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The Struggle for Balance: Culture Care Worldview of Mexican Americans About Diabetes Mellitus

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THE STRUGGLE FOR BALANCE: CULTURE CARE WORLDVIEW OF MEXICAN AMERICANS ABOUT DIABETES MELLITUS AN ETHNONURSING STUDY

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By

Jesus A. Hernandez

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ABSTRACT

THE STRUGGLE FOR BALANCE: CULTURE CARE WORLDVIEW OF MEXICAN AMERICANS ABOUT DIABETES MELLITUS AN ETHNONURSING STUDY

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Dissertation supervised by Rick Zoucha DNSc, APRN-BC, CTN

The purpose of this study was to describe, explain, and interpret perspectives, perceptions, meanings, symbols, and lifeways to explicate the culture care worldview about Diabetes Mellitus (DM) for Mexican American participants. Leininger's Culture Care Diversity and Universality Theory served as an organizing framework Interviews were conducted with thirty Mexican American key participants without DM. Four phases of analysis of ethnonursing method revealed thirteen categories, five patterns and three themes. The categories were: Health; faith and religion; natural living; tranquility and stress; strong emotions; susto; immigration; life in US; family advice and support; cultural beliefs; treatments of diabetes; care; and communication. The patterns were a pattern of: Concern about DM with much confusion and uncertainties about the disease; maintaining balance and body defenses towards health; integrating self-care, generic and

professional values in care; adaption to change and stressors; and valuing nursing and professional care. The themes American participants value balance and health yet have many uncertainties and concerns about Diabetes Mellitus that impact their culture care worldview; Mexican American participants' culture care worldview of Diabetes Mellitus integrates self-care with generic and professional care values, beliefs and practices; and Mexican American participants' culture care worldview of professional care of Diabetes Mellitus, emphasizes culturally acceptable, compassionate, personalized care, based on communication, mutual trust and respect, provided within the context of the family that supports the person's struggle for balance, health, wellbeing and function. *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model,* Hernandez © 2013 was abstracted by author, from study literature, findings and themes. Implications and recommendations for nursing theory, practice, education, policy and research were described.

Keywords: Nursing, Leininger, Culture Care, Worldview, Mexican American, Diabetes Mellitus Dissertation

DEDICATION

This dissertation is dedicated to my life-partner, Oscar Hull whose love, care, patience, and friendship were instrumental to overcoming the rigor and many obstacles along this journey, giving me the ability to prevail with faith, hope and resilience. I also dedicate this dissertation to my son, Brandon Samples whose love, talent, sweet spirit and determination motivated me to persevere. I would not have been able to succeed without the love and support of my parents Adis and Jesus, and brother, Carlos and his family Belkis, Christian and Carolina. I also dedicate this dissertation to all my family, friends and colleagues who stood with me and did not give up hope that this process would come to fruition. In memoriam, thanks to my grandmother Lucia, whose love, wisdom and faith have been my source of strength and inspiration. I dedicate this dissertation to Nursing and all nurses that provide compassionate nursing culture care, to ennoble persons to reach their optimum health and potential. All honor to God, who lifts me up with unconditional love, leads my journey, and has guided me to be who I am today and will determine who I'm to become.

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CHAPTER I

The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus

Introduction

Goal

The goal of this study was to understand the culture care worldview, values, beliefs and practices of Mexican Americans about Diabetes Mellitus (DM) using the ethnonursing method. The study aimed to explicate the emic or folk worldview and thus included Mexican American adults without DM, in an effort at understanding the values, beliefs and practices emanating from the culture as opposed to the etic, professional influences on the worldview of persons with DM. Further study was needed to explicate the culture care worldview for this high risk group experiencing epidemic rises in the incidence of DM. Evidence is inconclusive if health values, beliefs and practices about DM influence the person's ability to adhere to the professional plan of care for DM or if these may lead to conflicts or misunderstandings with the professional healthcare team and the provision of professional care. Increasing collaboration and adherence to an agreed upon and culturally appropriate plan of care may improve client care outcomes and significantly impact a person's ability to live with the chronic illness of DM and its complications.

