would come out blind. It just scared me all together. If I would have never gotten pregnant – [and sought medical help] I would have never known [of the disease].

Women spoke of the importance of vitamins and minerals that the caregiver prescribed for her general health and the health of the developing child. Linda commented, "I have my doctor, he has me on vitamins and iron." Women took these dietary supplements as a way to ensure a healthy pregnancy and prevent or treat anemia. A healthy child was seen as one that had no physical malformations, whose development after birth was not delayed, who appeared mentally healthy, and whose temperament was easy to parent. Flor commented, "The outcome is waiting for my baby, he'll have 10 fingers, 10 toes, and 2 eyes" and Ali stated, "Well, they could be, how do you say…a little delayed and sickly children".

The prenatal care they received offered the women a chance to know, usually through the sonogram, that their child was developing well and appeared healthy, before the child was born. All of the participants in the study were receiving prenatal care or had received prenatal care prior to delivering their babies. Women described the types of care received from the clinic and health care providers as educational as they provided pamphlets and oral teachings regarding the pregnancy. The inclusion of WIC as an important source of information and health knowledge was also seen to be mostly positive. The only exception was when Tina commented about the

conflicting information she was given regarding mercury in seafood. It is important to note that none of the participants described the care they received by using the term "prenatal care". They described their prenatal care in simple terms such as going to the doctor, going to the clinic, or going to WIC to obtain what they perceived was needed to ensure the health of the developing fetus.

Being Carefully Active

The third subcategory of *Caring for Myself* is *Being Carefully Active*. Women were cognizant and strived to find a balance between rest periods and activity. Exercise, in the form of daily walks, was viewed as a way for women to avoid having a difficult labor or pregnancy complications. Women were encouraged and reminded to exercise by family members. Balancing rest periods, even brief ones, with work or other household duties was also seen as important. Women were reminded by several people such as family, friends, and co-workers that there was a need to rest and relax now that they were pregnant. Specific activities such as bending, reaching overhead, and even excessive sleeping habits were seen as potentially dangerous for the developing fetus.

Although rest and sleep periods were seen as needed by all women, excessive amounts of sleep were seen as potentially hazardous to the women. Women allowed family members to interrupt their rest so that a balance could be achieved between rest and activity. Family was described as being there to help women monitor excessive sleep habits. Women who spent too much time sleeping were awakened by well-meaning family members. For example, if the woman went to bed at nine or 10 p.m. the night before and did not wake up by 10 a.m. the following morning, a family member would come and knock on the woman's bedroom door and wake her up. The woman was encouraged to get up and get something to eat. Only after the

woman had moved around some and had eaten did the family feel it was safe to let the woman return to her bedroom to sleep. Maria comments, "You can't be without moving for long periods of time. You have to go out, walk. You have to be careful that the baby doesn't get stuck to the womb."

During their pregnancies, women viewed excessive sleeping as a potential cause to a variety of labor problems such as having a difficult and long labor. Participants believed that the fetus could become attached to the placenta and cause problems during the labor process if the women slept for excessive amounts of time. Adequate amounts of sleep were described by participants as eight hours of uninterrupted sleep a night. This strategy proved to be difficult to accomplish if women worked. If participants worked they described other strategies such as finding time in the middle of their work day or after work to sit or lie down, elevate their legs, or even take a nap. Women who worked in occupations that required they stand for long periods of time incorporated frequent rest periods during their day. This resulted in an increase in energy and their ability to continue doing their work. These shorter rest periods were often for 10-15 minutes at a time and would result in the women feeling reenergized and able to continue on with their work or household duties. Linda commented:

> I get home like from work and stuff, and I just feel too tired, like my legs and stuff. I sit down for a little while. My legs would be rested and then I get up and help my mom with the cooking and cleaning. But for the most part, I get to sit down a lot at work. So that helps me, I don't have to be on my feet a lot.

The importance of continuing to exercise was mentioned by all participants except for Natalia who had experienced first trimester vaginal bleeding and felt it was not safe to exercise. In particular, walking was seen as the best type of exercise for women to perform safely.

Women exercised by walking approximately 30 minutes to 1 hour on a daily basis. Walking was performed in their neighborhoods, in a local park, at the mall, or a local flea market.

To be carefully active, women decreased the intensity of their workouts, the location of where they would exercise, and were aware of potentially unsafe environmental hazards. Walks were often made during the day and during non-rush hour times of the day so as to minimize their chances of being involved in an accident as a pedestrian. Although women were encouraged to exercise by their family members, they were cautioned not to exercise too strenuously by family members and were reminded to rest and relax. Over-exercising was thought to be the cause of pregnancy complications such as vaginal bleeding or even spontaneous abortions. Women who exercised more strenuously before their pregnancy decreased their activity levels, often as a result of family members telling them to slow down and to assure a healthy pregnancy. Tina stated:

> I'm used to walking and running, and I'm encouraged <u>not to</u> be so active. I mean, especially by my parents, my family. They always mention, "Don't, Don't overdo yourself. Don't overwork yourself. Just relax and rest." So it's just being aware that I do have limits now that I'm pregnant.

Other physical activities that were limited by the participants were bending, twisting, stretching, reaching over their head, and especially lifting heavy objects. Family members, friends, and even co-workers were responsible for reminding the woman to avoid these activities. The activities were thought to cause pregnancy complications such as nuchal cords, bleeding, back pains, or premature labor. Women often changed the way they performed certain activities such as bending down to pick up something that had fallen so that they could accommodate these physical limitations. Susana said:

> Well, my mother-in-law told me about…ammm…the… my aunt told me about the sweeping and the mopping. Me twisting myself, she told me that about twisting myself that will harm the baby I guess, the umbilical cord. My mother-in-law told me about reaching for high places [too]. Like staying over so much - bending over…it's not good… you don't want to be bending down so much to get something simple. You can if you need to- you can do it. But don't bend over constantly. 'Cause it's not healthy for the baby.

There were inconsistencies in the amount of weight women understood to be a safe upper limit for lifting safely. Some participants stated that she lifted 10 pounds, while other participants, such as Natalia, believed that lifting 40 pounds would not cause any problems. Natalia states that the information provided to her from her physician's office, even after a threatened miscarriage, was not specific. "I'm pretty sure it's safe now… I haven't brought it up. They [the staff at the doctor's office] just said 'don't lift anything heavy'." Therefore, participants continued to lift a variety of items such as backpacks for school filled with books or lifted job related items at their place of employment. This practice was altered at times to accommodate the understanding that they should not be lifting heavy items. One participant, Diana, notes that she bought a crate with wheels so that she could fill it up with her books, material to be graded, and her computer. She would take this crate home instead of physically carrying around the material: "Before I found out I was pregnant I took things all along and I had to go pack my computer and the [book] bag. Now I've got a crate. I just take things out at home, and put them back in one at a time. So I don't have to lift heavy things." If a participant's job required lifting heavy items, women would ask for help from co-workers or even customers to help lift a heavy object.

Controlling my Emotions

The fourth subcategory of *Caring for Myself* is *Controlling My Emotions*. *Controlling my Emotions* describes psychological interventions women used to manage their pregnancies and have healthy pregnancy outcomes. The need for this group of women to keep control of their emotions and decrease stress was a common finding in this subcategory. Women believed that negative emotions influenced the neurodevelopment of the baby and thus were strongly avoided. The women curtailed or minimized what they perceived to be negative emotions such as anger or stress to protect the developing child. If women lost control of their emotions, it became important to regain control over their emotions quickly. Again, family members served to remind the women that they were close to losing control and needed to remain calm. Women also avoided situations that they knew could become stressful or ignored problems that they knew would upset them. Women spoke of socioeconomic concerns such as current financial strains and their inability to visit relatives in Mexico as stress-producing. Participants mentioned that the ability to remain calm through difficult times, having a positive outlook on life, and the ability to just keep going even in the light of adversity were positive psychological goals they sought.

Stressors. First generation women spoke of controlling *corajes* or internal negative emotions that needed to be minimized. This concept was internally focused and differed from the stressors of women in second and subsequent generations. Women in the second through fourth generation spoke of external stressors such as economic hardships. Whether women spoke of *corajes* or stressors, these were both viewed as negative emotions that the women tried to curtail.

Women in the study found that several items in their everyday lives were responsible for the flaring of tempers or producing stress. Some of these things were simple everyday activities such as the stress of caring for other children in the home while they were tired or hungry, working with co-workers who were not doing their share of the work, or interpersonal conflicts such as speaking with ex-boyfriends, ex-husbands, and their respective girl friends.

Women in the second and subsequent generations spoke of the need to control or limit stressors in their lives. These stressors seemed to be external in origin and related to finances, future and past inter-personal relationships, or other household and/or job related duties. Again, the stress was seen as a negative influence on the developing child and needed to be avoided at all cost. The stress was viewed as causing neurological changes in the developing baby that could lead to irritability in the newborn. Natalia, a primiparous participant, commented on the worries and stress she feels regarding her future abilities to parent effectively:

> Ultimately I'm scared, I wanted to be a mother for a long time, I worry that I'm not going to be a good mom… I'm just scared, my mom had me when I was 15 and she had 4 other kids after me. My mom wasn't a horrible mother; she just wasn't a <u>good</u> mother. I just want to be so much better and I'm just worried that I won't be. That's the scary thing.

Stressors related to personal finances outweighed all of the other stressors mentioned in the interviews. Areas of stress that were mentioned were worrying about their ability to pay debts, finding the finances for extra expenses related to the pregnancy, and financial hardships relating to living as a single parent. The uncertainty of the future with the outcome of the pregnancy and the women's financial situation dominated the worries that many women had. Women often ignored economic pressures and would shift their attention to performing other more pleasant activities. Diana commented:

> I have another loan that came into repayment. It's strung out. It just, for the amount, I'm like it's just crazy. Because I have four different lenders, and it's like all together the payment is like $1,000 a month! And I've just been really down these last couple of days thinking about how am I going to pay it? Am I going to have [to declare] bankruptcy? Am I going to have to, you know…all of that is just really… it's really part of my pregnancy. And I start thinking, "Gosh, is this a good time to have gotten pregnant?" You know, I'm stressing about that, and I've been thinking about that especially the last couple of days; especially the student loan that came into repayment.

Participants who were born in Mexico but lived in the U.S. and who were undocumented immigrants feared that if they traveled into Mexico they may not be allowed to return back into the U.S. If the woman was apprehended while crossing the border, participants feared that their children's U.S. citizen status could be revoked and the child's citizenship transferred to that of a Mexican national. To these women, traveling into Mexico and risking losing what they had worked so hard to acquire here in the U.S. was too much of a risk and a stressor for these women. Thus, trips to visit family members and reconnect with family members living in Mexico were cancelled. Women reported that it had been close to one year since they had visited their relatives in Mexico. Participants said that although they would telephone and talk to their relatives in Mexico, they missed visiting with family members in Mexico and enjoying and partaking in different customs, foods, and the less stressful pace of life they had in Mexico.

Other participants who could legally cross the border to visit their family in Mexico mentioned the stress they felt related to the expense of financing new federal requirements for passports to cross the U.S. and Mexico border. Diana said:

> I haven't been [to Mexico] since that passport thing. It takes a good bit for us to go down. We usually go about once or twice a year. We probably won't go. Yeah, because I've looked into it and it will be like $100 for each of us to get our passport. And that's $400 just me and the kids. Yes, and I live paycheck to paycheck, taking that kind of change out of our monthly pay. It's something I have to plan – long term for.

Only one of the participants, Linda, who had received her U.S. citizenship only 3 months previously, had made plans and was successful in continuing her visits to see family members residing in Mexico. The remainder of participants chose to avoid trips into Mexico due to the high cost of traveling or fear of deportation.

Impact on Pregnancy. Although women tried not to lose control of their emotions, at times, they felt it was impossible to completely suppress these negatively perceived emotions. Women who found themselves in these situations were concerned that these negative emotions and the perceived increase in stress might affect the developing fetus. This effect would be seen after the baby was born and would be evidenced by an irritable child that is difficult to put to sleep, and difficult to comfort. Women also spoke of the baby becoming more active and kicking while they were pregnant if they were unable to control their emotions. They perceived this as proof that the baby could also "feel" and "hear" what the mother was going through. One participant, Soniku, believed that uncontrolled and prolonged stress could lead to babies being born with more severe congenital malformations such as gastroschisis, "What is it when her insides come out?" Soniku commented that when she lost control she became physically upset and began to cry and/or yell. She would feel that the baby become active inside her uterus during such events. She attributed this increase in fetal movements to the negative emotions and

stress that she was experiencing at the time. "I would feel her move. I would. With all that yelling, poor baby, she could feel it – when I was upset. If I cried, it would make her move."

Strategies Used to Manage Stressors. Women wishing to minimize their reaction to stress would practice several interventions that were aimed at reducing their reaction to what they perceived were stressful situations. Tactics used to control these negative feelings were as simple as diverting their attention to other things by simply thinking of more pleasant things, walking away from the situation that was causing problems, or simply watching television or listening to music. Women commented that they just had to keep going doing what they were doing, even in light of the stressor affecting their lives. Tina commented regarding her stress relating to being in graduate school during her pregnancy, "I have my goal, my plan to graduate in a certain time, so, you know, I have to keep going."

When women were unable to keep going and began to lose control, the participant and even her family members joined in trying to remind the woman to regain control over her emotions. This was accomplished by restraining their reactions to obnoxious external stimuli they found to be unpleasant or threatening. Participants also managed these potential outbursts by leaving the area where it was occurring or immediately walking away and stopping the conversation with the person who was upsetting them.

When stressors were due to financial strain, women looked to their spouses to offer solutions or put these challenges in God's hands. Diana commented, "God's not going to give us more than we can handle. So my husband is really good about that, and he's like talking the problem out and coming up with different ideas." Sometimes, when stressors were too much for the woman, they would seek to escape their problems. For participants who found themselves in this situation, they would ignore the problem by engaging in an activity that they enjoyed doing.

One of the participants, Diana, commented how she was worried about making her student loan payment, yet her husband came in while she was starting to cook dinner and offered an escape from their daily routine and her worries by saying, "You know what – just leave it there. We're going to go out to eat, so just leave it there."

Regardless of whether women described *corajes* or stress as needing to be tempered, women were responsible moderating their responses to either temper their corajes or avoid stress. They would temper their reactions to stressors by avoiding situations that they knew would make their tempers flare. Susana commented:

> She [mother-in-law] has her ways. Just her ways…. So, I ignore it, cause I don't want to get into conversations. How I'm living there. She's helping us out a lot, a lot. Helping **me** out a lot. So I just blow it off and just go my way. And I just treat her nicely… show her for that I'm happy for being there. That's all I do. 'Cause there are some things that I don't like, I just keep that to myself. I don't tell **him**, because I don't want to get into an argument.

For Susana, avoiding "conversations" with her mother-in-law was an intervention she used to avoid negative topics that could lead to flaring of tempers and increase stress. Negative emotions were simply avoided by the participants.

However, at times when the woman seemed to be on the edge of losing control and showing hints of anger or frustration, family stepped in and reminded her that she needed to control herself for the sake of the baby. Women who found themselves in this situation would leave the room or stop talking to the individual who may have been provoking them. Maria stated, "Emotions… trying so that my…temper doesn't win me over. Or if I'm in a situation that

I know I'm not going to be ok, I try to… avoid confronting that. I try to relax and turn the other cheek."

Another intervention women used to escape from their stressful lives was watching television. T*elenovelas* or Spanish soap operas were watched by participants and offered an escape from their worries and daily routines. *Telenovelas* were seen as a way to cope with stressors and release the perceived stress. The release of stress was accomplished through the act of crying with actor's predicaments on the television shows. Linda describes this when she said:

> Like before I used to be like 'Oh my God, the Telenovelas are SO dumb'. But now, I watch them, and I start crying, and I feel emotions I've never felt before! Well, I did feel them before. But not like I do now. So, it causes me – not struggle. But what is going on with me! Why am I crying? It's not even sad, but like I'd be crying? I guess it's a hormonal change or something, and I'll be crying.

Other forms of entertainment that were mentioned by the participants that decreased stress were going for walks, listening to music, and spending time with their family. Maria commented, "Not thinking in things, I try to forget things that are bothering me … I go out to walk with my daughter… watch television – cartoons."

For younger, unmarried participants, who worked in service-related jobs, their solutions to decrease financial stressors they felt came in the offer of assistance from family members which included future in-laws. Concerned family members encouraged the participants who were stressed about finances to move in with them and simply stop working. Often, the father-of-the baby's family offered to financially care for the woman until she delivered a healthy infant. This was done so that the woman could focus on taking care of herself and the

developing child growing inside her. Susana, after having first trimester bleeding, moved in with her future mother-in-law and her fiancée and describes her situation:

> I lived with my father – I used to live with my father and my older sister and it was just too hectic. It was too hectic. I guess the stress, and the responsibility, he'd hound me [about bills]. I just wasn't relaxed. So my fiancée and my mother-in-law, they'd tell me… if you move in you don't have to do so much, you don't have to worry about working or anything like that, he'll take care of you just until you have the baby. You'll be relaxed, you'll be ok. You don't have to think so much about your bills and this and that. So that's what I decided to do.

In contrast, Natalia, a teacher at a local public school also experienced bleeding during her pregnancy. Although her grandmother offered to move in with her and care for her during the pregnancy, she refused the help. Instead, she dealt with the stress of early first trimester vaginal bleeding by delving herself even further into her teaching work. This was done as a way of avoiding thoughts and worries relating to the threatened miscarriage. For Natalia, the busier she was, the less time she had to think about a potential miscarriage. She described this situation with tears in her eyes, "…there was nothing that I could do to prevent it – <u>if</u> it was going to happen. I kept myself busy at work."

Stage 3: Constant Monitoring

The final stage of the process of *Managing my Pregnancy* is *Constant Monitoring*. In this stage women evaluated the interventions they implemented from the previous two stages. Evaluations were done to ascertain if their interventions were effective. This required the women to continually remember that they were pregnant and there was a developing infant growing inside their bodies. This knowledge was used as a filter or lens that the women used to

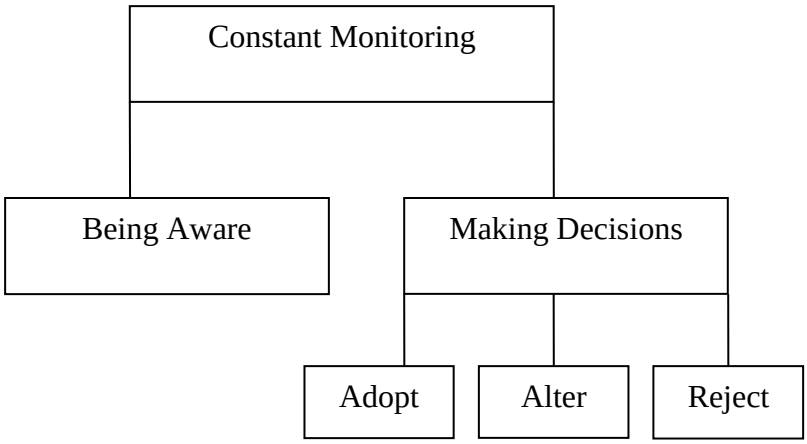
evaluate the decisions they had previously made. Women monitored their bodies for physical changes. If changes were found the woman would revisit the previous two stages. Physical changes in their bodies such as pain or other signs like vaginal bleeding lead women to re-enter the *Gaining Knowledge* or *Caring for Myself* stage. *Constant Monitoring* has two subcategories; *Being aware* and *Making Decisions*. Figure 4 is a diagrammatic representation of this stage.

The actions that women took to evaluate if their decisions and interventions were being effective are best described as monitoring their bodies for complications. This goal was achieved by the process of constant monitoring. Women in this stage can be described as monitoring the effects of the multitude of decisions they made regarding their pregnancies. Often, physical symptoms warranted revisiting a decision they had previously made. It was at this time, when the woman perceived a change in her status that the process of *Gaining Knowledge* would be revisited and interventions under *Caring for Myself* would be reevaluated and implemented. The decision to revisit a previous stage encouraged women to adopt, alter, or reject certain information they had been previously given.

Being Aware

Being Aware is the first subcategory of *Constant Monitoring*. Throughout the interviews, women described that there was a need to be aware that they were pregnant. This feeling lasted throughout the entire pregnancy even when they clearly showed that they were pregnant. For example, Diana commented regarding her physical limitations she imposed on herself, “So it’s just being aware that I do have limits – now that I’m pregnant”. Participants in this stage were conscious that every decision they made needed to be carefully thought out. These women

Figure 4. Constant Monitoring



would make these decisions with their pregnancy and the developing child foremost in their minds. Women monitored their physical bodies for pain and or complications of pregnancy such as bleeding and even monitored their developing fetus for new information that could lead to a change in their activities such as increased fetal movements during a stressful event.