Diabetes Mellitus

According to the American Diabetes Association (ADA), (2004) DM is one of the most common chronic diseases impacting persons in the United States (US). DM represents a group of metabolic or endocrine diseases characterized by hyperglycemia as

a result of decreased insulin secretion and/or its action on the body. DM may lead to long-term effects and dysfunction of many major body systems including the eyes, kidneys, nerves, heart and blood vessels. Undiagnosed DM increases the risk of stroke, coronary artery disease, peripheral vascular disease and the associated comorbidities of hyperlipidemia, hypertension and obesity. The risk of developing the disease is impacted by many risk factors including age over 45, obesity with body mass index (BMI) $\geq$ 25 kg/m2, lack of physical exercise, family history, ethnicity (African-American, Hispanic-Americans, Native Americans, Asian-Americans, and Pacific Islanders), previously identified pre-diabetes, history of gestational diabetes or delivery of baby > 9 lb., hypertension, dyslipidemia, polycystic ovary disease, or history of vascular disease.

ADA (2013) standards for medical care of diabetes included an A1C $\geq$6.5% performed in a laboratory using a method that is NGSP certified and standardized to the Diabetes Control and Complications Trial (DCCT) assay; or a fasting plasma glucose (FPG) $\geq$126 mg/dl (7.0 mmol/L) (fasting is defined as no caloric intake for at least 8 hours prior to test); or 2 hour plasma glucose $\geq$200 mg/dl (11.1 mmol/L) during an oral glucose tolerance test (OGTT) performed as described by the World Health Organization, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water; or in a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose $\geq$200 mg/dl (11.1 mmol/L); in the absence of unequivocal hyperglycemia, result should be confirmed by repeat testing.

The ADA (2013) recommended that testing to detect type 2 diabetes and prediabetes in asymptomatic people should be considered in adults of any age who are overweight or obese (BMI $\geq$25 kg/m^2) and who have one or more additional risk factors

for diabetes. In those without these risk factors, testing should begin at age 45 years. If these tests are normal, repeat testing at least at 3-year intervals is appropriate. The ADA stated that to test for diabetes or prediabetes, the A1C, FPG, or 75-g 2-h OGTT are appropriate according to guidelines. In those identified with prediabetes, providers must identify and, if appropriate, treat other cardiovascular disease (CVD) risk factors. The prevalence of DM in the Mexican American population was three to five times that of the traditional majority group. Most of the rise in prevalence of diabetes DM concerns the classification of type 2 diabetes (DM), previously known as non-insulin dependent diabetes.

According to the ADA (2013) by the most recent estimates in the US, 18.8 million people in the U.S. have been diagnosed with diabetes while and an additional 7 million are believed to be living with undiagnosed diabetes. Additionally, 79 million people are estimated to have blood glucose levels in the range of prediabetes or categories of increased risk for diabetes making more than 100 million Americans are at risk for developing the devastating complications of diabetes. Diabetes self-management education (DSME) is supported as a critical element of care for all people with diabetes and those at risk for developing the disease. DSME It is necessary in order to prevent or delay the complications of diabetes and has elements related to lifestyle changes that are also essential for individuals with prediabetes as part of efforts to prevent the disease.

There are many Complications associated with DM. Major complications are heart disease and stroke and in 2004, heart disease was noted on 68% of diabetes-related death certificates among people aged 65 years or older. In 2004, stroke was noted on 16% of diabetes-related death certificates among people aged 65 years or older. Adults with

diabetes had heart disease death rates about 2 to 4 times higher than adults without diabetes. The risk for stroke was 2 to 4 times higher among people with diabetes Another complication is High blood pressure in 2005-2008, of adults aged 20 years or older with self-reported diabetes, 67% had blood pressure greater than or equal to 140/90 mmHg or used prescription medications for hypertension (CDC 2011).

Blindness is associated with DM in that Diabetes is the leading cause of new cases of blindness among adults aged 20–74 years. In 2005-2008, 4.2 million (28.5%) people with diabetes aged 40 years or older had diabetic retinopathy. Of those with diabetic retinopathy, almost 0.7 million or 4.4% of those with diabetes, had advanced diabetic retinopathy that could lead to severe vision loss (CDC 2011).

Diabetes is the leading cause of kidney failure in The US, accounting for 44% of new cases in 2008. In 2008, 48,374 people with diabetes began treatment for end-stage kidney disease in the United States. In the US in 2008, a total of 202,290 people with end-stage kidney disease due to diabetes were living on chronic dialysis or with a kidney transplant (CDC 2011).

Nervous system disease (Neuropathy) about 60% to 70% of people with diabetes have mild to severe forms of nervous system damage including diabetic neuropathy. Amputation often related to nervous system disease affect persons with DM in that more than 60% of non-traumatic lower-limb amputations occur in people with diabetes. In the US in 2006, about 65,700 non-traumatic lower-limb amputations were performed in people with diabetes (CDC 2011).