For example, Susana described a situation during her first trimester when she was working as a cashier at a local chain store, lifting a variety of heavy items such as car batteries and 24-packs of bottled water. Although she experienced back aches and swollen ankles earlier in her pregnancy, she had learned through the *Gaining Knowledge* stage that these were common complaints of pregnancy. It wasn't until she experienced vaginal bleeding that she stopped the activity and sought medical help after revisiting the *Gaining Knowledge* stage again. During the revisiting of the Gaining Knowledge stage, Susana spoke to family members to obtain new information regarding her physical change. Susana decided to visit a local emergency room based on the new information she received from her family members.

Susana made this decisions based on new information she gathered during *Being Aware, Gaining Knowledge,* and as she monitoring her body. Susana commented:

> And then my back, after 2 hours of being there [at work], my back is just tired. My ankles are swollen. But the thing… ammm…around that time, I had to go to the doctor because I was bleeding at work. I didn't know what that was. So, I called my dad and he told me to [call] my mother-in-law and have her take me to the hospital. So I was there [at the hospital]. I was just scared. I was scared. Because I didn't know what was happening. So they told me that I was lucky…to slow down. So that's what it was.

Women in the *Being Aware* subcategory trusted their instincts and intuition to know and choose what was right for them and their unborn child more than any other source of information – even their families and medical personnel. This was true even for primiparous women who had no previous, personal, pregnancy knowledge to draw from.

Being Aware also included knowing that they had made the right decisions during their pregnancies. Participants who had already given birth validated the choices they had made during their pregnancies by commenting that because they had a healthy pregnancy and delivered a healthy infant they knew they made the right choices.

Other family members such as mothers, aunts, and cousins who had previously delivered healthy infants were seen as experts and had accurate knowledge regarding how to monitor their pregnancy if they too had delivered healthy infants. Participants would listen to these family members in addition to monitoring their own bodies.

Even in light of complications, some participants continued to try to care for themselves at home first. One participant had been diagnosed with cholelethiasis during her first trimester. Although she was following a low-fat diet, toward the end of her pregnancy she developed an acute gallbladder attack with severe abdominal pain and nausea. She describes trying to treat herself at home by continued monitoring of her pain and other symptoms. However, when the pain became intolerable and she couldn't tolerate it any longer, she decided to seek medical help by going to the clinic and trying to see the health care provider. Maria stated:

> Towards the end of April I felt pain after I ate, it would hurt here on my right side and the pain would radiate towards the back. I believe that it was the first weekend in May… I got really sick. I was sick the entire weekend with that pain, pain, pain, pain. On

> Monday I didn't go to work and on Tuesday I said to myself, no I have to go to the doctor, I can't stand it anymore.

Constant monitoring involved women being attuned to their bodies and listening to their bodies for subtle changes. These changes occurred when their bodies were physically exhausted. At this time, participants became aware that they needed to pay attention to aches and pains they were feeling. It was usually at the end of a long day of work that they decided to rest. Many of the participants described feeling this fatigue and exhaustion in their legs and feet the most. This was particularly true for those women who continued to work throughout their pregnancy. Maria comments, "More than everything when my body is tired, when it's totally tired, that I feel that I'm tired. My feet are exhausted and heavier than normal; this is when I know it's getting late."

At times, women initially rejected information that was given to them either by family, friends, co-workers, or medical staff. Women often felt that these people were being overprotective and thus the information was dismissed by the pregnant woman and the activity was continued. However, it wasn't until there was a physical symptom that changed in her condition that alerted the woman to stop the activity and reevaluate her decision. Susana commented:

> I've learned that now because I'm just stubborn, I just want to be on the go – do this, do that. That's how I've always been. I'm just stubborn! And until then I get my back pains – and my lower back pains. I just like stop. Ok, hang tight and for 30 minutes, just stay resting.

After one of her pregnancies, Raquel, a fourth generation participant, commented how she had decided to take advantage of *la cuarentena* after experiencing some sharp pain to her left

abdominal side. It wasn't until she felt the pain and she re-evaluated her previous decision and actions that she made a decision to alter her activities around the house. Raquel said:

> It [the pain] kind of scared me a little bit. I was doing a lot around the house and I was going out and about **a lot**. I felt great. I could bend over and things like that. My mom had been telling me 'take it easy', my mother-in-law said 'cuidate' [take care of yourself]. I spoke to my friend [after experiencing her pain] and she said 'You know comadre, you really need to take care of yourself, take advantage of the people coming to help you at home'. You know, you are right. Maybe all these people, they may be getting it right. I decided to really take it easy. I didn't even go to church… I was going to just stay at home; pretty much, I didn't really do much… I just put food on the table, I haven't been making breakfast. They just pour cereal in the mornings for the kids and have sandwiches [for lunch]. People have brought meals… my mom has come and cleaned, my mother-in-law came for 4 days and she cleaned and even did laundry, and people from church brought meals. I didn't even ask my mom or my mother-in-law to come.

At times, some of the participants seemed unsure or even indecisive about their decisions and would look towards the researcher for validation of their choices. One participant, Tina, commented regarding her knowledge of foods high in folic acid "My understanding it's more of like the spinach, spinach, and I love spinach, and vegetables. Right? I think (laughs nervously)." During Diana's interview, she described which foods she understands to be high in folic acid, Diana stated "my understanding is it's more of like the spinach and vegetables. Right? I think (laughs nervously)."

Making Decisions

The final sub-category of *Constant Monitoring* was making decisions regarding information they gained. As women received information from either an active or passive source they entered into the decision making process. Participants also evaluated their previous decision-making regarding the information they had received and already chose to implement. Women did so in order to change behaviors which they evaluated as needing change. Women knew to make changes in their decision based on information they gathered through *Constant Monitoring* of their body responses to the decisions they had made. Women had a difficult time describing the actual process that occurred in making these decisions. However, the participants described two main areas that guided their decisions. These were personal experience and intuition.

Women who used personal experience as a way to make decisions used previous knowledge in order to make their decisions. This knowledge came from either their previous pregnancies or someone else's pregnancy. This included knowledge of other people in their family or friends who had experience previously with a pregnancy. If the woman made a decision based on someone else's pregnancy it was usually a close family member, such as a mother's, sister's or cousin's pregnancy that influenced her decision making. Women who used personal experience and who were making decision based on something that could result in a negative outcome, were more likely to follow the recommendation. Participants commented several times that they were afraid that <u>not</u> following the advice could result in a negative outcome for the pregnancy. Susana said:

> My mother-in-law told me about reaching for high places, like I guess, like china cabinets and ammm…in the restroom where if you have anything high – you know it's

bad to be reaching because somehow, someway, her cousin had lost her baby because she was reaching so much. The umbilical cord tied around the neck…and things like that. That's what they [the family] told me. Which I do.

Participants also described following their intuition as a method they used to make decisions. Women described this sense of "knowing" or intuition about decision-making. When this method of decision-making was used, participants were certain that their decisions were "right". The women followed their innate ability to feel or know what was "right" for them, their immediate family (husband, children, and father of the baby), and the developing baby. Flor, although she was primiparous, described this by saying, "I think I'm pretty prepared and I know what to do." Women followed their intuition even when they had conflicting information from experts such as medical personnel or other women who had already had children. Women using intuition as their decision making method still followed what they thought was best. Participants weighed their options carefully and then made the decision that they thought was best for themselves and their baby. Susana said, "I know what is right and what's wrong. So, she [mother-in-law] tends to – butt in and get involved with my fiancée. When I **know** I'm taking good care of myself, of **him**. I know how to help him out."

However, when women were faced with making decisions that involved conflicting information from a medical provider or the family, surprisingly some women said they would follow their instincts and intuition before following the health care provider's advice. Reasons for this were often rooted in just "knowing" that their decisions were somehow the right decisions for themselves and their unborn child.

Participants consulted first with their families and second with a medical professional (nurse or physician). However, women eventually did what they thought was best for

themselves and their developing babies. Linda described this process, "I just go with my instinct. I just go, if I know to look at the consequences. Is it worth it or is it not worth it. And that's how I go with my instinct; I basically follow my instinct and my mother's advice and then the doctors".

Regardless of which decision-making style they implemented, decisions the participants made belonged to one of three subcategories of *Making Decisions*. Women chose to adopt, alter, or reject knowledge they had gained and made decisions based on one of these three decision-making outcomes.

Deciding to Adopt. A woman choosing to adopt knowledge would simply follow the intervention or apply the information she gained. This was done without making any changes to either the intervention or the information. Women making decisions to adopt knowledge would do so out of respect and/or the desire not to start any conflict within the family. Participants would go along with the recommendations made by others or what she gained through the process of *Gaining Knowledge*. In particular, this was true when it involved types of physical advice that the pregnant woman felt she had to follow such as limits on activities that could harm the baby.

Other participants described following traditions that they decided to adopt. Often, decisions were based on the fact that they had heard of these traditions for generations and they had been passed down to them. Women felt that the traditions had to be based on some unknown truth. Therefore, they simply chose to adopt the knowledge. Soniku stated, "If the majority [of women] say that [wearing a safety pin during a lunar eclipse], there's got to be a reason. I'd do it."

Deciding to Alter. Women who wished to apply portions of their new knowledge, or wanted to change a previous decision fell into this category. Women decided to alter or change an aspect of their decision based on new information they had received. This information was obtained from *Gaining Knowledge* or through *Constant Monitoring*. Susana comments that after her first trimester bleeding episode she made the decision to move in with her mother-in-law and her boyfriend. She made the decision to quit her job and not work until after the baby was born. To Susana, making the decision to alter her living situation and move in with the mother-in-law and fiancée offered her a way for her to learn how to monitor her body and learn to become aware of changes in her body. She credits her mother-in-law and aunt for teaching her what she needed to know about the risks that could have led to a miscarriage. Susana commented, "You don't even feel that stress until it happens. I didn't know that, until my mother-in-law and my aunt told me "calm down – don't worry so much".

Deciding to Reject. Women deciding to reject information did so without any further debate or second guessing their decisions. A hallmark of this process is that most of the women were confident that they had made the right decisions regarding the pregnancy topic. For example, women said they would abstain from alcohol or drugs during their pregnancies. This was a decision that was never again revisited. For Raquel, this applied to what she believed were old wives tales she had heard from her mother. She was told to avoid walking barefooted while she was pregnant and after the baby was born to avoid getting sick, "…you shouldn't walk around barefooted, because the floor is cold and later on… later on, you will feel it in your legs and it's bad for you." Raquel added, "It has nothing to do with it". Raquel continued to walk barefooted throughout her pregnancy.

Summary of the Findings

The core category, *Managing my Pregnancy*, describes the process and interventions this group of Hispanic women of Mexican ancestry engaged in that led them to ensure they did everything possible to have a healthy pregnancy, a quick and uneventful labor, and delivered a healthy infant. *Managing my Pregnancy* was a three-stage process. Participants in the study spanned all trimesters of pregnancy, came from different generational levels, and had other varied demographics. Each participant described the efforts they engaged in order to try to ensure a healthy pregnancy, smooth birth process, and healthy infant. The three stages of *Managing my Pregnancy* are *Caring for Myself, Gaining Knowledge*, and *Constant Monitoring*. The process began with *Gathering Knowledge,* which included obtaining information through passive and active pathways. *Reading Information* and *Listening to What Others Say* were two subcategories of *Gaining Knowledge*. The second stage was *Caring for Myself* and was demonstrated by the participants engaging in the subcategories of *Trying to Choose Healthy Foods*, *Going to the Clinic*, and *Being Carefully Active* which were physical interventions the women engaged in to manage their pregnancy and ensure they had a healthy newborn. *Controlling my Emotions* describes a set of psychological interventions the women followed during their pregnancies. Finally, participants described the stage of *Constant Monitoring*. In this final stage, participants described how they cared for themselves by listening to their bodies and monitoring for new knowledge they needed to incorporate or symptoms they perceived to be important that would lead them to reevaluate a previous decision they had made. Women had the goals of ensuring that they had a healthy pregnancy, smooth labor process, and delivered a healthy infant. There are two main subcategories to *Constant Monitoring, Being Aware, and Making Decisions*. *Being Aware* describes a process that women used in which they recognized

that they were pregnant and needed to do things differently during this stage of their life. *Making Decisions* refers to the decision-making strategies that women used to effectively make decisions. These decision-making strategies were deciding to adopt, alter, or reject knowledge or information they received.

Participants were engaged in more than one stage at a time and navigated in and out of all stages as new information was gathered and as they chose to adopt, alter, or reject new information into their beliefs and practices regarding their pregnancy. This process ensured women that they had a healthy pregnancy, smooth birth process, and delivered a healthy infant.

CHAPTER V: DISCUSSION

This chapter presents a brief summary of the study problem and is followed by a discussion of the findings of this study. Findings will be presented as they relate to the current literature. Implications for future research, nursing education, practice and health care policy are addressed. The chapter concludes with the study strengths and limitations.

Discussion of the Study Findings

It has been hypothesized that new immigrants bring traditions, values, and behaviors of their culture, which have been shown to support health (Guendelman, 1995; Guendelman, et al., 1990; Jones, et al., 1999). The stimulus for the study was an interest in the "epidemiologic paradox". The paradox is that certain Hispanic populations, mainly less acculturated and Spanish speaking, have similar or better birth outcomes than non-Hispanic Whites despite lower levels of prenatal care and lower socioeconomic status. Prior research has implicated protective behaviors and values among the Hispanic population as a reason for the enhanced perinatal outcomes in first generation immigrants (Guendelman, 1995; Guendelman, et al., 1990).

The purpose of this grounded theory study was to gain an understanding of current pregnancy-specific health beliefs and practices that Hispanic women of Mexican ancestry engaged in during their pregnancies. The study also explored the decision-making process related to the adoption, alteration, or rejection of pregnancy specific beliefs and practices. This study addressed the following research questions: a) Which pregnancy health beliefs and practices are used by pregnant women of Mexican ancestry who live in the southwest United States? b) What sources do pregnant women of Mexican ancestry state for their knowledge regarding pregnancy beliefs and practices? c) What purposes do pregnant women of Mexican ancestry identify for the use of pregnancy specific beliefs and practices that they engage in? d)

What origins and meanings do pregnant women of Mexican ancestry describe for the health beliefs and practices they have chosen to follow? e) What is the decision process that pregnant women of Mexican ancestry undergo as they choose to adopt, alter, or reject culturally specific pregnancy knowledge?

A total of 15 Hispanic pregnant and postpartum women were interviewed. Participants were recruited from an obstetric/gynecology clinic in a community health center and the surrounding community in an urban southwest Texas city. Participants mean age was 27 with a range of 19-36 years.

This qualitative research study used grounded theory methodology to address the research purpose and questions. Through the use of grounded theory methodology the core category that emerged was *Managing my Pregnancy*. This three-stage process included *Gaining Knowledge, Caring for Myself,* and *Constant Monitoring*. The model presented is not meant to be a linear model, but rather a continuous and simultaneous model that women engage in as they care for themselves during their pregnancies. Although the model describes three stages, the stages cannot be separated from the whole. The findings from this study will be further discussed in the light of known and emerging research.

Discussion of Demographics

The participants in this grounded theory study represented the heterogeneity of the Hispanic population. Women in this study had varied educational levels and marital statuses and were both English- and Spanish-speaking. They also represented wide-ranging pregnancy gestational ages at the time of interview and included interviews with postpartum women. All the participants reported Hispanic ethnicity with Mexican origins except for one who described herself as having Asian-Hispanic ethnicity. There was a wide generational representation

ranging from first to fourth generation. Type of health insurance was used as a proxy for household income. Ten women in this study were low income since they qualified for Medicaid/CHIP. The remaining 5 participants had private health insurance offered through their employers. The mean household size of this sample was 4.85 and is consistent with current research findings which state that Hispanic households are typically larger in size (U.S. Census Bureau, 2000). Despite socioeconomic data that represented two socioeconomic groups the women shared consistent ideas regarding the process of managing their pregnancies.

Although statistical analysis between these groups cannot be completed due to the small number of participants in each group, the following trends were identified in the data. All first generation women, regardless of level of education and type of health insurance followed their family's recommendation and protected themselves against the effects of a lunar eclipse by wearing a safety pin or key around their umbilicus. In addition, some of the women (Carolina, Flor, and Soniku) in second to fourth generations also protected themselves from the effects of the lunar eclipse. Knowledge of *La Cuarentena* did not seem to be influenced by either generational status or level of education since many of the participants (Linda, Georgina, Sonia, Carolina, Raquel, and Susana) in first thru third generation spoke of knowledge of and practicing varying descriptions of *La Cuarentena*. From this analysis, it is difficult to see what if any factor may have influenced the women to practice these traditional beliefs.

Discussion of Stage 1: *Gaining Knowledge*

The first stage of the process of *Managing my Pregnancy* was marked by the woman gaining knowledge from a active and passive sources. Sources of information included *Reading Information* and *Listening to What Others Say*. *Reading Information* included written information and internet sites. *Listening to what Others Say* included listening to friends, co-

workers, and clinic staff. Information obtained from the participant's family included information regarding family traditions.

Written Information

Women in this study read a variety of pregnancy related pamphlets, books, and health literature provided by the clinic and by the staff at the WIC program. All of the women who were seen at the clinic for their pregnancy were given the following pamphlets by the clinic staff for the pregnant woman to review and read on her own time: *Planning a Healthy Pregnancy/Como Planificar un Embarazo Saludable* is a 31-page self-care handbook that gives information on common topics related to pregnancy such as basic information regarding trimesters, prenatal screening, signs of miscarriage, premature labor, or other complications, protecting your baby from hazards, alcohol, tobacco and other drugs, sexually transmitted diseases, diet and nutrition, exercise, dealing with discomforts of pregnancy, getting support, preparing for your baby, labor and childbirth, special childbirth procedures, and also offers the mother an area to keep a personal journal, special memories, and the baby's birth information. In addition, the clinic staff provided handouts on the following topics: *What to Bring to Your WIC Appointment, Triple Screen Information Sheet, Pregnant? Protect your Baby from Syphilis, Tuberculosis: Get the Facts, A More Comfortable Pregnancy, Prevent Anemia, Eat Healthy & Be Active, Healthy Moms for Healthy Babies, Eating for You and a Healthy Baby Too, Folic Acid, and Calcium.*

All of the information was offered in both Spanish and English. Most of the information provided in the above pamphlets listed the information regarding foods and exercise that the participants mentioned in the study. For example, information was given on the avoidance of coffee, tea or other drinks that have caffeine because they may not be safe ("Planning a healthy

pregnancy," 2005). The pamphlet describes the need to limit fats, added sugars and calories with no nutritional value and stresses the importance of fluid intake. In addition, exercise recommendations that call for the woman to engage in a form of physical activity such as "brisk walk for 30 minutes or more… on most – preferably all – days of the week" are clearly stated ("Planning a healthy pregnancy," 2005). The information presented in this pamphlet alone corresponds to some of the information that the participants described in this study and participants stated that they read the information that was presented in this manner.

This is in contrast to current literature findings that state that Hispanics may not read written information that is provided to them (Berman, 2006). Although causal relationships cannot be made, it appears that for this group of women, both the written information they received and verbal information presented to them seemed to have some effect.

Women in this study also mentioned that they read books. In particular, the book What to Expect When You are Expecting (Murkoff & Mazel, 2008) seemed to be popular with the English-speaking group. This finding is in conjunction with the Listening to Mothers II national telephone survey conducted with 1,573 mothers who delivered in 2005, that found that first time mothers identified books as their most important source of information (Declercq, Sakala, Corry, & Applebaum, 2007). The Spanish-speaking participants did not mention any particular method for obtaining information other than through listening to others. This may be due to the lack of available Spanish print books and other materials that relate to pregnancy.

Use of the Internet

For the participants in this study, the internet was a tool used by 12 participants to gain or add knowledge about certain health topics or to learn more about common complaints of pregnancy. This closely follows a trend seen by researchers who have noted an increase in

internet use among even the lowest income households (less than $15,000 annually) from 9.2% in October 1997 to 25% in September 2001 (*A nation online: How Americans are expanding their use of the internet*, 2001). The report produced by the National Telecommunications and Information Administration and the Economics and Statistics Administration state that internet use among Hispanics grew at an annual rate of 26%. In particular, differences in internet use among Hispanics differ considerably between monolingual or bilingual households. According to the census bureau, approximately 1 in 9 Hispanic households speaks monolingual Spanish (U.S. Census Bureau, 2000). In 2001, 14.1% of monolingual Spanish speaking Hispanic households vs. 37.6% of bilingual Hispanic households used the internet (*A nation online: How Americans are expanding their use of the internet*, 2001).

Users report the value in the anonymity, convenience, and volume of internet health information (Powell & Clarke, 2002). Pregnant women are generally well, which is one of three groups of internet users – the well; the newly diagnosed; and the chronically ill and their caregivers (Powell & Clarke, 2002). Internet users in this present study fell into all three of the categories since the internet was used to search and secure information on general pregnancy information, specific information on STDs, and precise information on diabetes.

Listening to What Others Say

Women in this study reported a variety of different individuals who provided information such as family members, friends, neighbors, and professionals. Family members who provided information were usually female, older individuals such as a mother, mother-in-law, grandmother, or aunt. This corresponds to previous research findings that show a variety of people responsible for offering health advice to the pregnant woman. But mainly female head of households were responsible for the information being passed down (Hollyer, et al., 2002). St.

Clair and Anderson (1989) found that women were sometimes given incorrect or harmful information regarding the pregnancy. Two participants in this study, Claudia and Linda, were given incorrect or erroneous information regarding pregnancy specific knowledge. Claudia, who had no reported health problems, was told by her mother not to consider breast feeding since she could inadvertently give *"something bad"* to the newborn through her breast milk. The other participant, Linda, was told by her mother to avoid sleeping in a prone position since the baby's face could be smothered inside the womb and suffocate the child. The information that women listened to and followed was usually correct. The only exception was Claudia's information regarding breast feeding for this healthy pregnant woman. Therefore, for this group of women, the information that was passed down from one generation to the next was accurate and safe.

The women described that being cared for meant sharing information about the pregnancy and how to care for themselves. They valued the role of the mother and sought out information from their own mothers and other women who were mothers for health advice. This is in line with previous research that describes the important role of the mother in Hispanic populations (Jimenez, 1995; Lagana, 2003). The participants also gave credibility to people who had successfully completed a pregnancy and delivered a healthy infant. Thus, they were more likely to listen to women who were mothers themselves.

A new finding in this study is the role of male family members in this process. Male members also played a role in providing information and support to the pregnant woman – especially fathers and brothers of the participant. This has not been previously reported in the literature regarding prenatal care of this population. In particular, most research states that Hispanic households are matriarchal when it comes to making health care decisions (Wells, Cagle, & Bradley, 2006). Therefore, these findings suggest that the entire family, even male

members may play a role in providing support and knowledge to the pregnant woman regarding the pregnancy.

Discussion of Stage 2: *Caring for Myself*

Caring for Myself is described as the interventions women engaged in to care for themselves and the developing infant. Through the research process four subcategories emerged in the *Caring for Myself* category. These categories were: *Trying to Choose Healthy Foods*, *Going to the Clinic*, *Being Carefully Active*, and *Controlling my Emotions*. Several other studies described similar findings and they will be discussed in relation to this study's findings. In addition, new findings not previously seen in current research will be highlighted.

Dietary Findings

Women in this study were concerned with eating healthy and balanced meals. Food intake was seen as a way to ensure the health of the developing infant. In addition, women were eager to eat meals on a schedule. Therefore, participants strived to eat small but frequent meals with nutritious snacks. This was viewed as an important change and was often made early in the pregnancy. Women forced themselves to eat more fruits and vegetables even if this was not part of their normal routine prior to the pregnancy. Some dietary items, such as hot Cheetos and *picante* sauce, were avoided or only eaten in moderation. These items were avoided because of a belief that they caused stomach complaints such as heart burn. Well-meaning family members were seen as supportive in that they reminded women not to eat so much of these items. Both family members and participants were concerned with fulfilling dietary cravings immediately so as to prevent the developing infant from taking on a physical characteristic of the food which the mother was craving. Participants learned about nutritious and foods that could be potentially

dangerous, such as mercury-laden tuna fish, from different sources such as their medical providers and WIC programs.

Drinks consumed by these women were often homemade, such as *aguas frescas* (water flavored with fresh fruit juice) and *liquados* (fresh fruit shake made with milk and sugar), as well as other store-bought items such as juice and Kool-Aid. Women also mentioned they drank milk often to relieve heartburn. It is important to note that juice and Kool-Aid were often seen as healthy drinking alternatives to sugary sodas and caffeinated drinks such as coffee. Women in this study perceived that soda and caffeine were the cause behind hyperactive, restless, mischievous or "ornery" children that are a challenge to parent.

Previous research describing dietary findings of pregnant Hispanic women includes research conducted by Pearce (1998), Lagana (2003), Guendelman & Abrams (1995), and Athern, et al. (2004). These studies found that women also ate healthy foods such as fruits and vegetables. In addition, women in the above mentioned studies also believed in the connection between eating healthy and ensuring a healthy outcome to their pregnancy. One study in particular found that first generation women have higher average intake of protein, vitamins A, C, folic acid, and calcium than their second generation counterparts (Guendelman & Abrams, 1995). However, this present study found that most women, regardless of generational status, found it important to increase their consumption of fresh fruits, vegetables, and fruit juice. These types of foods are rich in vitamins and folic acid and contribute to a healthy pregnancy and birth.

It is interesting to note that none of the women interviewed in this study thought that there was a potential risk to the developing infant from lead exposure. The literature states that poor, urban, and immigrant populations are at greater risk for lead exposure than other groups in the United States (Cleveland, Minter, Cobb, Scott, & German, 2008). Women can experience

fatigue, nausea, vomiting, dizziness, and headaches which are symptoms that can mimic common complaints of pregnancy and which most of the participants complained about in this present study (Cleveland, et al., 2008). Potential risks of elevated serum lead levels during pregnancy can include an increased risk of hypertension during pregnancy and miscarriage (Cleveland, et al., 2008). In addition, women in this study described children as being hyperactive, unruly, and difficult to parent if the mother ingested caffeine during the pregnancy. It is important to note that these symptoms may be attributed to high lead levels in the children of these mothers. Cleveland, Minter, Cobb, Scott, and German (Cleveland, et al., 2008) report that adverse effects of lead exposure for the child may include impaired neurodevelopment and deficits in academic and cognitive skills. Women in this study may have been at risk of having increased lead levels since the majority of participants lived in housing built prior to 1970 and may contain lead-based paint or residue that may be found both indoors and outdoors in the soil.

This current grounded theory study adds to the knowledge of health beliefs regarding dietary practices among Hispanic pregnant women. In particular, it shows that for the most part, these participants did try to make healthy food choices to ensure the health of their developing baby. However, women in this study were not aware of any potential risks regarding lead exposure during pregnancy.

Stress and Corajes

Women spoke of the constant need to try to stay calm, avoiding things that angered or frustrated them, letting go of things that bothered them, and trying to avoid getting mad or completely losing control and becoming angry. The ability to control their emotions was seen as positive and necessary in order to have a healthy pregnancy. Women spoke of the struggle involved in trying to gain control over their emotions at times and how their family reminded

them not to lose control. This was done so that these negative emotions did not affect the developing infant in any way.

Differences between first and subsequent generation women centered on the use of the word *corajes* versus stress. First generation participants referred to internalized emotions called *corajes*. These women described how small things in their life where they perceived they had little if any control seemed to worsen their *corajes*. On the other hand, subsequent generations used the word stress, and described stressors and worries related mainly to finances. However, other stressors were related to work, the expected pregnancy outcome, and present and future interpersonal relationships, including their ability to parent effectively.

Lagana (2003) had similar findings. The Don't Worry/*No se Preocupe* category described by Lagana (2003) was similar to the Anglo concept of stress. However, she emphasizes that the verb used in Don't Worry/*No se Preocupe* indicates an internalized decision not to respond to outside stressors. *Preocuparse,* or the act of worrying was seen among pregnant Hispanics as having a detrimental effect on the pregnancy and the fetus (Lagana, 2003). Pregnant women were sheltered against upsetting news and family members who upset them were harshly criticized (Williams, 2001).

This internalized view of Don't worry/*no se preocupe* is in sharp contrast with the Anglo concept of stress that is external and may be out of the women's control and "bombards the woman frequently and from multiple sources" (Lagana, 2003). As in this study, Lagana (2003) found that this belief was strongly enforced by family members.

Cohen (1979) and Romero (2008) describes a similar concept to *no se preocupe*. The researchers state that Hispanics modify their feelings through the use of the concept *controlarse/aguantarse*. The concept of *controlarse/aguantarse* gives the woman a setting for

exercising self-discipline over disagreeable feelings, thoughts, and moods that are caused by *disgustos* (unpleasant events) or *contrariedades* (troubles and upsetting situations). Hispanics who modify their feelings through the use of *controlarse/aguantarse* help to hold back outbursts of feelings such as anger (*corajes*, *enojos*, or *rabias*) or the reactions of fear which result from an unexpected experience (Cohen, 1979).

The concept of *controlarse/aguantarse* that Cohen (1979) and Romero (2008) reported a similar concept that participants in this study followed as the women attempted to remove themselves from stressors and/or modify their feelings. This current study illustrates that women performed such self-discipline to decrease negative effects on the fetus. Women in this study described their mounting *corajes* they tried to control. For the participants in this study, c*orajes* referred to women's physical manifestations to external stressors. *Corajes* was viewed as stress being internalized by the woman, rather than a nebulous external source of stress which the woman had no control over.

Women in this study worked diligently at minimizing their stressors through a variety of healthy interventions. Women in Lagana's (2003) study wanted to simplify their lives and were encouraged to relax. Participants in this present study described family members monitoring their activity and their stress. In an effort to decrease their stress, participants in this study lived with or decided to move in with family members such as future in-laws. Such decisions were seen as positive for the reduction of stressors and to assure a healthy outcome to the pregnancy. One participant even made a decision to quit working after she had vaginal bleeding while at work early in the pregnancy. This was similar to findings in the Lagana (2003) study. One major difference between the two studies is that women in this study thought that their inability to control their *corajes* would lead to pregnancy problems such as miscarriage and/or premature

labor. This finding adds depth to our current knowledge about this phenomenon. Although a wealth of information exists on pregnancy related stress in the literature, to date little research other than this study provides descriptive findings of this phenomenon that are specific to pregnant women of Mexican ancestries.

A new finding and one that is not well-represented in the literature is that women in this study worried about finances – especially their inability to pay for bills. Perhaps the current state of our economy marked by a 26-year high in unemployment rates and an unprecedented recession ("New jobless claims hit 26-year high," 2008) may have brought these issues to the forefront. But the findings highlight the struggles that families with limited incomes experience when the economy is doing poorly. Several studies exist on economic stressors that are valid for pregnant women in general (Curry, Burton, & Fields, 1998; Lobel, 1997; Ruiz, Fullerton, Guerrero, Garcia-Atwater, & Dolbier, 2006). In particular Curry et al.(1998) described the assessment of pregnancy-causing stressors to include financial worries from sources such as food, shelter, health care, transportation and other general money worries such as inability to pay for bills.

Worries did not just involve financial difficulties. The women were also concerned about the ability of the woman and her family to continue visiting family members who live in Mexico. The current socioeconomic and political debates may have influenced the women to feel insecure regarding travel plans to Mexico. These visits to Mexico serve to reconnect with family members who live in Mexico and may serve to enhance the sharing of pregnancy information and support. Those women who met the legal requirement to obtain a residency card, citizenship papers, or a passport mentioned the cost in obtaining such documents as a hardship. Passport application and processing fees can range from $85 to $100, for children under the age of 16 and

adults respectively ("Passport Fees," 2008). These fees may still represent an undue burden on low-income families. None of the families were aware of less expensive alternatives to passports, such as the new passport card.

A few participants in this study could not qualify for a passport or passport card since they stated that they did not qualify because of their undocumented status. This is in line with current research that has found that many Hispanic families live in households where there is a mix of undocumented and documented individuals. One survey study conducted by Berk, Schur, Chavez, and Frankel (2000) found that half of married, undocumented immigrant households in Texas and California have a child who is a U.S. citizen. For these families, the reality of having an undocumented parent and a child who is a legal citizen of the United States by virtue of birth is a reality. These families deal with the burden of being unable to cross the border legally since it is unlikely that the undocumented parent will be allowed to re-enter the U.S. without having proper documentation showing legal residence in the United States.

What was represented in the data is the fact that some families have decided to forgo the potential risk and are not traveling to and from Mexico. Participants felt insecure with their knowledge of current immigration and citizenship laws. Five women found the current political discussion and the tightening of the border to be problematic for them. Many women described economic or legal hardships they will endure as the southern border is under heavier control than in previous years.

Although this is a new finding, some information exists in the literature on mental health and migration. Various researchers suggest that immigration in and of itself is a stressful situation for the immigrant (Hovey, 2000; Rodriguez, Myers, Mira, Flores, & Garcia-Hernandez, 2002). In addition to the usual situational and developmental stressors that are experienced

during pregnancy, stressful situations for new immigrants include learning an unfamiliar language, having a lack of close relatives living nearby, and learning strange customs (Martinez-Schallmoser, MacMullen, & Telleen, 2005). The effects of this increased governmental control will inevitably rest on the shoulders of families of Mexican origin who have children born in the U.S. and whose parents are undocumented and thus unable to visit family members in Mexico for either fear of deportation or lack of economic resources.

Regardless of the status of documentation, health care providers need to be aware of the negative effects of stress on the human body. Women of childbearing age may be at increased risk for the development of health complications related to stress that will not only affect their bodies, but also the developing child. A growing body of literature implicates the role of prenatal maternal stress on the negative health effects on the developing infant. As a result of this stress, changes in the immunologic and neurodevelopment of the fetus have been demonstrated in human studies (Ruiz & Avant, 2005). The infant immune system may predispose infants to illnesses in the first year of life. In addition, Ruiz and Avant (2005) state that a reduction in the size of the hippocampus from elevated levels of maternal stress can predispose the infant to reduced neurocognitive function and developmental delays. This finding may also explain why mothers in this study described children as being difficult to parent.

Rest and Physical Activity

Women in this study spoke of trying to find a balance between rest and activity. They found it important to take life easy and were cautious when walking, climbing, sweeping, bending, and lifting items so that they would not hurt themselves or most importantly, the baby. Fear of miscarriage was a commonly discussed fear for women in this study and was often

spoken of in relationship to rest and physical activity. Another common belief that was present among the women in this study was that reaching overhead for items would cause nuchal cord.

Other studies have found similar findings. Women in both this study and Pearce's (1998) study found it important to find a balance between rest and activity. For example, Pearce (1998) found that women believed that certain activities could cause the mother to have a miscarriage and women were found to be careful in performing certain activities such as walking, sweeping, climbing, bending over, and lifting items to avoid complications. Women in other studies also avoided reaching overhead since they were afraid that it would cause a nuchal cord (Depacheco & Hutti, 1999; Jimenez, 1995).

It is interesting to find that although this study and Pearce's (1998) studies were conducted in two different states, Texas vs. Massachusetts, and with different countries of origins, Mexican origin vs. Puerto Rico, Dominican Republic, both groups shared similar findings. This may be due to the fact that these beliefs are not specific to Hispanics, rather pregnancy beliefs that may be held by pregnant women in general.

An important subcategory of *Caring for Myself* that mirrors other previously published findings is that of *Being Carefully Active*. Lagana's (2003) ethnographic study was conducted in California and examined the influence of acculturation on a group of 29 Mexican-American childbearing women. In the walk/*camina* category Lagana (2003) states that exercise was done for general well-being. However, the women in this study described *Being <u>Carefully</u>* active because they were concerned that such physical activity could lead to miscarriages or preterm labor. Daily walks were encouraged by family members in both this study and in Lagana (2003). The women in both the Lagana (2003) study and this study believed that an inability to stay active would result in the fetus becoming stuck inside the uterus and making delivery more

difficult for the mother. Other activities to be avoided such as bending, lifting, and standing for extended periods of time (Lagana, 2003) were similarly described by participants in this study. Although only one of the participants in the Lagana (2003) study reported a folk condition in which the fetus sticks to the inside of the uterus, making delivery difficult, three participants in this study held the belief that the fetus would become stuck to the placenta if the woman did not exercise on a daily basis or slept too much. However, seven women believed that exercising on a daily basis would make their labor easier.

One major difference between the Lagana (2003) study and this study is that in this study the participants did not relate exercise to body image; rather, they focused on the outcome of the pregnancy which was to have a healthy baby and an easier labor process.

Following Family Traditions

Traditional Medicine (TM) is described by the World Health Organization (WHO) as "health practices, approaches, knowledge and beliefs incorporating plant, animal and mineral based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being" (Bagozzi, 2003). Although Palinkas and Kabongo (2000) found that Hispanic women were ten times more likely to engage in traditional medicine/complementary and alternative medicine (TM/CAM) than other ethnic groups. This present study did not illustrate that. The participants in this study engaged in very little TM/CAM. Among the beliefs found in this present study are avoiding exposure to a lunar eclipse for fear of causing fetal abnormalities and the *cuarentena* or period of seclusion in which women follow certain physical restrictions.

In contrast to Lagana's (2003) study, women in this study also consumed little amounts of herbal drinks during their pregnancy. The only exception was when women were interested in

speeding up the labor process and drank tea made from cinnamon/*te de canela* and cumin/*te de comino*. The finding that these women drank cinnamon tea/*te de canela* for this purpose is new, since it had previously been reported that women drank cinnamon tea for relief of only cold and flu symptoms (Jimenez, 1995). Cumin tea/*te de comino* had been previously mentioned as a tea consumed to stimulate labor (Burk, et al., 1995).

None of the pregnant women in this study visited any traditional healers. Only one participant believed in culture-bound syndrome, such as *mal ojo*, during her pregnancy. This researcher visited a local *botanica* or herbal shop located within 5 miles of the clinic and spoke to the owner who verified these findings. As Chesney et al. (1980) describe in their study of 40 families of Mexican descent in Galveston,Texas, not all women believe in culture-bound syndromes. Perhaps traditional beliefs and/or use of traditional remedies among pregnant women of Mexican origin is not as prevalent as previously thought. Few participants actually took herbal teas or practiced any TM/CAM modalities.

Lunar Eclipse. The Hispanic belief of familism or *familismo* has been described as a powerful cultural trait that ensures loyalty, solidarity, and reciprocal actions among family members (Lagana, 2003). Perhaps, in accordance with these beliefs, participants in the current study also felt compelled to follow this traditional belief. The beliefs regarding the lunar eclipse have been documented by several sources. The lunar eclipse is said to cause fetal anomalies such as cleft lip and cleft palate (Burk, et al., 1995; Cohen, et al., 1998; Depacheco & Hutti, 1999; Lagana, 2003). Some sources describe a technique used by pregnant women relating to the use of or wearing of a metal object around the waist as a protective factor that the woman employs to guard against fetal anomalies (Burk, et al., 1995).

The belief that a pregnant woman must protect herself and her unborn infant from a lunar eclipse by wearing a metal object over her umbilicus was a common belief among 7 women in this study. Women did not hold the belief to be true per se, but were convinced to wear a metal key or safety pin for protection over their abdomen by well-meaning family members that lived with them or would even notify them of the need to wear the key by a telephone call. Women in this study complied with the family's request because they did not feel the practice would harm the developing infant. In addition, women added that failing to wear the protection could result in other developmental abnormalities such as polydactyl or syndactyl.

La Cuarentena. *La cuarentena*, or period of seclusion, has been described by several researchers and is defined as a 40- to 60-day period of time that starts approximately a month before the due date and can extend several weeks after the baby is born (Burk, et al., 1995; Galanti, 2003; Jimenez, 1995; Zepeda, 1982). Participants in this study, regardless of their generational status, had some knowledge about this belief and practiced varying forms of *la cuarentena*. However, none of the participants began this period of seclusion before the baby's birth. Other researchers have commented on the importance of this belief as evidence of a strong social support framework for the pregnant and postpartum Hispanic woman (Lagana, 2003). Padilla and Villalobos (Padilla & Villalobos, 2007) call for researchers to view cultural characteristics such as familism as a useful tool in reaching underserved Mexican-American women. Especially at risk may be women who do not have the social support needed to perform *la cuarentena*. In this case, *promotoras* can be taught to provide interventions that target the entire family by focusing on family support, communication, and family health behaviors.

In keeping with current research findings for Hispanic household composition, this group of women also had large household sizes that were available to offer this type of social support.