According to the ADA (2010) researchers do not fully understand why DM develops but have uncovered many factors that may contribute to the disease. Genetics is

one factor that appears to play a role in how DM develops as it appears to run in families and is most likely due to the inheritance of certain genes. The link to genetics seems even stronger in DM than in type 1 diabetes. If a person with type 1 diabetes has an identical twin, there is a 25 to 50 percent chance that the twin will develop diabetes. However, there is a 60 to 75 percent chance that the person will develop diabetes if a person with type 2 diabetes has an identical twin. Additional evidence to support the role of genetics in DM comes from studying differences in prevalence for certain ethnic groups. African Americans, Asian Americans, Hispanic Americans (except Cuban Americans), and Native Americans all get type DM more often when compared with Caucasians. Native Americans have the highest rate of DM in the world. Hispanic groups that share genes with Native American groups (where there has been cultural mixing) such as Mexican Americans, have a higher rate of DM than other Hispanic groups, such as Cuban Americans, where less intercultural contact has occurred.

Researchers have yet to isolate a single DM gene, but are finding several genes that may contribute to the disease. One example is a protein called PC-1, which researchers have identified, that shuts down the insulin receptor, creating insulin resistance. This protein is prevalent in most people with DM, compared to those without diabetes. For unknown reasons, too much of this inhibitor protein is made in some people, and affects the insulin receptor which can lead to insulin resistance (ADA 2010). Genes that lead to obesity may also play a role in diabetes. The obese gene first identified in mice, appears to regulate body weight by making proteins that affect the center in the brain that signals whether you're full or hungry. Mutations in the obese gene lead mice to become obese and develop DM (ADA, 2010).

Environmental factors are also implicated in DM and the most important trigger appears to be obesity, defined as having a body mass index of 30 or greater. Genetics may also play a role in obesity and, thus, in triggering DM. Excessive amounts of body fat promote resistance to insulin but losing weight and increasing the amount of muscle and decreasing the amount of fat helps insulin use. DM been treated with diet and exercise as a way to reduce obesity and insulin resistance (ADA, 2010).

Researchers have also found a link between DM and fat is storage. Persons with central body obesity, or excess fat carried above the hips, have a higher risk of developing DM compared with those with excess fat on the hips and thighs. One reason why DM is also more common in African Americans is that central body obesity and overall obesity are more common in African Americans than in Caucasians (ADA, 2010).

According to ADA (2010) age also appears to play a role in that half of all new cases of DM occur in people over age 55. Researchers think that the reason more older people develop diabetes is because older people are more often overweight as people tend to gain weight as they age. Life style choices like leading a sedentary lifestyle and consuming a high-calorie diet can also lead to diabetes type 2 in susceptible people and contribute to obesity.

Researchers assert that the best way to prevent DM is to maintain an active lifestyle and prevent obesity by keeping your weight at a healthy level. In the Diabetes Prevention Program (DPP) study, researchers tested if it could delay or prevent the onset of diabetes in people at high risk for DM by changing lifestyle habits or taking the oral diabetes medication metformin (Glucophage). The study evaluated 3,234 overweight volunteers who had impaired glucose tolerance (IGT). The subjects were placed in one of

three groups: the lifestyle intervention group, the metformin group, and a placebo group. In the first group, the lifestyle intervention group, participants used a low-fat diet and exercised for 30 minutes a day five times a week. People in the second group were treated with the diabetic medication metformin 850 mg twice a day, and the people in the third group took placebo pills in place of metformin. The last two groups also received information on diet and exercise along with the pills (ADA, 2010).

The study ended a year early when researchers discovered that people the incidence of DM decreased 58% in the lifestyle group who lost 5 to 7 percent of their body weight or an average of 10–20 pounds and exercised usually by walking 30 minutes a day, 5 days a week. The group taking Metformin also demonstrated a lowered the incidence of diabetes by 31 percent. These results indicated that moderate exercise and modest weight loss can assist in preventing DM (ADA, 2010).

Background

According to Senemmari (2005) the number of Americans diagnosed with DM doubled over the period from 1980-2002. Evidence suggests that of those persons born in the US in 2000 up to one in three will be diagnosed with DM in their lifetime.