It is important to note that there is a substantial amount of literature that describes the importance of social support being a buffer against stress. In particular, the literature is filled with descriptions of stress as having the potential to influence Preterm birth and low birth weight. Particularly, strong evidence of a social support network and adherence to traditional cultural beliefs has been linked to positive pregnancy outcomes; mainly the decrease in rates of PTB and LBW (Jones, et al., 1999; Zambrana, et al., 1997). Unfortunately, this study did not investigate stress or pregnancy outcomes as these topics were not the focus of the study. One researcher reported that Mexican American mothers who were less satisfied with the amount of support they were receiving during their third trimester of pregnancy had more postpartum depressive symptoms at their six week postpartum visit (Martinez-Schallmoser, Telleen, & MacMullen, 2003). Therefore, health care providers should assess the amount and type of social support that pregnant women have during the third trimester and include questions that assess if they have plans to continue the traditional belief in the *cuarentena*.

Social support has also been implicated as a factor that influences prenatal care rates. With the exception of four women, the women of this study were all recruited from a community health center and thus were seeking either prenatal or postpartum care. In addition, the four women that were recruited from the community at large also obtained prenatal care with private physicians. Future studies could investigate if family serves a role in the woman initiating prenatal care.

Discussion of Stage 3: *Constant Monitoring*

This final stage of the process of *Managing my Pregnancy* was described as monitoring their pregnancies and the decisions they chose to implement. All of the women commented that

they would do whatever it took to assure that they had a healthy infant. This goal was achieved by the process of *Constant Monitoring*.

Constant Monitoring

This stage describes the active experience of listening to their bodies and monitoring for complications. During the pregnancy, participants reported listening to their bodies. Women looked for complications of pregnancy or changes in their physical bodies that would alert them of a potential need to reevaluate a previous decision. Participants were acutely aware that all the decisions they made affected not only not only themselves, but also their unborn baby. If women experienced no pregnancy complications, women felt that they were gaining expertise in effectively managing their pregnancies and thus this validated the choices they had made. However, if women experienced a complication, this encouraged the woman to reevaluate her previously made decision and re-enter one of the previous stages. Women did this internal evaluation or checks and balances throughout their pregnancy, the birth process, and even into the postpartum period. *Constant Monitoring* is made up of two subcategories,

Being Aware

Gallagher (2005) reported a similar finding to *Constant Monitoring*. Gallagher (2005) noted that mothers of Mexican descent used being mindfully aware/*al pendiente* or taking care/*al cuidado* strategies during the care of their preschool children. Gallagher (2005) comments that this led to an emotional connectedness between the child and the mother that cultivated the emotional health of the child. Perhaps this constant monitoring/*estar pendiente* is a stage that women enter soon after becoming aware of the pregnancy and begin cultivating this emotional connectedness. This may represent a method that these women grew into the mothering role.

Women in this study described the need to be aware that they were pregnant and maintained a consciousness that every decision they made could affect their unborn child. Therefore, all participants monitored their pregnancy and the developing child throughout their pregnancy. Women in this study felt a connection to the child immediately after they were aware of their pregnancies. The developing child was said to be the most important factor for the woman and all her decisions centered on this thought.

Domian (2001) study found that Hispanic women shared values that were important to participants that centered on keeping family values. The pregnancy was seen as a positive experience and children were seen as a priority from the beginning of their pregnancies. This is also a common finding among the women of this study. Women in this study also thought their developing child was a priority and would make decisions based on how those decisions affected their developing child.

Making Decisions

The final subcategory of gaining knowledge was making decisions. As women received the information from either a written source such as pamphlets or books or a verbal source from family, friends and health care providers the women then entered a stage of decision making regarding the information they had received. Women had a difficult time describing the actual process that occurred in making these decisions. However, the participants described two main areas that guided their decisions. These are personal experience and intuition. This is in direct conflict with previous studies that have shown women make health care decisions based on information received from family members and health care providers (Galavotti & Richter, 2000). Howeve, it is important to note that classic research conducted by Belenky, Clinchy, Goldberger, and Tarule (1997) which was conducted in the 1970s describes different ways of

knowing in which women view reality and make decisions about what they consider truth, knowledge, and authority. Belenky and collegues (1997) studied women ages 16 to 60 as they experienced their discovery of subjective (or intuitive) knowledge. Subjective knowledge is defined as a way of knowing that is personal, private, and subjectively known or intuitive. Women in Belenky and collegue's (1997) study described listening to their inner voice rather than external or expert sources of knowledge. Women who reached the developmental milestone of viewing truth as multiple and infinite rather than absolute and singular, turned to people that had a similar experience such as female peers, mothers, sisters, and grandmothers to guide them in their decision making process. The knowledge they sought was often grounded in firsthand experiences that other people had. When women had no close family members they could turn to, they would turn to female peers or even a social agency for assistance. It is important to note, that although women sought out these experts, the information they received served to affirm their intuitive knowledge and their decisions.

Another way that women in Belenky and collegue's (1997) study made decisions was through the use of personal information and knowledge to formulate a decision. Participants in this study also used firsthand experiences by others as a basis for making decisions. Women in this study followed their intuitive knowledge to make decisions and often turned to female family members and peers whom they felt had already gone through similar experiences. For example, one participant chose to wear a safety pin on her clothing to protect her unborn child, not because she believed that the safety pin or metal offered any type of protection, rather she did it because a cousin had not worn the safety pin and had a child with a deformity. The women were more prone to follow health advice from these sources since they were afraid that not following the advice could result in a similar outcome. Often, out of respect and/or the desire

not to start any conflict within the family, the participants would go along with the family member's recommendation. In particular, this was true when it involved types of physical advice that the pregnant woman had to follow such as limits on activities that could harm the baby.

Van den Berg et al. (2008) describe several decision making methods they use when deciding to partake in prenatal screening for Down syndrome. One of these methods is the subjective expected utility (SEU) theory. SEU theory is described as women making decisions based on subjective evaluations of probabilities, that their risk of being pregnant with a Down syndrome child is high, and outcomes, that they perceive Down syndrome as serious and severe for the developing infant. Women in this study may have tried to describe a similar concept when they spoke of following family traditions. In this study, women evaluated the probability that they could have a child with a physical deformity or developmental problem. Women in this study were influenced by knowledge of family and friends who had given birth to infants with such problems such as cleft lip/palate and syndactyl.

All women described that their main reason for making decisions was to ensure the health of the baby. Another hallmark of this subcategory was that most of the women were confident that they had made all of the right decisions regarding the pregnancy. Most participants described this as a sense of knowing or intuition about decision making. Once a decision was made, the women were certain that they had made the right decision and could not be convinced otherwise by well-meaning family members. On the other hand, some participants described a level of uncertainty when it came to their financial future. This was particularly true for participants that were faced with the task of providing for a new baby with already limited resources and living as a single parent.

Deciding to Adopt, Alter, and Reject Knowledge

Decision-making is defined as the outcome of cognitive or mental processes that leads to the selection or course of action among several alternatives (Wikipedia, 2009). Women in this study found it difficult to discuss their decision-making process. This may be because women in this study used intuitive decision-making when they made decisions to adopt, alter, or reject knowledge and interventions throughout their pregnancies. Women in this study used intuition as a way to make decisions quickly and felt that their decisions were right. They relied on previous experience or knowledge with the subject and allowed these experiences to intuitively guide their decision-making process. This is in concurrence with Sloman's (1996) research that describes the process of decision-making and reasoning occurring in one of two steps; intuitive or analytical. Intuitive decision-making is rapid, based on personal experience, and autonomic (Sloman, 1996). In intuitive decision-making people rely on experienced-based or holistic decision-making processes. In contrast, analytical strategy is formal, role-based process, systematic, causal, logical, and hierarchical (Sloman, 1996). However, women in this study used both of these decision-making strategies for choosing to adopt, alter, or reject information and knowledge they gained.

Norenzayan, Smith, Kim, and Nisbett (2002) found cultural differences in decision-making strategies exist. Western cultural groups use formal or analytical methods more often than Asians who tend to use more intuitive decision-making processes. This may explain the findings in this study that showed women using intuition as a major decision-making process and had a difficult time describing the reasons behind their decisions. The data did not fully describe this process, therefore, further study is needed that will focus on describing this decision making

process that Hispanic women of Mexican origins use in choosing to accept, alter, or reject pregnancy specific information.

Thus far, a discussion of the findings presented in this chapter regarding the core category or basic social process of *Managing my Pregnancy* has been presented. *Managing my Pregnancy* is a three-step process which includes the categories of *Gaining Knowledge, Caring for Myself,* and *Constant Monitoring*. This core category or basic social process describes pregnancy specific health beliefs and practices of this group of women and describes their decision making process relating to how they chose to adopt, alter, or reject these beliefs and practices. The following sections will discuss the implications for these findings in future research, nursing education, practice, and health care policy.

Implications for Future Research

As our borders close to families that are undocumented and are unable to obtain proper documentation to cross the border due to financial constraints, some health beliefs may be lost completely. Future research can focus on how the impact of these policy changes of our border region will impact cultural inheritance and transmission of cultural knowledge for this population. Research that investigates health beliefs models regarding the acceptance, alteration, or rejection of health beliefs in multi-generational Hispanics need to be developed and tested. Research that includes these new models, outcomes such as preterm birth and preterm labor, and implications for diminishing social support may better describe the cultural black box by attempting to answer questions relating to pregnancy-specific health beliefs and practices that may be changing in this population. These models can then be used to develop interventions to change the deleterious effects of acculturation on Hispanic pregnancy outcomes.

Women in this study did not report concerns about the risk of lead exposure. Future research should identify if this group is indeed more at risk for lead toxicity. Therefore, future studies need to look at this population's lead level and also be used to develop interventions educating this population on the dangers of lead toxicity during pregnancy. Knowledge of this dangerous metal among this population should be increased since they may be more at risk for accidentally ingesting lead from Mexican pottery and other risk factors, such as the age of their residences.

Research needs to be conducted in identifying interventions aimed at increasing internet and computer usage among Spanish-speaking populations. Development of internet sites that come from local well-known sources of health care should be a key priority for communities that have a large percentage of Hispanic clients.

Future work in this area can include the investigation of the quality and readability of Spanish language pregnancy related web sites. Furthermore, there is a need to design and implement web sites with accurate pregnancy topics offered in both English and Spanish for the Hispanic population. Items to consider in this emerging area may include the needed access to computers with internet access and increasing computer training and software use for low-income populations. Training can take place in local libraries where approximately 13.8 percent of Hispanic internet users access the internet at these sites (U.S. Census Bureau, 2000). Community health centers are under-utilized in this respect since only 0.6% of all internet users access the internet at this location (U.S. Census Bureau, 2000). Nursing can be strategically located to build partnerships with community health centers, local libraries, and institutions of higher learning that will focus on educating monolingual Spanish speaking prenatal patients.

Women who partook in the traditional beliefs of wearing a key or metal safety pin on their abdomen may have perceived that their risk of being pregnant with an infant with a deformity or developmental problem was high because of that personal knowledge. Further testing of these concepts that have been described in this grounded theory study may enlighten researchers wishing to develop other decision making models for adoption, alteration, or rejections of traditional health beliefs and may choose to link such models to birth outcomes such as preterm birth and preterm labor.

Participants in this study did not speak of taking many herbal teas or the use of *botanicas*, incense, candles, or amulets for protection against evil. This finding was validated after a personal communication with the owner of a local Botanica located five miles from the clinic where recruitment took place. She stated that she hardly ever sees pregnant women attending her place of business. She mentioned that pregnant women are leery of taking any herbal medicine because they are unsure of how the baby would be affected. Further research into the effects of cumin and cinnamon tea that this group of women consumed is also needed.

Another finding that needs attention in the research area is the role that male family members played in the stage of *Gaining Knowledge*. Although the majority of the information gained in this stage came from female family members, friends, and co-workers, nurses need to focus on the role that male family members may serve in the care and support of pregnant Hispanic women. Further research that better describes this role both from the perspective of the pregnant woman but also the male's perspective are need.

Implications for Nursing Education

Nursing education has continued to promote teachings that fan the fires of homogeneic cultural beliefs among Hispanics. A recent study published in a well-known and widely read

nursing magazine describes the need for assessing the use of holistic health care practitioners among patients of Mexican-American ancestry (Wells, et al., 2006). This article describes basic Mexican-American cultural values and states that nurses must assess for the use of traditional healers such as *curanderos*, *sobadores*, or herbalist when taking a health history with the Hispanic population. Although this article does not have a pregnancy focus, it illustrates that there are common stereotypes that are prevalent in the literature that may not be necessarily present in our perinatal patients that we care for each day. However, nurses should be taught to not stereotype Hispanic patients and automatically believe that they ascribe to traditional beliefs. Rather educators should teach nurses to assess for these beliefs. This study illustrates that not all pregnant Hispanic women ascribe to or follow cultural bound beliefs. Therefore, Suarez's (2000b) criticism of past studies documenting the extent of TM/CAM use may have legitimate claims. Educators need to teach on the heterogeneity of the Hispanic population and help to discard commonly believed stereotypes. Findings from this study will help all health professionals become aware of commonly held stereotypes and will lead to the opening of true dialogue between patients, caregivers and other medical professionals.

Implications for Practice

The results of this study suggest that stressors in the form of financial and immigration status may be of importance to pregnant women of Mexican ancestry living in southwest Texas. Health care providers should assess for these forms of stress at initial and subsequent prenatal visits. Women may need to be screened for depression and anxiety as a result of additional stressors they may be experiencing. Information on the importance of the reduction of stress and its link to poor pregnancy outcomes need to be provided to women seeking prenatal care. Additionally, referrals to other health care partners such as mental health providers may need to

be made if the woman shows signs and symptoms of depression and anxiety. According to the Listening to Mothers II survey, health care practitioners are not screening for depression during pregnancy (Declercq, et al., 2007). Therefore, a practice recommendation is made to improve clinical identification of depression in pregnant women.

In addition, health care providers need to be able to refer to case managers who have knowledge of community resources with detailed immigration information. Patients need accurate information on ever changing immigration laws so that they can stay informed. This information can be given to patients in pamphlets that are easy to read. Community health centers and other community partners may want to provide current knowledge regarding new U.S. Department of State passport cards and passport requirements. This will educate patients who have both documented and undocumented individuals in their families with current and factual information regarding these laws. This practice will dispel myths and lies that are currently held by this group.

Another topic that could be offered is education on immigration laws as they pertain to families of mixed immigration status. For example an undocumented mother who has given birth to a child who is now considered a U.S. citizen. Topics that need to be included should be relevant for individuals who do not hold legal residency documentation. Access to information that could be offered in community classes geared to these families should educate our patients on social services that U.S. born children may qualify for such as enrollment into CHIP, Medicaid, and Temporary Assistance to Needy Families; reduced and/or free lunch or food stamp programs. These classes need to be offered by community volunteers such as *promotoras,* or community health volunteers that have been trained in providing education on services that the newborn baby may qualify for but that the mother does not due to her immigration status.

If health care providers are going to care for Spanish speaking individuals then we should assist them in learning to access the internet. There is a need for quality bilingual pregnancy specific information on the internet. Universities in conjunction with private and non-profit agencies can come together to build internet sites where information can be easily accessed and available for our Spanish speaking patients. Unfortunately, much of the health information found on the internet has been described as having poor and inconsistent information provided in both English and Spanish language web sites (Berland, et al., 2001). Unfortunately, most of these sites have also been written at a reading level of high school or higher (Berland, et al., 2001). These findings, coupled with the fact that, at the end of 2000, 94% of links to pages on servers were only presented in English serve to identify a need for greater access for our Spanish monolingual patients. This is especially true if we are to focus on providing quality Spanish pregnancy-specific health information on the internet.

Implications regarding nutritional practices also need to be addressed. Women in this study consumed an undetermined amount of juice and Kool-Aid. Both of these drinks are high in calories and may predispose Hispanic women to gestational diabetes. Since these women believed that these drinks were healthier alternatives to sugary drinks such as soda, health care providers should assess the amount of juice and Kool-Aid Hispanic pregnant women may be consuming.

Other Topics Not Present in the Findings.

The disinterest in childbirth education among women in this study mirror findings in the health literature. Although researchers know that women who receive prenatal care benefit from separate prenatal education classes, participation in these classes is low (Berman, 2006; Declercq, et al., 2007). This is particularly true for ethnically diverse populations. One cross-

sectional national telephone survey study of an ethnically diverse population of pregnant mothers looked at rates of attendance at childbirth education classes and the association with breastfeeding initiation. Although 17% of the sample of 1,540 women was Hispanic, only half of these reported attending a childbirth education class (Lu, et al., 2003). Unfortunately, to date there is little information that addresses how best to present prenatal health information to patients with different cultural backgrounds (Berman, 2006). However, one study completed by Berman (2006) found that Hispanic women preferred the health educator to come from a similar cultural background as themselves.

Perhaps by offering women classes that include culturally relevant topics and demedicalizing prenatal and childbirth education we can hope to lure Hispanic pregnant women back into antenatal and prenatal education classes. Incorporating non-health topics that women in this study spoke of into prenatal and antenatal education is an area of improvement prenatal education specialists may want to consider.

Potential topics of interest could include classes on helping mothers tap into community programs aimed at helping struggling families cope with financial strains on the family such as offering debt analysis or financial budgeting classes. This class could also be expanded to include some information on the role of stress and pregnancy and even include signs and symptoms of preterm labor.

Prenatal classes should be offered at different times of the day and be welcoming to non-traditional labor partners. Having the option to take classes offered in a family style may allow the woman to bring her closest social support like her mother, sister, or mother-in-law versus the traditional male partner classes that are offered aimed at higher socioeconomic and Anglo

populations. These childbirth education classes could also be offered at different times of the day and evening to allow a diverse group of women and their family members to attend.

Programs such as *Cominezo Sano* (Healthy Beginnings) that use *promotoras* or community health volunteers trained in the role of providing prenatal education have been used in the past with much success (Meister, Warrick, De Zapien, & Wood, 1992). This program included the following major elements, Spanish language prenatal curriculum, a trained group of mature Hispanic women trained as *promotoras*, and the support of local health professionals. Although the purpose of that program was to extend the reach of their prenatal programs into the community, pregnant women of Mexican ancestry in this community may have different needs. Therefore research on the needs of this population is necessary.

An additional goal of the implementation of such a program is encouraging women to attend early in the first trimester of pregnancy, thus helping to decrease the rates of late or no prenatal care for the community which are presently over 25% for Bexar county (Metropolitan Health, 2006). Finally, planning to eliminate barriers to known antenatal and prenatal education such as lack of childcare for prenatal appointments and transportation issues need to be worked into the overall plan.

Implications for Health Care Policy

Nurses should attempt to influence health policy issues by educating legislators and other key figures on the relevant issues that affect this population. It is only thorough our impact on future health care policy that nurses can hope to influence the myriad of decisions and government dollars that will be aimed at this target group.

Smart and Smart (2001) call for our American social policy to adapt to a changing ethnic and racial plurality. Solutions for our current immigration problems must be sought. Currently,

undocumented immigrants do not have access to jobs, education, and economic benefits and live in fear of deportation (Smart & Smart, 2001). For example, recently as the border tightened, employers experienced a lack of farm workers who were available for picking crops in farms across the U.S. that lead to losses of $59.9 million of lost produce due to labor shortages (Frazier & Quintero, 2006). This resulted in higher produce costs that many consumers are now seeing. In addition, as the available job market in the U.S. tightens, this will inevitably affect monetary remittances that are sent to Mexico.

This present study illustrates some of the above mentioned stressors. Travel across the Mexican and U.S. borders has been much more controlled recently and the effects of these changes on the daily lives of this group of women were described. In addition, policy implications for this area include how the decrease in contact with Mexico will affect Hispanic families on the U.S. and Mexican side of the border. These policy changes may influence the speed of acculturation of these groups and thus influence health outcomes in the future and may impact our economy.

Participants in this study were not aware that as of July14, 2008, the State Department enacted the use of a passport card which offers a less expensive and a more portable alternative to a passport. The passport card can be used by American citizens when crossing the border by land or sea but it may not be used for air travel. This card facilitates land and sea port-of-entry processing when arriving from Mexico, Canada, the Caribbean and Bermuda. The cost ranges from $35 to $45 for children and adults respectively ("Passport Fees," 2008). The card has the same period of validity as that of a passport: 10 years for adults and 5 years for children less than 16 years of age ("Passport Fees," 2008). Although this may offer a lower cost alternative to the traditional passport. It may be a considerable expense for Hispanic families who have a larger

number of family members. For example, for one family who had the largest household size in this study, this would have been an investment of $740 to obtain passports or $320 to obtain the new passport card for the entire family. New programs aimed at helping low-income households subsidize such expenses need to be developed.

What this will do to the socioeconomic ties that exist between the two countries is unknown. In addition, what the effects of this type of social seclusion and isolation from family members living in Mexico will do to families and individuals in this country and in Mexico is currently unknown. Further research into how current laws and future legislation affect Hispanic families as they adapt to a tighter and more controlled southern border is needed.

If the epidemiological paradox holds true for subsequent generations and if traditional beliefs are lost due to the border closure, then we may see increases in the rates of preterm labor and preterm birth among what we now consider at-risk, but healthy populations. This may inadvertently lead to additional costs as the health care system cares for a larger population of sick infants and children with developmental and learning delays. Unfortunately, this will only lead to taxing our already limited healthcare resources.

Women in this study spoke of the importance of being tested for sexually transmitted diseases (STDs), gestational diabetes, and spoke of the need to have the growth of the baby monitored during their pregnancy. Nurses need to focus on lobbying for health care dollars that will fund new public message announcements targeted at the Hispanic population that discuss the importance of prenatal care and these links. Further research on the evaluation of such programs would need to be completed to see if they were adequate to improve the rates of initiating early prenatal care in this population.

Study Strengths and Limitations

This study used grounded theory methodology to gain an understanding of the health beliefs and practices of pregnant women of Mexican ancestry. The selection of the method was appropriate since the researcher hoped to understand not only the beliefs but also the decision making process that women used during their pregnancy to accept, alter, or reject certain health beliefs and practices they were being taught. The participants of this study were pregnant or postpartum women of Mexican ancestry in first to fourth generation. A total of 15 participants were recruited and a total of 16 interviews were conducted. Interviews occurred over a two year period. There was a wide range in gestational ages among the participants (from 15 to 41 weeks gestation). Both English and Spanish participants were included in the sample.

Several limitations became apparent once the study was conducted. One limitation is that only one participant was interviewed a second time. This participant was first interviewed at 19 weeks gestation, 31 weeks gestation, and two months post-partum. Perhaps following pregnant Hispanic women of Mexican ancestry through all of the trimesters of pregnancy and into the postpartum period may yield a different set of data and different findings that better describe how Hispanic women of Mexican ancestry grow into the pregnant and mothering role. The researcher speculates if the findings may be different for women not attending or obtaining prenatal or postpartum care. The lack of data on birth outcomes for the group, initiation of PNC, and household incomes are other limitations to the study that could have given readers a better description of the participants in this study

Another limitation was that most of the sample was gathered from patients obtaining care from the obstetric/gynecology department in an inner city community health center and the bulk of the interviews were conducted at that site. Participants may have told the researcher what

they believed were acceptable beliefs about pregnancy. This may explain why women in this study chose to talk about diet and exercise as the hallmark of caring for themselves during their pregnancy.

Future studies should focus on multiple interviews over shorter periods of time but that span the entire pregnancy and include the postpartum period. An added benefit may be to interview all women in their home and include other family members in the interviews. This way the researcher can better understand the sources of information and see if there are differences in the health beliefs of family members vs. those of the pregnant woman. In addition, the researcher may be able to see if there are any health beliefs and practices the women reject without being fully aware or conscious that she is rejecting such beliefs.

Conclusion

Research has shown that foreign-born Hispanic women offer a healthy model for pregnancy despite many demographic and socioeconomic risk factors (Acevedo-Garcia, et al., 2005; Lagana, 1996; Madan, et al., 2006; Zambrana, et al., 1997). This finding is labeled the epidemiological paradox because although Hispanic women share socioeconomic risk factors with Blacks, foreign born Hispanic women have better birth outcomes in the form of lower rates of low birth weight and preterm labor (Buekens, Notzon, Kotelchuck, & Wilcox, 2000). As these women acculturate to the U.S. customs and foods, their levels of stress increase and thus trends demonstrate that birth outcomes also worsen (Ruiz, Dolbier, & Flescher, 2006).

This study provides an overview of the pregnancy-specific health beliefs and practices of pregnant women of Mexican ancestry living in southwest Texas. Women were found to undergo a three-stage process called *Managing my Pregnancy*. Participants moved in and out of the

phases which were described as *Gaining Knowledge, Caring for Myself,* and *Constant Monitoring*.

The findings attempt to begin to answer the question regarding which specific "cultural practices" are either present or may be lost with subsequent pregnancies and in later generations of U.S.-born Hispanic women that have been conceptually linked to influencing birth outcomes. (Gould, et al., 2003; Guendelman, et al., 1990; Madan, et al., 2006). Of utmost importance was the study's focus to identify, describe, and explore the decision-making process that pregnant women of Mexican ancestry undertook in deciding which health beliefs and practices they would adopt, alter, or reject. Future research can focus on expanding this research by formulating a qualitative model for cultural inheritance of pregnancy-specific health beliefs among Hispanic women.

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APPENDIX A

CONSENT FORMS

Consent to Participate in a Research Study
Title of Study: Pregnancy Specific Health Beliefs of Mexican Women: A Grounded Theory

The University of Texas Health Science Center at San Antonio (UTHSCSA)
Institutional Review Board (IRB)
To be conducted at
University of Texas Health Science Center at San Antonio
CentroMed

Information about this form

You may be eligible to take part in a research study. This form gives you important information about the study. You will be asked to sign in more than one place in this document.

Please take time to review this information carefully. You should talk to the researchers about the study and ask them any questions you have. You may also wish to talk to others (for example, your friends or family) about your participation in this study. If you decide to take part in the study, you will be asked to sign this form. Before you sign this form, be sure you understand what the study is about, including the risks and possible benefits to you.

Please tell the researchers or study staff if you are taking part in another research study.

Taking part in this study is completely voluntary. You do not have to participate if you don't want to. You do not have to participate in this study in order to get standard medical treatment. You may also leave the study at any time. If you leave the study before it is finished, there will be no penalty to you, and you will not lose any benefits to which you are entitled.

General Information – "Who is conducting this research?"

Principal Investigator
The Principal Investigator (PI) is the researcher directing this study; the PI is responsible for protecting your rights, safety and welfare as a participant in the research. The PI for this study is Lorena C. Guerrero, MSN, RN, FNP, University of Texas Health Science Center School of Nursing Clinical Instructor and PhD student & CentroMed Family Nurse Practitioner.

Study Sponsor: Sigma Theta Tau, Delta Alpha Chapter-at-Large

Sigma Theta Tau, Delta Alpha Chapter-at-Large, a non-profit organization that promotes scientific research, is funding this study (the sponsor). This organization is providing money to UTHSCSA so that the researcher can conduct the study.

Purpose of this study – "Why is this study being done?"

You are asked to participate in this research study of pregnancy beliefs and traditions in Hispanic women of Mexican origin.

The researchers hope to learn more about your thoughts and feelings about your pregnancy beliefs and traditions.

Information about Study Participants – "Who is participating in this research?"

You are being asked to be a participant in this study because you are currently pregnant and are Hispanic of Mexican origin.

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UTHSCSA

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This study will enroll approximately 15-20 study participants.

Information about Study Procedures – "What will be done if you decide to be in the research?"

If you decide to take part, you will be asked to sign this consent form.

While you are taking part in this study, you will be asked to attend 1 face-to-face interview with the researcher.

Study Procedures - as a participant, you will undergo the following procedures:

- You will be asked to participate in a face-to-face interview
- The interviews will be scheduled for a date and time that is agreeable to all parties involved
- Interviews will last approximately 1 hour
- The interview will be audio recorded
- Interview recordings will later be transcribed into a written record of what was said during the interview
- We may ask that you ask other family members or friends that may have more information about pregnancy beliefs and practices to contact us

Risks – "What are the risks of participation in the research?"

Risks from the research:
This study only involves an interview with the researcher. We do not expect you to be harmed in any way from the research. However, you may be uncomfortable when answering interview questions about your beliefs and traditions about pregnancy and your personal information. You may not like being audio-taped during the interview. You may also become tired from sitting and talking to us during the interview.

Please be aware that if you disclose information about illegal or reportable offenses such as child/elder abuse and neglect, illegal drug use, and/or other illegal activities the researcher is bound by law to report these activities. If these activities are noted or disclosed, the researcher will stop the interview, gather any further information that may be needed, make any reports or referrals to law enforcement as needed, and leave the premises.

For more information about risks and side effects, ask one of the researchers or study staff.

We will tell you about any significant new findings which develop during the course of this research which may relate to your willingness to continue taking part.

Are there risks if I also participate in other research studies?
Being in more than one research study at the same time, or even at different times, may increase the risk to you. It may also affect the results of the studies. You should not take part in more than one study without approval from the researchers involved in each study.

What if a research-related injury occurs?
The researchers have taken steps to minimize the known or expected risks. However, you may still experience problems or side effects, even though the researchers are careful to avoid them.

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If you believe that you have been harmed, notify the researchers as soon as possible. You may also need to tell your regular doctors.

If you are injured as a result of the research procedures, your injury will be treated. You will be responsible for any charges. We have no plans to give you money if you are injured.

If you sign this form, you do not give up your right to seek additional compensation if you are harmed as a result of being in this study.

Benefits – "How could I or others benefit if I take part in this study?"

You may not receive any personal benefits from being in this study.

We hope the information learned from this study will help researchers understand how pregnant women of Mexican origin take care of themselves during pregnancy.

Alternatives – "What other options are there to participation in this study?"

You have an option to not participate in this study. Your decision to not participate will not affect your future medical care or any relationship you might have with CentroMed and any other providers of medical care. The researcher will discuss all of your options with you.

Compensation – Will there be any compensation for participation?

You will receive compensation for participating in this research:

- If you complete at least half of the interview you will be eligible for a $5.00 gift card to Wal-Mart.
- You will receive a $10.00 gift card to Wal-Mart if you complete the entire interview process
- The gift card will be given to you at the end of the interview process

The compensation you receive may be taxable. When the total compensation paid to someone participating in one or more studies is $600 or more in one calendar year, the institution must report the amount to the IRS. The IRS considers it earned income and treats it like any other income.

Costs – Will taking part in this study cost me anything?

You will not have to pay any money to take part in this study.

Confidentiality – Will my personal information be kept private?

Everything we learn about you in this study will be handled in a confidential manner, within the limits of the law. If we publish the results of the study in a scientific journal or book, we will not identify you in any way. The Institutional Review Board and other groups that have the responsibility of monitoring research may want to see study records which identify you as a subject in this study.

Consent to Participate in a Research Study
Title of Study: Pregnancy Specific Health Beliefs of Mexican Women: A Grounded Theory

Contact Information – Who can I contact if I have questions or concerns?

If you have questions now, feel free to ask us. If you have additional questions later or you wish to report a problem which may be related to this study please contact:

Primary contact:
Lorena C. Guerrero, MSN, RN, FNP can be reached at [redacted] office or [redacted] home.

The University of Texas Health Science Center committee that reviews research on human subjects (Institutional Review Board) will answer any questions about your rights as a research subject. You can contact the IRB by calling [redacted] or by mail to IRB, UTHSCSA, Mail Code 7830, 7703 Floyd Curl Drive, San Antonio, TX 78229-3900.

INSTITUTIONAL REVIEW BOARD
JAN 24 2008
Date Approved by IRB
UTHSCSA

Consent to Participate in a Research Study
Title of Study: Pregnancy Specific Health Beliefs of Mexican Women: A Grounded Theory

Research Consent Signature Section

If you agree to participate in this research sign this section. You will be given a signed copy of this form to keep. You do not waive any of your legal rights by signing this form.
SIGN THIS FORM ONLY IF ALL OF THE FOLLOWING ARE TRUE:

- You have voluntarily decided to take part in this research study.
- You have read the above information.
- Your questions have been answered to your satisfaction and you believe you understand all of the information given about this study.

Printed Name of Subject	Signature of Subject	Date	Time
Printed Name of Witness	Signature of Witness	Date	Time
Printed Name and Title of Person Obtaining Consent	Signature of Person Obtaining Consent	Date	Time

Authorization to Use and Disclose Identifiable Health Information as part of a Research Study
Title of Study: Pregnancy Specific Health Beliefs of Mexican Women: A Grounded Theory

This section describes the use of your personal information. If you agree to allow the researcher to use your private information, you will be asked to sign at the end of this section.

Confidentiality – Will my personal health information be kept private?

Research policies require that private information about you be protected. This is especially true for your personal health information.

However, the law sometimes allows or requires others to see your information. The information given below describes how your privacy and the confidentiality of your research records will be protected in this study.

What is Protected Health Information (PHI)?
Protected Health Information is information about a person's health that includes information that would make it possible to figure out whose it is. According to the law, you have the right to decide who can see your protected health information. If you choose to take part in this study, you will be giving your permission to the investigators and the research study staff (individuals carrying out the study) to see and use your health information for this research study. In carrying out this research, the health information we will see and use about you will include: Your age, your marital status, the type of work you do, the years of formal education you have completed, the amount of income your household receives, your health insurance information, information such as age and relationship of other people living in the same house as you, and information on where you and your family members were born. In addition other medical information you share regarding your medical history relating to your pregnancies such as number of pregnancies, complications, abortions or miscarriages will also be asked.

We will get this information by asking you and by looking at your chart at CentroMed.

How will your PHI be shared?
Because this is a research study, we will be unable keep your PHI completely confidential. We may share your health information with people and groups involved in overseeing this research study including:

- Sigma Theta Tau, Delta Alpha Chapter-at-Large
- the committee that checks the study data on an ongoing basis, to determine if the study should be stopped for any reason
- the members of the local research team
- The Institutional Review Board and the Compliance Office of the University of Texas Health Science Center at San Antonio, and other groups that oversee how research studies are carried out.
- The Research offices at the University of Texas Health Science Center at San Antonio

Parts of your PHI may be photocopied and sent to a central location or it may be transmitted electronically, such as by e-mail or fax.

The groups receiving your health information may not be obligated to keep it private. They may pass information on to other groups or individuals not named here.

Authorization to Use and Disclose Identifiable Health Information as part of a Research Study
Title of Study: Pregnancy Specific Health Beliefs of Mexican Women: A Grounded Theory

If you decide to participate in this study, you will be giving your permission for the groups named above, to see and share your health information. If you choose not to let these groups see and share your health information as explained above, you will not be able to participate in the research study.

How will your PHI be protected?
In an effort to protect your privacy, the study staff will use code numbers instead of your name, to identify your health information. Initials and numbers will be used on any photocopies of your study records. If the results of this study are reported in medical journals or at meetings, you will not be identified.

Do you have to allow the use of your health information?
You do not have to allow the researchers and other groups to see and share your health information. If you choose not to let the researchers and other groups use your health information, there will be no penalties but you will not be allowed to participate in the study. After you enroll in this study, you may ask the researchers to stop using your health information at any time. However, you need to say this in writing and send your letter to Lorena G. Guerrero, MSN, RN, FNP, [redacted] If you tell the researchers to stop using your health information, your participation in the study will end and the study staff will stop collecting new health information from you and about you for this study. However, the study staff will continue to use the health information collected up to the time they receive your letter asking them to stop.

Can you ask to see the PHI that is collected about you for this study?
The federal rules say that you can see the health information that we collect about you and use in this study. Contact the study staff if you have a need to review your PHI collected for this study.

You will only have access to your PHI until May 31, 2008.

How long will your PHI be used?
By signing this form, you agree to let us use and disclose your health information for purposes of the study at any time in the future. There is no expiration date because we do not know how long it will take us to finish doing all of the analyses and we will need to use your health information for as long as it takes.

Authorization to Use and Disclose Identifiable Health Information as part of a Research Study
Title of Study: Pregnancy Specific Health Beliefs of Mexican Women: A Grounded Theory

Confidentiality Signature Section

If you agree to the use of your private information in this research sign this section. You will be given a signed copy of this form to keep. You do not waive any of your legal rights by signing this form.

SIGN THIS FORM ONLY IF ALL OF THE FOLLOWING ARE TRUE:

- You authorize the collection, use and sharing of your protected health information as described in this form.
- You have read the above information.
- Your questions have been answered to your satisfaction and you believe you understand all of the information given about this study and about the use and disclosure of your health information.

Printed Name of Subject	Signature of Subject	Date	Time
Printed Name of Witness	Witness Signature	Date	Time
Printed Name and Title of Person Obtaining Authorization	Signature of Person Obtaining Authorization	Date	Time

INSTITUTIONAL REVIEW BOARD
JAN 24 2008
Date Approved by IRB
UTHSCSA

Autorización para dar y divulgar informacion identificada por parte de un Estudio de Investigación. Titúlo del estudio: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

The University of Texas Health Science Center at San Antonio (UTHSCSA)
Institutional Review Board (IRB)
Pare ser condusido en
University of Texas Health Science Center at San Antonio,
CentroMed

Información acerca de este formulario

Usted podria ser elejido para participar en un studio de investigación. Este formulario le da informacion importante acerca del estudio de investigación. Le pediremos que firme este documento en mas de un lugar.

Porfavor, tome su tiempo en revisar esta informacion con cuidado. Debe de hablar con la investigadora hacerca del estudio y solicite cualquier pregunta que usted tiene. Tambien usted querra hablar con otras personas (por ejemplo, sus amigos o su familia) acerca de su participacion en este estudio. Si decide participar en este estudio, le vamos a preguntar que firme este formulario. Antes que firme este formulario, este seguro de entender de que se trata el estudio, incluyendo los riesgos y posibles beneficios que le puede afectar.

Por favor dígale a la investigadora o empleado del estudio si esta participando en otro estudio de investigación.

Participar en este estudio es completamente voluntario. Usted no tiene que participar en si no quiere. Usted no tiene que participar en este estudio para recibir un tratamiento médico normal. Usted puede dejar el estudio en cualquier momento. Si usted deja el estudio antes que se termine, usted no tendra ninguna penalidad, y no perdera su derecho a otros beneficios en cuál tenga derechos.

Información General – "¿Quien esta conduciendo este estudio?"

Investigador Principal
La investigadora Principal (IP) es la invetigadora que dirije el estudio; el IP es responsable por protejer sus derechos, su seguridad, y su bienestar como un participante en este estudio. El IP de este estudio es Lorena C. Guerrero, MSN, RN, FNP, Instructora y estudeiante de Doctorado y Enfermera Especialista de CentroMed.

Patrocinador del Estudio: Sigma Theta Tau, Delta Alpha Chapter-at-Large

Sigma Theta Tau, Delta Alpha Chapter-at-Large, una organizacion sin ánimo de lucro que promociona estudios scientificos esta financianzo este estudio (el patrocinador). Esta organizacion proporciona dinero a UTHSCSA para que la investigadora pueda conducir este estudio.

Proposito del estudio - "¿Por que se hace el estudio?"

Se le invita participar en un estudio de investigación sobre las costumbres y creencias de las mujeres Hispanas de origen mejicano.

Los investigadores quieren aprender más acerca de los pensamientos, creencias, y costumbres acerca de su embarazo.

INSTITUTIONAL REVIEW BOARD
MAY – 5 2008
Date Approved by IRB
UTHSCSA

Autorización para dar y divulgar informacion identificada por parte de un Estudio de Investigación. Titúlo del estudio: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

Informacion acerca de los participantes del estudio - "¿Quienes participan en este esta investigación?"

La estamos invitando a participar en este estudio porque usted esta embarazada y es una mujer Hispana de origen Mejicano.

Este estudio tendra approximadamente entre 15-20 participantes.

Información acerca de los Procedimiento del Estudio – "¿Que sucederá si usted decide estar en la investigacion?

Si usted decide participar, le pideran que firme este consentimiento.

Mientras toma parte en este estudio, tendra que atender a una entrevista cara a cara con la investigadora.

Procedimientos del estudio – como participante, sera sometido a los siguinetes procedimientos:

- Participará en una entrevista cara a cara
- Las entrevistas seran programadas con fecha y hora de acuerdo a todo los participantes envueltos
- Las entrevistas seran de aproximadamente 1 hora
- Las entrevistas seran gravada de sonido
- Gravaciones de los entrevistas seran traducidas a recolecciones escritas de lo que se dijo durante la entrevista
- Le preguntaremos que nosde la informacion sobre otros miembros o amigos que tengan mas informacion sobre crencias y costumbres durante el embarazo

Riesgos – "¿Cuales son los riesgos de participar en el estudio?"

Riesgos del estudio:
Hay un posible riesgo de sentirse incomfortable mientras uno esta contestando las preguntas acerca de sus creencias y costumbres y su informacion personal. Tal vez usted no le gustaría que su voz este grabada en una cinta de audio casete durante la entrevista. También usted se puede cansar físicamente de estar sentada y hablando con nosotros durante la entrevista.