Jimenez-Cruz and Bacardi-Gascon (2004) describe DM as the most common reason for hospitalizations of Mexicans in México after obstetrical admissions. DM accounts for the third highest cause for mortality in the nation. In 1999 the prevalence in México was calculated to have increased to 11.4% from 8.8% in 1993. A higher prevalence rate of 14.4% is seen in the southern states of México, in those that are populated by large numbers of Mexican Indians. DM is expected to increase in

prevalence over the next decades as an increase in obesity, which contributes to DM, continues to be of concern for México.

One in five Americans has a chronic condition and the prevalence of chronic illnesses and associated comorbid conditions and complications has continued to increase in the population. It is estimated that one third of Hispanics in the US are without any health insurance to deal with the increased burden of living with a chronic disease (Lorig, Ritter, & Gonzalez, 2003). DM is one of the most common chronic diseases in the United States (US). Hispanics are one of the fastest growing minorities in the US, and represented 13% of the total population in the 2000 census. Mexican Americans made up 58.5% of all Hispanics, the largest group (Galanti, 2003).

Data from the 2010 Census provided evidence of US as an increasingly ethnically diverse nation. According to the 2010 Census, Hispanic or Latino origin people accounted for 308.7 million people or 16 % of the population. Over half of the growth in the total population of the United States for period of 2000-2010 was due to the increase in Hispanics, that increased by 15.2 million, making it a 27.3 million increase in the total population of the US. Between 2000 and 2010, there was an increase of 43% in the Hispanic population, which was four times the growth in the total population at 10 percent. The Mexican origin population increased by 54 percent and had the largest numeric change growing from 20.6 million in 2000 to 31.8 million in the 2010 census. Of all increase in the Hispanic population from 2000 to 2010, Mexicans Americans accounted for about three-quarters of the 15.2 million increases in Hispanics. Retrieved June, 2013 from http://www.census.gov/prod/cen2010/briefs/c2010br-04.pdf

After working for five years as a family nurse practitioner (FNP) in a free clinic in Charlotte, the largest city in the Southeastern United States (US), the researcher began to notice that professional interventions for care of Mexican Americans with the chronic illness of DM were sometimes not followed by the client. Non-adherence to the plan of care was often due to cultural misunderstandings and the influences of health beliefs, values and traditional care practices on the recommended plan of care. Client conflicts with adhering to the proposed health care plan and lack of culturally congruent professional care often led to poor outcomes and miscommunications in managing the illness.

Leininger and McFarland (2002) advocated for the practice of transcultural nursing and application of culture care theory in order to use nursing care modes to provide culturally congruent care and improve care delivery. This proposal is for an ethnonursing study to further explicate and increase understanding of the culture care values, beliefs and practices of Mexican Americans about DM.

Caring for persons with chronic illnesses like DM requires understanding of the influence of culture on the lifeways of the person. Leininger (1997a) developed a grand theory of caring that among other factors explicated caring as being generic and professional. She cautioned against the term alternative medicine as being alternative to what? She introduced the term *generic care* to refer to folk and traditional healing modes. This mode is older than professional caring. Generic care is culturally transmitted while professional care knowledge and practices are learned through formal education. Generic care was defined as "the folk, familiar, natural, and lay care that is used and relied upon

by cultures as their basic primary care practices" (Leininger, 1995, p. 72). To understand generic care the culture's values, beliefs and practices must be explored and understood.

Professional care in contrast was defined as "the learned and practiced care by nurses prepared in schools of nursing and used largely in clinical professional contexts (Leininger, 1995, p. 72)." These two types of care may not always be congruent. (Rosenbaum, 1997). Leininger advocated integrating generic care with professional care for transcultural nurses to provide culturally congruent care and improve healthcare outcomes. Leininger advocated using qualitative methods such as ethnonursing to understand generic care and add to transcultural nursing science (Leininger, 1997b; 1999).

Boyle (2002) asserted that little research existed that demonstrated culturally congruent care and how it was to be accomplished and recommended that nurses be familiar with cultural concepts such as folk illnesses perspectives. Culturally congruent care requires understanding and acceptance of how client's think about an illness and how their beliefs and values impact their behavioral responses and practices.

According to Welch (2000) the satisfaction of a patient with care, adherence to therapy, and continuity of care may depend on a provider's culturally sensitive response to folk illness beliefs. Giving a judgmental response to folk illnesses may lead to termination of future clinical encounters.

Little is known about the care beliefs and practices of Mexican Americans about DM within an ethnonursing approach that explores the culture care worldview of the person. Increasing understanding and scientific knowledge of culture care beliefs and

practices of Mexican Americans about DM can have important implications for nursing practice, theory development, testing, and research.