Por favor, tenga presente que si usted revela informacion acerca de ofensas ilegales, como el abuso o negligencia de los ninos o ancianos o otra actividad ilicita, la investigadora esta obligada por la ley a reportar estas actitividades. Si estas actividades se notan o son reveladas, la investigadora concluirá la entrevista, juntará qualquier otra informacion, hara reportes o referencias como sean necesarias, y se retirará del establecimiento.

Riesgos y effectos secundarios de las entrevistas de cara a cara:
Probable (Aproximadamente 5 sujeto de 20)

Probable y graves

- Ninguno

Probable y no graves

- no le gustaría que su voz este grabada en una cinta de audio casete
- También usted se puede cansar físicamente de estar sentada y hablando durante la entrevista.
- Es posible que usted nos informe que ingiesa substancias no comibles que pueden ser peligrosas
- Es possible que usted se ponga anciosa durante la entrevista si esta discutiendo temas sensitivos

Menos Probable (Aproximadamente 1 sujeto de 20)

Menos probable y graves

- Ninguno

Menos probable y no graves

- Necesidad de reportar actos criminals e ilegales a las autoridades como el abuso y negligencia de ninos y de ancianos que debe ser reportado al Servicio de Proteccion al Nino (CPS), Servicio de protection de Adultos (APS) o la policia; uso de drogas ilegales, o otras actividades ilegales que se necesitan reportar a la policia local.

Raros pero Graves (Aproximadamente 0 sujeto de 100),

- Ninguno

Para mas informacion acerca de los riesgos y efectos secundarios, pregunte a los investigadores o empleado del estudio.
Nosotros le informaremos acerca de nuevas e importantes determinaciones que se desarrollan durante el curso de este estudio y que estan relacionadas a su deseo de continuar.

Hay riesgos si tambien participo en otros estudios de investigación?
Estando en mas de un estudio de investigación al mismo tiempo, o en differentes horarios, puede aumentar el riesgo para usted. Tambien puede afectar el resultado de los estudios. No debe tomar parte en mas de un estudio sin la aprobacion de los investiadores de cada estudio.

¿Qué sucederá si sufre una lesión que esté relacionada a la investigación?
Los investigadores han tomado pasos para disminuir los riesgos conocidos o anticipados. Como sea, usted podria sentir problemas o efectos secundarios, aunque los investigadores han tenido cuidado de evitarlos. Si usted cree que ha sido dañado, notifique a la investigadora tan pronto sea possible.

Si usted se leciona por el resultado de un procedimiento del estudio, su lición va ha estar tratado. Usted va ha estar responsable por el costo. Nosotros no tenemos planes para darle dinero si usted se leciona.

Si firma este formulario, usted no dara su derecho de conseguir una compensacion adicional si usted resulta lesionado por estar en este estudio.

Autorización para dar y divulgar informacion identificada por parte de un Estudio de Investigación. Titúlo del estudio: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

Beneficios – "¿Como podre yo y otros tener beneficios al participar en esta investigación?

Talvez usted no recivira ningun beneficio personal por participar en el estudio.

Nosotros tenemos la esperanza que la informacion que aprendemos de este estudio valla a ayudar a los investigadores a entender como mujeres embarazadas de origen Mejicana se cuidan durante el embarazo.

Alternativas – "¿Que otras opciones hay para participar en este estudio?"

Tiene la opcion de no participar en el estudio. Su decisión de no participar en este estudio no le va afectar su tratamientos médicos en la clínica o su relación con CentroMed y los provedores del cuidado medico. La investigadora va a discutir todas sus opciones con usted.

Compensación – "¿Tendra una compensacion por participar?"

Va a recibir compensasion por participar en este estudio:

- Si completa a lo menos medio de la entrevista usted esta eligible para recibir una tarjeta de regalo de Wal-Mart de $5.00
- Usted va a recibir $10.00 en una tarjeta de Wal-Mart si termina todo el processo de la entrevista
- Le vamos a dar la tarjeta de regalo al final del processo de la entrevista

La compensasion que recive pude ser sujeto a impuestos. Cuando la compensasion total que se paga a una persona que participa en uno o mas estudios es mas de $600 en un año, la institusion tiene que reportar esa cantidad al IRS. El IRS lo considera como ingreso que gano y lo trata como tal otro ingreso.

Costos – "¿Participar en este estudio me costará algo?"

Usted no tendrá que pagar ningún dinero por tomar parte en el estudio.

Informacion de Contacto – "¿A quien puedo cotactar si es que tengo preguntas o preocupaciones?"

Si tiene otras preguntas despues o usted quiere reportar un problema que puede estar relacionado a este estudio por favor llame:

Contacto Principal
Lorena C. Guerrero, MSN, RN, FNP puede ser localizada al teléfono de la oficina [redacted]

Si el contacto principal no se encuntra, llame:
Kay Avant, PhD, can be reached at [redacted] office.
Kay Avant, PhD, se puede encontrar a [redacted] oficina

Autorización para dar y divulgar informacion identificada por parte de un Estudio de Investigación. Titúlo del estudio: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

El comité de The University of Texas Health Science Center que revisa las investigaciónes en sujetos humanos (Institutional Review Board) podrá contestar cualquiera pregunta sobre sus derechos como sujeto. Usted puede contactar al IRB al [redacted] o por el correo a IRB, UTHSCSA, Code 7830, 7703 Floyd Curl Drive, San Antonio, TX 78229-3900.

Seccion de Firma del Consentimiento

Si usted esta acuerdo de participar en este estudio firme esta sección. Le daremos una copia firmada de este formulario para que lo guarde. Usted no renuncia ningun derecho legal al firmar este formulario.

FIRME ESTE DOCUMENTO SOLAMENTE SI TODO LO SIGUIENTE ESTÁ CORRECTO:

- Usted ha decidido voluntariamente participar en este estudio de investigación.
- Usted ha leído la información antes mencionada.
- Sus preguntas han sido contestadas a su satisfacción y usted cree que entiende toda la información dada sobre el estudio.

Sección de Firma para Adultos

Nombre del Sujeto en letra de Imprenta	Firma del Sujeto	Fecha	Hora
Nombre del Testigo en Letra de Imprenta	Firma del Testigo	Fecha	Hora
Nombre y Título de la Persona que está Obteniendo el Consentimiento en Letra de Imprenta	Firma de la Persona que está Obteniendo el Consentimiento	Fecha	Hora

Autorización para dar y divulgar informacion identificada por parte de un Estudio de Investigación. Titúlo del estudio: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

Esta sección describe el uso de su informacion personal. Si usted nos da el derecho para usar su informacion privada, se le pidera que firme al final del esta sección.

Confidencialidad ¿Guardaran en privado mi informacion personal?

El plan de accion de la investigación requiere que la informacion privada sea protejida. Esto es especialmente verdadero por su información acerca de su salúd.

De cualquier manera, la ley al gunas veces permite o requiere que otras personas podran ver su informacion. La informacion que sique describe como su privacidad y su confidencialidad de su archivo del estudio van ha cer protejidos en este estudio.

¿Qué es la Información Protegida de Salud (siglas en Inglés son PHI)?
La informacion de salud protejida (PHI) es informacion acerca de la salud de una persona que incluye informacion que podria ser posible descubrir quien esa persona es. Segun las leyes, usted tiene el derecho para decider quien puede ver su informacion protegida de salud. Si decide de tomar parte en este estudio, usted dara su permiso a los investigadores y a los empleados del estudio (individuuos que hacen el estudio) para ver y usar su infomacion de salud por este estudio de investigación. Llevando acabo esta investigación la informacion de salud acerca de usted sera vista y usada para este estudio de la investigación incluira: Su edad, estado matrimonial, la clase de trabajo de usted, los anos completes que tiene de educacion, el monto de ganancias que el hogar recibe, informacion de su seguro de salud, informacion como la edas, relacion de otras personas que viven en su casa, y informacion donde nacieron miembros de su familia. Ademas, otra informacion que usted tenga en acuerdo a su historia médica relacionada a sus embarazos y numero de ellos, complicaciones, abortos o pérdidas naturales le seran preguntadas.

Obtendremos esta informacion preguntándole y mirando su archivo de CentroMed.

¿Como su informacion de salud protejida sera compartida?
Porque este es un estudio de investigación, no podremos tener su PHI completamente confidencial. Poremos compartir su informacion de salud con gente y grupos envueltos en supervigilar este estudio de investigación incluyendo:

- La organizasion Sigma Theta Tau, y su capitulo Delta Alpha
- El comite que revisa el estudio de datos frecuentemente, que determina si el estudio podria ser detenido por cualquier razon
- Los miembros del grupo local de investigación
- El Institutional Review Board y la Officina de Complianza de la University of Texas Health Science Center en San Antonio, y otros grupos que revisa los estudios que se llevan en afecto
- Las oficinas de investigación de la University of Texas Health Science Center en San Antonio

Partes de su PHI sera fotocopiada y enviada a una localidad central o sera transmitida electronicamente, como en correo electronico o fasímil.

Los grupos que recibirian su informacion de salud nos tendrian la obligacion de mantenerlo en privado. Podrian pasar la informacion a otros grupos o individuos no nombrados aquí.

INSTITUTIONAL REVIEW BOARD
MAY - 5 2008
Date Approved by IRB
UTHSCSA

Autorización para dar y divulgar informacion identificada por parte de un Estudio de Investigación. Titúlo del estudio: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

Si usted decide participar en este estudio, estara dando su permiso para los grupos nombrados anteriormente, para ver y compartir su informacion de salud. Si usted decide no dejar que estos grupos vean y compartan su informacion de salud como se explica anteriormente usted no podrá participar en el estudio de investigación.

¿Como su PHI sera protegida?
En un esfuerzo de protejer su privacidad, los empleados del estudio usaran numeros de codigo en vez de su nombre, para indentificar su informacion de salud. Iniciales y numeros seran usado en cualquier fotocopia de su registro de estudio. Si el resultado de este estudio es registrado en diarios de medicina, o en reuniones profesionales, usted no sera indentificada.

¿Permiteran el uso de informacion de salud?
Usted no tiene que permitir a los investigadores y otros grupos que vean y comparten en su informacion de salud. Si usted decide de no dejar que los investigadores y otros grupos que usen su informacion de salud, no habran castigos pero no se le permitira participar en el estudio. Despues que usted se incriba en el estudio, puede pedir a los investigadores de parar el uso de su informacion de salud a cualquier momento. De cualquier manera, necesita decirlo por escrito y mandarle una carta a Lorena C. Guerrero, MSN, RN, FNP, [redacted] Si usted le dice a los investigadores de parar el uso de su informacion de salud, su participacion en el estudio terminara, y los empleados del estudio pararan de recopilar nueva informacion de usted y acerca suyo para el estudio. De cualquier manera, empleados del estudio continuaran usando la informacion de salud recopilada hasta el dia que reciban su cara pidiendo que paren.

¿Puede usted pedir ver el PHI que se recopila acerca de usted en este estudio?
Las reglas federales dicen que puede ver la informacion de salud que se recopiló acerca de usted y el uso en este estudio. Contacte el personal del estudio si necesita examinar su PHI recopilado por este estudio.

Usted tiene acceso a su PHI solo hasta 31 Mayo, 2009.

¿Por cuanto tiempo sera usado su PHI?
Firmando este formulario, esta de acuerdo de dejarnos usar y reveler su informacion de salud con el proposito del estudio a cualquier tiempo en el futuro. No hay fecha de expiracion porque no sabemos cuanto tiempo nos llevara en concluir todos los analises y necesitamos usar su informacion de salud por el tiempo que nos tome lograrlo.

Autorización para dar y divulgar informacion identificada por parte de un Estudio de Investigación. Titúlo del estudio: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

Seccion de Firma Confidencial

Si esta de acuerdo al uso de su informacion privada en esta investigación firme esta seccion. Se le entregara una copia firmada de este formulario. Usted no renuncia a ningun derecho legal por firmar este formulario.

FIRME ESTE FORMULARIO SI LO SIGUIENTE ES VERDADERO:

- Usted autoriza la recoleccion, uso y compartir su informacion de salud como se describe en este formulario
- Leyo la informacion anterior
- Sus preguntas fueron contestada a su satisfaccion y cree que entiende toda la información dada acerca del estudio y acerca del uso y revelacion de su informacion de salud

Sección de Firma para Adultos

Nombre del Sujeto en letra de Imprenta	Firma del Sujeto	Fecha	Hora
Nombre del Testigo en Letra de Imprenta	Firma del Testigo	Fecha	Hora
Nombre y Título de la Persona que está Obteniendo el Consentimiento en Letra de Imprenta	Firma de la Persona que está Obteniendo el Consentimiento	Fecha	Hora

APPENDIX B

IRB FORMS

The University of Texas
Health Science Center at San Antonio
Mail Code 7830
7703 Floyd Curl Drive
San Antonio, Texas 78229-3900

Institutional Review Board
IORG0000312
Federalwide Assurance #FWA00005928

[redacted]

January 24, 2008

TO: Lorena C. Guerrero, PhD Student
Dept. of Chronic Nursing Care
UTHSCSA

FROM: Institutional Review Board

SUBJECT: **FINAL EXPEDITED IRB APPROVAL**

IRB Protocol #HSC20080111H
A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

IRB Approval Date: January 24, 2008
Next IRB review: December 1, 2008
IRB Expiration Date: January 24, 2009

This minimal risk protocol was approved, including 1 consent form, for Expedited Review under the following DHHS Regulation categories:

45CFR46.110(b)(1) Category 5: Research involving materials (data, documents, records or specimens) that have been collected, or will be collected solely for non-research purposes (such as medical treatment or diagnosis).

45CFR46.110(b)(1) Category 6: Collection of data from voice, video, digital, or image recordings made for research purposes.

45CFR46.110(b)(1) Category 7: Research on individual or group characteristics or behavior; or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

This study has been approved for the inclusion of pregnant women, in this minimal risk study, under 45 CFR 46.204. Individuals engaged in the research may not have any part in any decisions as to the timing, method or procedures used to terminate a pregnancy or determining the viability of a neonate.

Approval was given on January 24, 2008 for a waiver of requirement to obtain a valid authorization to use or disclose PHI as specified in **45 CFR 164.512(i).** The details of this approval are outlined on the Approval for the Application for Waiver of Authorization.

It was determined that this study will pose minimal risk to subjects participating and that continuing review will occur annually.

[redacted]

Rhonda Barnard, MS, Expedited Reviewer

Study Sites: (UTHSCSA) (CentroMed)
Please retain this document in your IRB correspondence file

WE MAKE LIVES BETTER
UT HEALTH SCIENCE CENTER™
SAN ANTONIO

January 30, 2009

To: Lorena C. Guerrero, PhD Student
Dept. of Chronic Nursing Care, MC 7950
UTHSCSA

From: Institutional Review Board-2

Subject: **NOTICE OF CONTINUING REVIEW REAPPROVAL**

Protocol Number: HSC20080111H
Title: A Grounded Theory of Pregnancy Beliefs and Practices among Pregnant Hispanic Women of Mexican Origin

The study is closed to new subject enrollment and data are being analyzed. The above referenced protocol was reapproved on January 23, 2009 by ***expedited review*** for the Institutional Review Board-2. The protocol continues to meet the criteria to include pregnant women and fetuses in the study under DHHS regulation 45 CFR 46.204, as originally approved.

Your reapproval period expires on January 24, 2010.

IRB required training for researchers: It was noted that the PI and several Sub-Investigators/Study Staff met the current investigator training requirements. The Board determined that only the investigators listed below were approved to continue to be engaged in this research study:

- **Lorena Guerrero**

Important Note: All Investigators previously listed as engaged in research not complying with the training requirement are no longer approved to be engaged in this research study. The Principal Investigator may request these individuals be added once the training requirements have been met. *Only the Investigators engaged in research covered under the UTHSCSA Federalwide Assurance have been listed.*

Under the OHRP guidance, the IRB is retaining the anniversary date as the previous expiration date plus one year. The annual continuing review for this study was performed within 30 days before the IRB approval expiration date. The Office for Human Research Protections (HHS/OHRP) recognizes the advantages of keeping the IRB approval period constant from year to year throughout the life of each project.

In order to keep your study open beyond this date, you must submit a progress report six weeks (42 days) prior to expiration.

Sincerely,

[redacted]

Patricia Alexander
Institutional Review Board Coordinator
Institutional Review Board-2

Please retain this document in your IRB correspondence file

APPENDIX C

CENTROMED APPROVAL

BOARD OF DIRECTORS
Noemí Galván Eling, Esq.
Chair
John A. Soto, Ph.D.
1st Vice Chair
Judy H. Treviño
2nd Vice Chair
Heriberto (Berto) Guerra, Jr.
Treasurer
Maria C. Flores
Secretary
Patricia Butler
Juan A. Chavira, Ph.D., J.D.
Sarah Davidson
Norma L. Green, M.B.A.
James D. Legler, M.D.
Diana M. Lopez
Cresencio Ortiz
Melinda Perez
Mollie Polansky
Theresa Scepanski, M.A.

Ernesto Gómez, Ph.D.
Chief Executive Officer

PROGRAMS
CentroMed
South Park Clinic
South Park Dental
Southside Clinic
Somerset Family Clinic
Santa Rosa Clinic
Lanier Student Health Center
Elder Services
Family Resource Center
Health Care for the Homeless
WIC Program
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A Health and Human Service Agency

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January 11, 2008

The University of Texas Health Science Center at San Antonio
Joseph O. Schmelz, PhD
Director of Institutional Review Board
7703 Floyd Curl Drive
San Antonio, TX 78229

Re: RE: HSC20080111H - Pregnancy Beliefs in Hispanic Women

Dear Dr. Schmelz,

As the CEO of CentroMed (El Centro del Barrio), we are committed to assisting the primary investigator and our employee, Ms. Lorena C. Guerrero, MSN, RN, FNP with her educational endeavors. Therefore, please accept this formal letter of support for the study entitled Pregnancy Beliefs in Hispanic Women: A Grounded Theory; number HSC20080111H.

Ms. Guerrero will have access to two of our obstetrics/gynecology clinics where she will be responsible for recruiting patients for her study on her own, non-CentroMed work schedule. The locations of our two clinics are as follows:

1) CentroMed South Park Clinic
6315 S. Zarzamora
San Antonio, TX 78211

2) CentroMed Southside Clinic
910 S.W. Military Drive
San Antonio, TX 78221

If there is anything you need, please don't hesitate to call me at 9[redacted]

Sincerely,

[redacted]

Ernesto Gomez, PhD
President & Chief Executive Officer

APPENDIX D

DEMOGRAPHIC FORM

CONTACT INFORMATION

Name: _____ Participant's ALIAS: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Home phone #: (_____)_____ Work phone #: (___) _____

Alternate phone # (cellular, pager): (_____) _____

Family member/friend's contact information: (____)_____

INTERVIEW SCHEDULING INFORMATION

	Appointment date (MM/DD/YYYY)	Appointment time (am/pm)	Appointment location	Reason for rescheduling
1.				
2.				

After participant is recruited and interview is scheduled:

Task	Date completed	Initials
Input information into Administration Data Base		
Mail thank you letter after interview		

DEMOGRAPHIC INFORMATION

(Ask as many of the following questions after completion of the initial interview)

TODAY'S DATE: _____

AGE

Maternal age: _____ years Birth date: _____
(MM/DD/YYYY)

CURRENT MARITAL STATUS *(*indicates need to complete past marital history)*

- ☐ Yes ☐ No Single (never married, living with parents or other family members)
- ☐ Yes ☐ No Single (never married, living alone)
- ☐ Yes ☐ No Single (never married, living with platonic friend)
- ☐ Yes ☐ No Single (living with significant other, not married) [ ] years
- ☐ Yes ☐ No Married [ ] years *
- ☐ Yes ☐ No Separated [ ] years *
- ☐ Yes ☐ No Divorced [ ] years *
- ☐ Yes ☐ No Widowed [ ] years *

PAST MARITAL HISTORY *(only complete if marked Current Marital Status * choice)*

Number of times you have been married _____

Number of times you have been separated _____

Number of times you have been divorced _____

Number of times you have been widowed _____

ETHNICITY

Please indicate which of the following Hispanic ethnic group(s) you belong to:

Mexican-American	☐ Yes	☐ No
Mexican	☐ Yes	☐ No
Other: _____	☐ Yes	☐ No

Country of birth: _____

Years and months living in the U.S.: _____ years and _____ months

EDUCATION (*Include schooling and degrees and/or certificates earned in other countries*)

How many years of school, grades Kindergarten – 12, have you completed? _____ Years

How many years of school beyond high school or GED have you completed? _____ Years

Depending on the information available, use the following table to determine years of full time school completed:

# credit hours	Standing	Years of school completed
0-29	Freshman standing (1st year of undergrad)	Less than 1
30-59	Sophomore standing (2nd year of undergrad)	1
60-89	Junior standing (3rd year of undergrad)	2
90-119	Senior standing (4th year of undergrad)	3
120-138	1st year in fulltime graduate school	4
139-155	2nd year in fulltime graduate school	5
156-173	3rd year in fulltime graduate school	6
174-191	4th year in fulltime graduate school	7
192-209	5th year in fulltime graduate school	8
210-227	6th year in fulltime graduate school	9

228-245	7th year in fulltime graduate school	10

DEGREES *(Check as many as apply)*

Currently in high school or GED program ☐ Yes ☐ No
Grade level: _____
Currently in a technical/vocational program ☐ Yes ☐ No
Have High School diploma or GED ☐ Yes ☐ No
Have Technical/vocational certificate ☐ Yes ☐ No
Have Associates degree ☐ Yes ☐ No
Have Bachelors degree ☐ Yes ☐ No
Have Masters degree ☐ Yes ☐ No
Have Doctorate ☐ Yes ☐ No

MEDICAL INSURANCE

Medicaid ☐ Yes ☐ No
Medicare ☐ Yes ☐ No
Private ☐ Yes ☐ No -
Type:_____
None ☐ Yes ☐ No

MEDICAL DATA:

Last Menstrual Period: _____ Due Date: _____

Number of times you have been pregnant (including this pregnancy): _____

Number of times you have given birth: _____

Number of infants born 37-40 weeks gestation: _____

Number of preterm (less than 36 weeks) infants that you gave birth to: _____

Number of spontaneous abortions: _____

Number of pregnancy terminations: _____

Number of living children: _____

HOUSEHOLD COMPOSITION

Household Members Currently Residing With Respondent

	Relationship to you	Age of individual	Code *(Office use only)*
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Use the following numeric codes to designate relationship to participant:

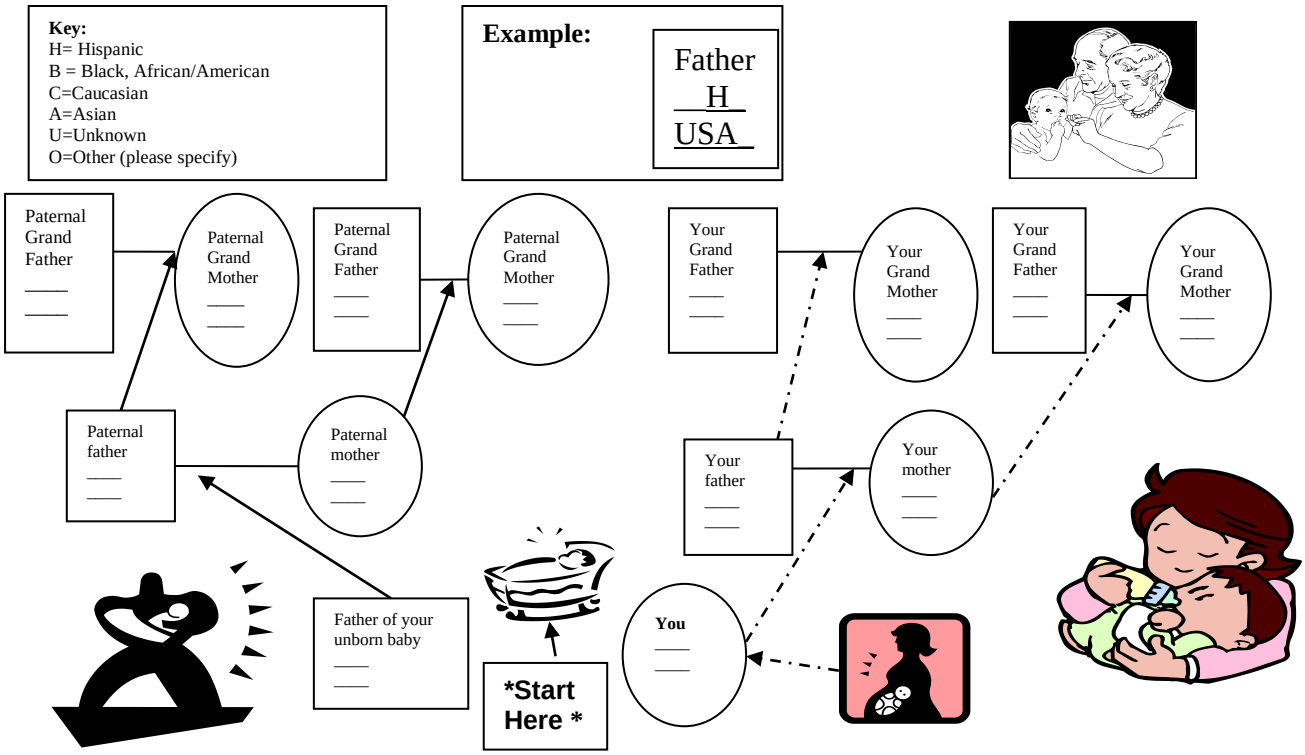
0.0= Daughter
1.0= Son
2.0= Husband
3.0= Fiancé
4.0= Boyfriend
5.0= Mother
6.0= Father
7.0= Sister
8.0= Brother
9.0= Grandmother
10.0= Grandfather
11.0= Male cousin
12.0= Female cousin
13.0= Aunt
14.0= Uncle
15.0= Niece
16.0= Nephew
17.0= Great grandmother
18.0= Great grandfather
19.0= Male friend non-relative
20.0= Female friend non-relative
21.0= other male relative
22.0= other female relative

#.0= full
#.1= step

#.2= half

APPENDIX D

GENERATIONAL GENOGRAM



LITERATURE CITED

Acevedo-Garcia, D., Soobader, M. J., & Berkman, L. F. (2005). The differential effect of foreign-born status on low birth weight by race/ethnicity and education. *Pediatrics, 115*(1), 20-30.

Allaire, A. D. (2001). Complementary and alternative medicine in the labor and delivery suite. *Clinical Obstetrics and Gynecology, 44*(4), 681-691.

Allaire, A. D., Moos, M. K., & Wells, S. R. (2000). Complementary and alternative medicine in pregnancy: A survey of North Carolina certified nurse-midwives. *Obstetrics & Gynecology, 95*(1), 19-23.

Applewhite, S. L. (1995). Curanderismo: Demystifying the health beliefs and practices of elderly Mexican Americans. *Health & Social Work, 20*(4), 247-254.

Athearn, P. N., Kendall, P. A., Hillers, V., Schroeder, M., Bergmann, V., Chen, G., et al. (2004). Awareness and acceptance of current food safety recommendations during pregnancy. *Maternal and Child Health Journal, 8*(3), 149-162.

Avila, E., & Parker, J. (1999). *Woman who glows in the dark: A curandera reveals traditional Aztec secrets of physical and spiritual health*. New York: Penguin Putman, Inc.

Baer, R. D., Weller, S. C., de Alba-Garcia, J. G., Glazer, M., Trotter, R., Pachter, L., et al. (2003a). A cross-cultural approach to the study of the folk illness nervios. *Culture, Medicine & Psychiatry, 27*(3), 315-337.

Baer, R. D., Weller, S. C., Garcia de Alba Garcia, J., Trotter, R., Pachter, L., & Klein, R. E. (2003b). A cross-cultural approach to the study of the folk illness nervios. *Culture, Medicine & Psychiatry, 27*(3), 315-337.

Bagozzi, D. (2003). Traditional medicine Retrieved May 19, 2007, from http://www.who.int/mediacentre/factsheets/fs134/en/

Barnes, P., Bloom, B., & Nahin, R. (2008). Complementary and alternative medicine use among adults and children: United States, 2007. *Terms related to complementary and alternative medicine, 12*, 20-23

Bean, F. D., Swicegood, C. G., & Berg, R. (2000). Mexican-origin fertility: New patterns and interpretations. *Social Science Quarterly, 81*(1).

Beck, C. T. (1994). Reliability and validity issues in phenomenological research. *Western Journal of Nursing Research, 16*(3), 254-267.

Beck, C. T. (2006). Acculturation: Implications for perinatal research. *The Journal of Maternal Child Nursing, 31*(2), 114-120.

Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1997). *Women's ways of knowing: The developmeent of self, voice, and mind* (10th anniversay ed. ed.). New York: Basic Books.

Berk, M. L., Schur, C. L., Chavez, L. R., & Frankel, M. (2000). Health care use among undocumented Latino immigrants. *Health Affairs, 19*(4), 51-64.

Berland, G. K., Elliott, M. N., Morales, L. S., Algazy, J. I., Kravitz, R. L., Broder, M. S., et al. (2001). Health information on the internet: Accessibility, quality, and readability in English and Spanish. *Journal of the American Medical Association, 285*, 2612-2621.

Berman, R. O. (2006). Perceived lerning needs of minority expectant women and barriers to prenatal education. *Journal of Perinatal Education, 15*(2), 36-42.

Berry, A. B. (1999). Mexican American women's expressions of the meaning of culturally congruent prenatal care. *Journal of Transcultural Nursing, 10*(3), 203-212.

Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review, 46*(1), 5-33.

Berry, J. W. (1998). Acculturation and health: Theory and research. In KAZARIAN, S. S. & EVANS, D. R. (Eds.), *Cultural clinical psychology: Theory, research and practice* (pp. 39-57). New York: Oxford University Press.

Blackmore, S. (2000). The power of memes. *Scientific American, 283*(4), 64-73.

Bloch, M. (2000). A well-disposed social anthropologist's problems with memes. In AUNGER, R. (Ed.), *Darwinizing culture* (pp. 189-203). Oxford: Oxford University Press.

Blumer, H. (1969). *Symbolic interactionis: Perspective and method*. Englewood Cliffs, NJ: Prentice-Hall.

Bodeker, G., & Kronenberg, F. (2002). A public health agenda for traditional, complementary, and alternative medicine. *American Journal of Public Health, 92*(10), 1582-1591.

Boyle, J. S. (2003). Culture, family, and community. In ANDREWS, M. M. & BOYLE, J. S. (Eds.), *Transcultural concepts in nursing care* (4th ed., pp. 315-360). Philadelphia, PA: Lipincott Williams & Wilkins.

Brach, C., & Fraserirector, I. (2001). Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model. *Medical Care Res Rev, 57*(1), 181-217.

Brown, R. W., Jewell, R. T., & Rous, J. J. (2000). Abortion decisions among Hispanic women along the Texas-Mexico border. *Social Science Quarterly, 81*(1), 237-252.

Browner, C. H., & Mabel Preloran, H. (1999). Male partners' role in Latinas' amniocentesis decisions. *Journal of Genetic Counseling, 8*(2), 85-108.

Buekens, P., Notzon, F., Kotelchuck, M., & Wilcox, A. (2000). Why do Mexican-Americans give birth to few low birth weight infants? *American Journal of Epidemiology, 152*(4), 347-351.

Burk, M. E., Wieser, P. C., & Keegan, L. (1995). Cultural beliefs and health behaviors of pregnant Mexican-American women: Implications for primary care. *Advances in Nursing Science, 17*(4), 37-52.

Callister, L. C., & Birkhead, A. (2002). Acculturation and perinatal outcomes in Mexican immigrant childbearing women: An integrative review. *Journal of Perinatal Neonatal Nurses, 16*(3), 22-38.

Chao, M. T., Wade, C., Kronenberg, F., Kalmuss, D., & Cushman, L. F. (2006). Women's reasons for complementary and alternative medicine use: Racial/ethnic differences. *The Journal of Alternative and Complementary Medicine, 12*(8), 719-722.

Chavez, L. R., Cornelius, W. A., & Jones, O. W. (1986). Utilization of health services by Mexican immigrant women in San Diego. *Women and Health, 11*(2), 3-20.

Chesney, A. P., Thompson, B. L., Guevara, A., Vela, A., & Schottstaedt, M. F. (1980). Mexican-American folk medicine: Implications for the family physician. *The Journal of Family Practice, 11*(4), 567-574.

Clark, M. (1970a). *Health in the Mexican-American culture*. Los Angeles: California Press.

Clark, M. (1970b). *Health in the Mexican-American culture*. Los Angeles: University of California Press.

Cleveland, L. M., Minter, M. L., Cobb, K. A., Scott, A. A., & German, V. F. (2008). Lead hazards for pregnant women and children: Part 1. *American Journal of Nursing, 108*(10), 40-49.

Cohen, L. H., Fine, B. A., & Pergament, E. (1998). An assessment of ethnocultural beliefs regarding the causes of birth defects and genetic disorders. *Journal of Genetic Counseling, 7*(1), 15-29.

Cohen, L. M. (1979). *Culture, disease, and stress among Latino immigrants*. Washington, D.C.: The Catholic University of America.

Collins Jr., J. W., & David, R. J. (2004). Pregnancy outcome of Mexican-American women: The effect of generational residence in the United States. *Ethnicity & Disease, 14*(3), 317-321.

Corbin, J. M., & Strauss, A. L. (2007). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Cunningham, F. G., Gant, N. F., Leveno, K. J., Gilstrap, L. C. I., Hauth, J. C., & Wenstrom, K. D. (Eds.). (2001). *Williams obstetrics* (21st ed.). New York: McGraw-Hill.

Curry, M. A., Burton, D., & Fields, J. (1998). The prenatal psychosocial profile: A research and clinical tool. *Research in Nursing & Health, 21*, 211-219.

Cushman, L. F., Wade, C., Factor-Litvak, P., & Firester, L. (1999). Use of complementary and alternative medicine among African-American and Hispanic women in New York City: A pilot study. *Journal of American Medical Womens Association, 54*(4), 193-195.

Dawkins, R. (1976). *The selfish gene*. Oxford, England: Oxford University Press.

Declercq, E. R., Sakala, C., Corry, M. P., & Applebaum, S. (2007). Listening to mothers II: Report of the second national U.S. survey of women's childbearing experiences. *The Journal of Perinatal Education, 16*(4), 9-14.

Delgado-Rodriguez, M., Gomez-Olmedo, M., Bueno-Cavanillas, A., & Galvez-Vargas, R. (1997). Unplanned pregnancy as major determinant in inadequate use of prenatal care. *Preventive Medicine*, *26*(6), 834-838.

Depacheco, M. R., & Hutti, M. H. (1999). Cultural beliefs and health care practices of childbearing Puerto Rican American women and Mexican American women: a review of the literature. *Mother Baby Journal, 3*(1), 14-23.

Department of Health and Human Services (2004). Healthy people 2010 objectives: Maternal, infant, and child health. *Department of Health and Human Services* Retrieved February 26, 2005, from http://www.healthypeople.gov/Document/HTML/Volume2/16MICH.htm#_Toc494699661

Domian, E. W. (2001). Cultural practices and social support of pregnant wome in a northern New Mexico community. *Journal of Nursing Scholarship, 33*(4), 331-336.

Dye, J. L. (2008). Fertility of American women: 2006. *Population Characteristics*, 1-22. Retrieved from http://www.cesus.gov/prod/2008pubs/p20-558.pdf

Eaves, Y. D. (2001). A synthesis technique for grounded theory data analysis. *Journal of Advanced Nursing, 35*(5), 654-663.

Edelman, C., & Mandle, C. (Eds.). (2002). *Health promotion throughout the lifespan* (5th ed.). St. Louis, MO: Mosby.

El Reda, D. K., Grigorescu, V., Posner, S. F., & Davis-Harrier, A. (2007). Lower rates of preterm birth in women of Arab ancestry: An epidemiological paradox - Michigan, 1993-2002. *Maternal and Child Health Journal, 11*(6), 622-627.

Factor-Litvak, P., Cushman, L. F., Kronenberg, F., Wade, C., & Kalmuss, D. (2001). Use of complementary and alternative medicine among women in New York City: A pilot study. *The Journal of Alternative and Complementary Medicine, 7*(6), 659-666.

Falicov, C. J. (2003). Religion and spiritual folk traditions in immigrant families. In WALSH, F. (Ed.), *Spiritual resources in family therapy* (pp. 104-120). New York: Guilford Publications.

Franzini, L., Ribble, J. C., & Keddie, A. M. (2001). Understanding the Hispanic paradox. *Ethnicity & Disease, 11*(3), 496-518.

Frazier, D., & Quintero, F. (2006, September 9, 2006). Farms' harvest: lack of workers. *Rocky Mountain News*, from http://www.rockymountainnews.com/drmn/local/article/0,1299,DRMN_15_4980378,00.html

Fugh-Berman, A., & Kronenberg, F. (2003). Complementary and alternative medicine (CAM) in reproductive-age women: A review of randomized controlled trials. *Reproductive Toxicology, 17*, 137-152.

Gaffney, L., & Smith, C. A. (2004). Use of complementary therapies in pregnancy: The perceptions of obstetricians and midwives in South Australia. *Australian and New Zeland Journal of Obstetrics and Gynaecology, 44*(1), 24-29.

Galanti, G.-A. (2003). *Caring for patients from different cultures* (3rd ed.). Philadelphia: University of Pennsylvania Press.

Galavotti, C., & Richter, D. L. (2000). Talking about hysterectomy: the experiences of women from four cultural groups. *Journal of Women's Health & Gender-Based Medicine, 9 (Suppl)*(2), S63-67.

Gallagher, M. (2005). *Child health promotion and health protection practices used by mothers of Mexican descent.* Unpublished Dissertation, University of Texas Health Science Center at San Antonio, San Antonio.

Gallo, M., Einarson, A., & Koren, G. (2003). Herbal medicine use in pregnancy: A new frontier in clinical teratology. *Birth Defects Research, 58,* 499-500.

Geller, S. E., Bernstein, S. J., & Harlow, S. D. (1997). The decision-making process for the treatment of abnormal uterine bleeding. *Journal of Women's Health, 6,* 559.

General guidelines for methodologies on research and evaluation of traditional medicine (2000). Retrieved May 19, 2007

Gill, S. L., Reifsnider, E., Mann, A., Villarreal, P., & Tinkle, M. B. (2004). Assessing infant breastfeeding beliefs among low-income Mexican-Americans. *The Journal of Perinatal Education, 13*(3), 39-50.

Glaser, B. G. (1998). *Doing Grounded Theory: Issues and Discussions*. Mill Valley, CA: Sociology Press.

Gonzalez, T., & Kuipers, J. (2004). Mexican-Americans. In GIGER, J. N. & DAVIDHIZAR, R. E. (Eds.), *Transcultural Nursing Assessment & Intervention* (4th ed., pp. 221-253). St. Louis, MO: Mosby.

Gordon, S. M. (1994). Hispanic cultural health beliefs and folk remedies. *Journal of Holistic Nursing, 12*(3), 307-322.

Gould, J. B., Madan, A., Qin, C., & Chavez, G. (2003). Perinatal outcomes in two dissimilar immigrant populations in the United States: a dual epidemiologic paradox. *Pediatrics, 111*(6), 676-682.

Guarnaccia, P. J., Lewis-Fernandez, R., & Marano, M. R. (2003). Toward a Puerto Rican popular nosology: Nervios and ataque de nervios. *Culture, Medicine & Psychiatry, 27*(3), 339-366.

Guendelman, S. (1995). Effect of United States residence on birth outcomes among Mexican immigrants: An exploratory study. *American Journal of Epidemiology, 142*(Supplement 9), 30-38.

Guendelman, S., & Abrams, B. (1995). Dietary intake among Mexican American women: Generational differences and a comparison with white non-Hispanic women. *American Journal of Public Health, 85*, 20-25.

Guendelman, S., Gould, J. B., Hudes, M., & Eskenazi, B. (1990). Generational differences in perinatal health among the Mexican American population: findings from HHANES 1982-84. *American Journal of Public Health, 80*(1), 61-65.

Guenther, E., Mendoza, J., Crouch, B. I., Moyer-Mileur, L. J., & Junkins, E. P. (2005). Differences in herbal and dietary supplement use in the Hispanic and non-Hispanic pediatric population. *Pediatric Emergency Care, 21*(8), 507-514.

Guglielmino, C. R., Viganotti, C., Hewlett, B., & Cavalli-Sforza, L. L. (1995). Cultural variation in Africa: Role of mechanism of transmission and adaptation. *Proceedings of the National Academy of Sciences of the United States of America, 92*(16), 7585-7589.

Guzman, B. (2001). *The Hispanic population*: U.S. Census.

Hannon, P. R., Willis, S. K., Bishop-Townsend, V., Martinez, I. M., & Scrimshaw, S. C. (2000). African-American and Latina adolescent mothers' infant feeding decisions and brastfeeding practices: a qualitative study. *Journal of Adolescent Health, 26*(6), 399-407.