Purpose of Study

The purpose of study is to describe, explain, and interpret perspectives, perceptions, meanings, symbols, and lifeways to explicate the culture care worldview about Diabetes Mellitus for Mexican American participants. The goal of this study was to understand the culture care worldview, of Mexican Americans about Diabetes Mellitus using the ethnonursing method. This ethnonursing study is designed to increase understanding and discovery of lifeways and generic and professional care values, beliefs and practices about Diabetes mellitus within a cultural context and the influence of social, technological, religious, political, educational and economic factors in order to improve the provision of culturally congruent care and care outcomes for Mexican Americans with Diabetes Mellitus.

Domain of Inquiry

The Domain of Inquiry (DOI) for this ethnonursing study is the culture care values, beliefs and practices of Mexican Americans about to DM. This DOI is important to nurses because increasing numbers of Mexican Americans with DM are receiving care in the US. Understanding care values, beliefs and practices about DM can increase the provision of culturally congruent nursing care to Mexican Americans and improve health outcomes and wellbeing, and management of the illness.

Research Questions

The research questions for this study are:

1. What is the Mexican American culture care worldview about DM and health?

2. What are the culture care generic values, beliefs and practices of Mexican Americans about DM?
3. What culture care expressions, patterns and practices are important in the provision of professional care and nursing care of DM to Mexican Americans?

Orientational Definitions

Orientational definitions were tailored to the Mexican Americans participants in the study and were used as a guide to discover culture care phenomena (Leininger & McFarland, 2002, p. 83). The following definitions were adapted for this ethnonursing study:

1. Culture: refers to patterned lifeways, beliefs, values, norms, symbols and practices of Mexican Americans, that are learned, shared and usually transmitted intergenerationally (adapted from Leininger & McFarland, 2002, p. 83).
2. Culture care: refers to synthesized and culturally congruent assistive, supportive, and facilitative caring acts towards self or others focused on evident or anticipated needs for Mexican Americans' health or wellbeing or to face disabilities, death, or other human conditions (adapted from Leininger & McFarland, 2002, p. 83).
3. Worldview: refers to the way Mexican Americans look out upon and understand their world about them, as a value, stance, picture, or perspective about life or the world (adapted from Leininger & McFarland, 2002, p. 83).
4. Generic care: refers to culturally learned and transmitted lay, indigenous, (traditional), and largely emic folk knowledge used by Mexican Americans (adapted from Leininger & McFarland, 2002, p. 61).

5. Professional care: refers to formally and cognitively learned etic knowledge and practice skills that have been taught and used by healthcare providers, nurses, faculty and clinical services to provide professional care (adapted from Leininger & McFarland, 2002, p. 61).

6. Emic: refers to Mexican Americans local, indigenous, or insider's views and values about a phenomenon (adapted from Leininger & McFarland, 2002, p. 83).

7. Etic: refers to the outsider's or more universal views and values about a phenomenon (adapted from Leininger & McFarland, 2002, p. 83).

8. Mexican American: refers to a person who self-identifies as originating from México and now living primarily in the US.

8. Health: refers to a state of wellbeing, and/or restorative state that is culturally constituted, defined, valued, and practiced by Mexican Americans and allows them to function in their daily lives (adapted from Leininger & McFarland, 2002, p. 83).

9. Diabetes Mellitus: refers to a group of metabolic or endocrine diseases characterized by hyperglycemia as a result of decreased insulin secretion and/or its action on the body (ADA 2004).

10. Illness: refers to the human experience of symptoms and suffering, how a disease is perceived, the responses shown and how it impacts the lives of individual and families (Lubkin & Larsen, 2002).

11. Chronic Illness: refers to impairments or deviations from normal and must include one or more of these: permanency, residual disability, non-pathological alteration, required rehabilitation, or a long period of supervision, observation and care (Lubkin & Larsen, 2002).

Significance to Nursing

Research with populations-at-risk has become a nursing and national priority to help reduce and eliminate health disparities. Healthy People 2010 make a central goal eliminating racial and ethnic health disparities among population groups. Providing care to minority populations based on sound scientific knowledge and research is a major challenge. This change in focus has meant a paradigm shift in the US towards prevention of disease and promotion of health that will promote the philosophy that "The best citizen is a healthy citizen" (Jones & Bond, 2003, p. 173).

DM continues to increase in the US reaching an all-time high of 18.2 million Americans affected with this chronic illness. This increase represented a cost of $132 million to the nation. There also continues to be a gap between desired and actual clinical outcomes for DM. The National Diabetes Education Program has advocated a proactive approach to the disease (*The American Nurse*, March/April 2004).