Hartweg, D. L., & Isabelli-Garcia, C. (2007). Health perceptions of low-income, immigrant Spanish-speaking Latinas in the United States. *Hispanic Health Care International, 5*(2), 53-63.

HHS poverty guidelines (2008). *Federal Register, 2008*(15), 3971-3972.

Hollyer, T., Boon, H., Georgousis, A., Smith, M., & Einarson, A. (2002). The use of CAM by women suffering from nausea and vomiting during pregnancy. *BMC Complementary and Alternative Medicine, 2*(5), 1-6.

Hovey, J. D. (2000). Psychosocial predictors of acculturative stress in Mexican immigrants. *The Journal of Psychology, 134*(5), 490-502.

Howell, L., Kochhar, K., Saywell, R., Zollinger, T., Koehler, J., Mandzuk, C., et al. (2006). Use of herbal remedies by Hispanic patients: Do they inform their physician? *The Journal of the American Board of Family Medicine, 19,* 566-578.

Hufford, D. (1997). Folk medicine and health culture in contemporary society. *Therapies in Primary Care, 24*(4), 723-741.

Hunt, K. J., Resendez, R. G., Williams, K., Haffner, S. M., Stern, M. P., & Hazuda, H. P. (2003). All-cause and cardiovascular mortality among Mexican-American and Non-Hispanic white older participants in the San Antonio heart study -- Evidence against the "Hispanic paradox". *American Journal of Epidemiology, 158*(11), 1048-1057.

Hunt, L. M. (2005). Health research: What's culture got to do with it? (Comment). *The Lancet, 366*(9486), 617-618.

Hunt, L. M., Schneider, S., & Comer, B. (2004). Should acculturation be a variable in health research? A critical review of research on US Hispanics. *Social Science and Medicine, 59,* 973-986.

Hutchinson, S. A., & Wilson, H. S. (2001). Grounded theory the method. In MUNHALL, P. L. (Ed.), *Nursing Research* (3rd ed.). Sudbury, MA: Jones and Bartlett Publishers.

Jimenez, S. (1995). The Hispanic culture, folklore, and perinatal health. *Journal of Perinatal Education, 4*(1), 9-16.

Jones, M. E., Hughes, S. T., & Bond, M. L. (1999). Predictors of birth outcome among Hispanic immigrant women. *Journal of Nursing Care Quality, 14*(1), 56-62.

Kelaher, M., & Jessop, D. J. (2002). Differences in low-birthweight amond documented and undocumented foreign-born and US-born Latinas. *Social Science and Medicine, 55*, 2171-2175.

Kochhar, R. (2005). *Survey of Mexican migrants*. Washington, D.C.: Pew Hispanic Center.

Koss-Chioino, J. D. (1995). Traditional and folk approaches among ethnic minorities. *Aponte, Joseph F, (Ed); Rivers,* 333pp.

Koss-Chioino, J. D., & Canive, J. M. (1993). The interaction of popular and clinical diagnostic labeling: The case of embrujado. *Medical Anthropology, 15*(2), 171-188.

Krajewski-Jaime, E. R. (1991a). Folk-healing among Mexican-American families as a consideration in the delivery of child welfare and child health care services. *Child Welfare, 70*(2), 157-167.

Krajewski-Jaime, E. R. (1991b). Folk healing among Mexican-American families as a consideration in the delivery of child welfare and child health care services. *Child Welfare, 52*(2), 157-167.

Kramer, M. (1996). Hispanic folk healing as culturally responsive psychotherapy. *Dissertation Abstracts International: Section B: the Sciences & Engineering, 56*(10-B), 5772, US: Univ Microfilms International.

Kramer, M. S., Goulet, L., Lydon, J., Seguin, L., McNamara, H., & Dassa, C. (2001). Socio-economic disparities in preterm birth: Causal pathways and mechanisms. *Paediatric and Perinatal Epidemiology, 15*(Supplement 2), 104-123.

Kronenberg, F., Cushman, L. F., Wade, C., Kalmuss, D., & Chao, M. T. (2006). Race/ethnicity and women's use of complementary and alternative medicine in the United States: Results of a national survey. *Research and Practice, 96*(7), 1236-1242.

Lagana, K. L. (1996). Preventing low birthweight: cultural influences on Mexican immigrant and Mexican-American prenatal care. A community study. *294*.

Lagana, K. L. (2003). Come bien, camina y no se preocupe--eat right, walk, and do not worry: Selective biculturalism during pregnancy in a Mexican American community. *Journal of Transcultural Nursing, 14*(2), 117-124.

Lara, M., Gamboa, C., Kahramanian, M. I., Morales, L. S., & Hayes-Bautista, D. E. (2005). Acculturation and Latino health in the United States: A review of the literature and its sociopolitical context. *Annual Review of Public Health, 26*, 367-397.

The Latino paradox (2003). *Harvard Health Letter*, 3.

Lauderdale, J. (2003). Transcultural perspectives in childbearing. In ANDREWS, M. M. & BOYLE, J. S. (Eds.), *Transcultural concepts in nursing care* (pp. 95-131). Philadelphia: Lippincott, Williams & Wilkins.

Leininger, M. (Ed.). (2001). *Culture care diversity and universality: a theory of nursing*. Boston: Jones and Bartlett.

Lewis, C. E., Groff, J. Y., Herman, C. J., McKeown, R. E., & Wilcox, L. S. (2000). Overview of women's decision making regarding elective hysterectomy, oophorectomy, and hormone replacement therapy. *Journal of Women's Health, 9*, S-5.

Lobel, M. (1997). *The life strain inventory (LSI)*. Stoney Brook, NY: State University of New York at Stony Brook.

Lopez, R., A. (2005). Use of alternative folk medicine by Mexican American women. *Journal of Immigrant Health, 7*(1), 23-31.

Lu, M. C., Prentice, J., Yu, S. M., Inkelas, M., Lange, L. O., & Halfon, N. (2003). Childbirth education classes: Sociodemographic disparities in attendance and the association of attendance with breastfeeding initiation. *Maternal and Child Health Journal, 7*(2), 87-93.

Madan, A., Palaniappan, L., Urizar, G., Wang, Y., Fortmann, S. P., & Gould, J. B. (2006). Sociocultural factors that affect pregnancy outcomes in two dissimilar immigrant groups in the United States. *Pediatrics, 148*(3), 341-346.

Marshall, C., & Rossman, G. B. (2006). *Designing qualitative research* (4th ed.): Sage Publications, Inc.

Martin, N. G., Eaves, L. J., Heath, A. C., Jardine, R., Feingold, L. M., & Eysenck, H. J. (1986). Transmission of social attitudes. *Proceedings of the National Academy of Sciences of the United States of America, 83*, 3464-4368.

Martinez-Schallmoser, L., MacMullen, N. J., & Telleen, S. (2005). Social support in Mexican American childbearing women. *Journal of Gynecological Neonatal Nurses, 34*(6), 755-760.

Martinez-Schallmoser, L., Telleen, S., & MacMullen, N. (2003). The effect of social support and acculturation on postpartum depression in Mexican-American women. *Journal of Transcultural Nursing, 14*, 329-338.

Massimini, F., & Delle Fave, A. (2000). Individual development in a bio-cultural perspective. *American Psychologist, 55*(1), 24-33.

Mattson, S. (2003). Caring for Latino women. *AWHONN Lifelines, 7*(3), 258-259.

McCarthy, M. C., Ruiz, E., Gale, B. J., Karam, C., & Moore, N. (2004). The meaning of health: Perspectives of Anglo and Latino older women. *Health Care for Women International, 25*(10), 950-969.

McGlade, M. S., Saha, S., & Dahlstrom, M. E. (2004). The Latina paradox: An opportunity for restructuring prenatal care delivery. *American Journal of Public Health, 94*(12), 2062-2065.

Meister, J. S., Warrick, L. H., De Zapien, J. G., & Wood, A. H. (1992). Using lay health workers: case study of a community-based prenatal intervention. *Journal of Community Health, 17*(1), 37-51.

Mendelson, C. (2003). Creating healthy environments: Household-based health behaviours of contemporary Mexican American women. *Journal of Community Health Nursing, 20*(3), 147-159.

Metropolitan Health (2006). Maternal and child health indicators: Births to mothers receiving late or no prenatal care Retrieved October 3, 2008, from http://www.sanantonio.gov/health/pdf/healthprofiles/hp2006/births/births/births.htm

Mikhail, N., Wali, S., & Ziment, I. (2004). Use of alternative medicine among Hispanics. *The Journal of Alternative and Complementary Medicine, 10*(5), 851-859.

Morales, L. S., Lara, M., Kington, R. S., Valdez, R. O., & Escarce, J. J. (2002). Socioeconomic, cultural, and behavioral factors affecting Hispanic health outcomes. *Journal of Health Care for the Poor & Underserved, 13*(4), 477-503.

Morse, J. M. (2003). A review committee's guide for evaluating qualitative proposals. *Qualitative Health Research, 13*(6), 833-851.

Munhall, P. L., & Boyd, C. O. (1993). *Nursing research: A qualitative perspective*. New York: National League for Nursing Press.

Murkoff, H., & Mazel, S. (2008). *What to expect when you're expecting* (4th ed.). New York: Workman Publishing Company, Inc.

A nation online: How Americans are expanding their use of the internet (2001). National Telecommunications and Information Administration

Economics and Statistics Adminstration.

New jobless claims hit 26-year high (2008, December 25, 2008). *New York Times*, p. 1,

Newby, C. A., Riley, D. M., & Leal-Almeraz, T. O. (2006). Mercury use and exposure among santeria practitioners: Religious versus folk practice in northern New Jersey, USA. *Ethnicity & Health, 11*(3), 287-306.

Norenzayan, A., Smith, E. E., Kim, B. J., & Nisbett, R. E. (2002). Cultural preferences for formal versus intuitive reasoning. *Cognitive Science, 26*, 653-684.

Padilla, Y. C., & Villalobos, G. (2007). Cultural responses to health among Mexican American women and their families. *Family & Community Health, 30*(1S), S24-S33.

Palinkas, L. A., & Kabongo, M. L. (2000). The use of complementary and alternative medicine by primary care patients. *Journal of Family Practice, 49*(12), 1121-1130.

Pasky, R. (1979). Hartford Connecticut: A prevalence study of folk medical beliefs. *Urban Health, 8*(9), 39-42.

Passport Fees (2008). Retrieved October 5, 2008, from http://travel.state.gov/passport/get/fees/fees_837.html

Pearce, C. W. (1998). Seeking a healthy baby: Hispanic women's views of pregnancy and prenatal care. *Clinical Excellence for Nurse Practitioner, 2*(6), 352-361.

Peedicayil, J. (2001). The importance of cultural inheritance. *Medical Hypotheses, 56*(2), 158-159.

Peristats (2005). *Final mortality data, 1990-1994; and period linked birth infant death data, 1995-2001*: March of Dimes.

Planning a healthy pregnancy (2005). (pp. 1-31): Channing Bete Company, Inc.

Poss, J., & Jezewski, M. A. (2002). The role and meaning of susto in Mexican Americans' explanatory model of type 2 diabetes. *Medical Anthropology Quarterly, 16*(3), 360-377.

Poss, J. E., Jezewski, M. A., & Gonzalez, A. (2003a). Home remedies for type 2 diabetes used by Mexican Americans in El Paso, Texas. *Clinical Nursing Research, 12*(4), 304-323.

Poss, J. E., Jezewski, M. A., & Stuart, A. G. (2003b). Home Remedies for Type 2 Diabetes Used by Mexican Americans in El Paso, Texas. *Clinical Nursing Research, 12*(4), 304-323.

Powell, J., & Clarke, A. (2002). The www of the world wide web: Who, what, and why? *Journal of Medical Internet Resources, 4*(1).

Ramirez, R. R., & De La Cruz, P. G. (2002). The Hispanic population in the United States. *Current population reports*, 1-8

Reiss, R. E., & Ash, A. D. (1988). The eight-month fetus: Classical sources for a modern superstition. *Obstetrical Gynecology, 71*, 270-273.

Rodriguez, N., Myers, H. F., Mira, C. B., Flores, T., & Garcia-Hernandez, L. (2002). Development of the multidimensional acculturative stress inventory for adults of Mexican origin. *Psychological Assessment, 14*(4), 451-461.

Rodriguez, R. A. (1993). *Female migrant farmworkers: the meaning of health within the culture of transience.* Texas Woman's University.

Romero, M. G. (2008). Mental health counseling with Hispanics/Latinos: The role of culture in practice. In MARINI, I. & STEBNICKI, M. A. (Eds.), *The professional counselor's desk reference* (pp. 1004). New York: Springer Publishing Company.

Routine Prenatal Care (2006). Retrieved January 13, 2007, from http://www.icsi.org/display_file.asp?FileId=178&title=Prenatal%20Care,%20Routine

Roy, L. C., Torrez, D., & Dale, J. C. (2004). Ethnicity, traditional health beliefs, and health-seeking behavior: Guardians' attitudes regarding their children's medical treatment. *Journal of Pediatric Health Care, 18*, 22-29.

Ruiz, P. (1985). Cultural barriers to effective medical care among Hispanic-American patients. *Annual Review of Medicine, 36*, 63-71.

Ruiz, R. J., & Avant, K. C. (2005). Effects of prental maternal stress on infant outcomes: A synthesis of the literature. *Advances in Nursing Science, 28*(4), 345-355.

Ruiz, R. J., Dolbier, C. L., & Flescher, R. (2006). The relationship among acculturation, biobehavioral risk, stress, corticotropin releasing hormone, and poor birth outcomes in Hispanic women. *Ethnicity & Disease, 16*(4), 926-932.

Ruiz, R. J., Fullerton, J., Guerrero, L. C., Garcia-Atwater, M., & Dolbier, C. L. (2006). Development of a culturally sensitive stress instrument for pregnant Hispanic women. *Hispanic Health Care International, 4*(1), 27-35.

San Antonio Metropolitan Health District (2003). San Antonio metropolitan health district executive summary. *Health Profiles 2003* Retrieved February 26, 2005, 2005, from http://www.sanantonio.gov/health/profiles/profiles2003/2003HealthProfiles/ExecSummary.doc

Sanchez, M. (2007). Mexican American Women's pathways to health. *Family & Community Health, 30*(1s), S43-S52.

Sloman, S. (1996). The empirical case for two systems of reasoning. *Psychological Bulletin, 119*, 3-22.

Smart, J. F., & Smart, D. W. (2001). Acculturative stress of hispanics: Loss and challege. *Journal of Counseling & Development, 73*, 390-396.

Snow, L. F., & Johnson, S. M. (1977). Modern day menstrual folklore. *Journal of the American Medical Association, 237*(25), 2736-2739.

Spector, R. E. (2000). *Cultural diversity in health & illness* (5th ed.). Upper Saddle River, New Jersey: Prentice Hall Health.

St. Clair, P. A., & Anderson, N. A. (1989). Social network advice during pregnancy: myths, misinformation, and sound counsel. *Birth, 16*(3), 103-107.

Stern, P. (1980). Grounded theory methodology: its uses and processes. *Image, 12*, 20-23.

Stolley, J. M., & Koenig, H. (1997). Religion/spirituality and health among elderly African-Americans and Hispanics. *Journal of Psychosocial Nursing, 35*(1), 32-38.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage Publications.

Suarez, M., Raffaelli, M., & O'Leary, A. (1996). Use of folk healing practices by HIV-infected Hispanics living in the United States. *AIDS Care, 8*(6), 683-690.

Suarez, Z. E. (2000a). Hispanics and health care. In CAFFERTY, P. S. J. & ENGSTROM, D. W. (Eds.), *An agenda for the twenty-first century: Hispanics in the United States* (pp. 363). New Brunswick, New Jersey: Transaction Publishers.

Suarez, Z. E. (2000b). *Hispanics and health care*. New Brunswick, NJ: Transaction Publishers.

Torres, R. (2005). Latina perceptions of prenatal care. *Hispanic Health Care International, 3*(3), 153-159.

Tripp-Reimer, T. (1983). Retention of a folk-healing practice (Matiasma) among four generations of urban Greek immigrants. *Nursing Research, 32*(2), 97-101.

U.S. Census Bureau (2000). Census 2000 demographic profile highlights, from http://factfinder.census.gov/

U.S. Census Bureau (2004). U.S. interim projections by age, sex, race, and Hispanic origin.

U.S. Census Bureau (2005). Race and Hispanic origin in 2005. *Population profile of the United States: Dynamic Version*, 1-9

U.S. Census Bureau (2008). An older and more diverse nation by midcentury. *U.S. Census Bureau News*. Retrieved from http://www.census.gov/Press-release/www/releases/archives/population/012496.html

Upchurch, D. M., & Chyu, L. (2005). Use of complementary and alternative medicine among American women. *Women's Health Issues, 15*, 5-13.

Upchurch, D. M., Chyu, L., Greendale, G. A., Utts, J., Bair, Y. A., Zhang, G., et al. (2007). Complementary and alternative medicine use among American women: Findings from the national health interview survey, 2002. *Journal of Women's Health, 16*(1), 102-113.

Van den Berg, M., Timmermans, R. M., Knol, D. L., Van Eijk, J. T. M., De Smit, D. J., Van Vugt, J. M. G., et al. (2008). Understanding pregnant women's decision making concerning prenatal screening. *Health Psychology, 27*(4), 430-437.

Wang, S., DeZinno, P., Fermo, L., William, K., Caldwell-Andrews, A. A., Bravemen, F., et al. (2005). Complementary and alternative medicine for low-back pain in pregnancy: A

cross-sectional survey. *The Journal of Alternative and Complementary Medicine, 11*(3), 459-464.

Wells, J., Cagle, C., & Bradley, P. (2006). Building on Mexican-American cultural values. *Nursing, 36*(7), 20-21.

Westfall, R. E. (2003). Herbal healing in pregnancy: women's experiences. *Journal of Herb Pharmacotherapy, 3*(4), 17-39.

Wikipedia (2009). Decision making, from http://en.wikipedia.org/wiki/Decision_Making

Williams, D. E. (2001). Cultural practices and social support of pregnant women in northern New Mexico community. *Journal of Nursing Scholarship, 33*(4), 331-336.

Woods, N. F., Laffrey, S., Duffy, M., Lentz, M. J., Sullivan Mitchell, E., Taylor, D., et al. (1988). Being healhty: Women's images. *Advances in Nursing Science, 11*(1), 36-46.

World Health Organization (2006). Traditional medicine Retrieved June 13, 2006, from http://www.who.int/mediacentre/factsheets/fs134/en/print.html

Zambrana, R. E., Scrimshaw, S. C., Collins, N., & Dunkel-Schetter, C. (1997). Prenatal health behaviors and psychosocial risk factors in pregnant women of Mexican origin: The role of acculturation. *American Journal of Public Health, 87*(6), 1022-1026.

Zepeda, M. (1982). Selected maternal-infant care practices of Spanish-speaking women. *Journal of Obstetric and Gynecological Nursing, 11*(6), 371-373.

Vita

Lorena C. Guerrero was born on [redacted] in Punta Arenas, Chile as the third child to Sonia and Rigoberto Guerrero. In 1977, when I was nine years old, my family escaped political persecution in Chile and immigrated to the United States. After arriving in the states, my family and I settled in West Concord, Massachusetts where we lived until 1980. During the summer of 1980, we relocated to San Antonio, Texas to live closer to other family members who were living in south Texas. In 1986, I graduated from John Marshall High School in San Antonio, Texas. I attended San Antonio College where I received an Associate Degree in Nursing in 1993. I began working as a Registered Nurse at the Baptist Health System where I worked in the medical-surgical, orthopedic, telemetry, and post anesthesia recovery units caring for a variety of patients ranging in age from infants to the elderly. I began the early master's degree (Associate Degree to Masters Degree in Nursing) at the University of Texas Health Science Center at San Antonio in 1998. In 2002, I received both my Bachelor degree in Nursing from the University of Texas Health Science Center at San Antonio School of Nursing and a Master of Science in Nursing Degree from the University of Texas Health Science Center at San Antonio Graduate School of Biomedical Sciences with a major in family nurse practitioner certification and a minor in teaching.

I started my research career as the research coordinator working with Dr. Jeanne Ruiz and quickly learned that I had not only an interest but a passion for conducting research. After reviewing the literature on the Hispanic Paradox relating to birth outcomes, I found I had more unanswered questions - specially relating to cultural issues. As a first generation immigrant, my interest in this subject increased and I wanted to learn more about sociocultural factors that may be influencing this paradox. Therefore, in the fall of 2003, I began the PhD program to try to

answer some of the questions I had regarding this phenomenon. I plan to continue my program of research focusing on eliminating health care disparities by studying sociocultural influences that may affect health outcomes in minority families