DM is a costly disease and it was estimated that the total costs of diagnosed diabetes in the United States in 2007 was 174 billion. These costs were distributed as $116 billion for direct medical costs and $58 billion for indirect costs such as disability, work loss, and premature mortality (CDC 2011).

Data from the CDC National Diabetes Fact Sheet (2011) revealed that after adjusting for population age differences, 2007-2009 national survey data for people diagnosed with diabetes, aged 20 years or older the following prevalence by race/ethnicity was 7.1% of non-Hispanic whites, 8.4% of Asian Americans, 12.6% of non-Hispanic blacks, and 11.8% of Hispanics. Among Hispanics rates were: 7.6% for Cubans, 13.3% for Mexican Americans, and 13.8% for Puerto Ricans. Morbidity and Mortality statistics reported in 2011 were that in 2007, diabetes was listed as the underlying cause on 71,382 death certificates

and was listed as a contributing factor on an additional 160,022 death certificates. This means that diabetes contributed to a total of 231,404 deaths.

The New World Syndrome has been described as a constellation of health problems including DM that disproportionately affects Americans of Amerindian descent including Mexican Americans. This syndrome appears to be the result of the interaction of genetic predisposition and Western lifestyles. Other factors that contribute to this increased DM burden include: obesity, sedentary lifestyles, low socioeconomic status, barriers in healthcare access, dietary factors, lack of education of healthy behaviors and use of the healthcare system (Brown, Harrist, Villagomez, Segura, Barton, & Helms, 2000).

It is estimated that 1 in 10 Mexican Americans older than age 19 have DM (Jezewski & Poss, 2002). Complications of DM are also more prevalent for this population-at-risk. When compared to non-Hispanic whites with diabetes, Mexican American's incidence of end-stage renal disease needing dialysis is six times higher, while the incidence of retinopathy leading to blindness is two to three times higher than the majority group (Schwab, Meyer, & Merrell, 1994). Munro (2003) stated that impairment of function; prevalence and mortality are greater for Hispanics with diabetes than the European American population.

Chronic diseases like diabetes disproportionately affect minority Americans. Hispanics and especially Mexican Americans bear the burden of increased prevalence, disability and mortality rates of diabetes mellitus. Eliminating health disparities has become a major national health goal. Further research is needed to increase understanding of what contributes to health disparities regarding diabetes and ways to reduce or eliminate disparities in the Mexican American population (Healthy People, 2010).

Values, beliefs, attitudes, and experiences, as integral concepts of culture, can influence a person's perceptions and responses to their illness. The value system can have an impact on the outcomes, behaviors and decisions made to manage the disease. Individuals that are ill rely not only on objective data but on their own beliefs of etiology. Understanding of these concepts can enable providers and the healthcare system to predict more accurately the behaviors and practices of patients and collaborate with them

to provide appropriate, culturally congruent healthcare services (Mercado-Martinez & Ramos-Herrera, 2002). Thorne (2202) cautions others about avoiding stereotypic generalizations when examining health belief models of diverse populations and the dynamic ways that the biomedical and folk belief models interact with one another.

Pletsch (2002) stated that to deliver effective care to Mexican Americans living with DM, providers must understand knowledge, beliefs, values and lifeways of this population. "One of the challenges of conducting research with and providing care for minority communities in the United States is to acknowledge and account for the diversity that exists among people of a particular heritage." (p. 861). The author advocated using a wide variety of research approaches to providing healthcare that is sensitive to beliefs, values, practices and needs of populations.

Warda (2000) defined cultural competence as "a set of academic and interpersonal skills that allow individuals to increase their understanding and appreciation of cultural differences and similarities among, within and between groups (p. 203)." There is little research as to what constituted this concept. Monolingual fluency in Spanish has been identified as a factor that reduces healthcare access. Mexican Americans are more likely not to seek routine physical examination. A focus group of Mexican American recipients and nurses regarding their perceptions of culturally appropriate care supported the concepts of *personalismo* (personal care), and *simpatia* (harmony and positive feelings in social relationships). Family support was identified as an important factor as were respect, caring, understanding, and patience and personal processes in healthcare encounters. The influence of the culture of origin remained strong in spite of the Western biomedical healthcare system.

Welch (2000) summarized that the definition *Hispanic* included all persons living in the United States whose origins can be traced to the Spanish- speaking regions of Latin America, including the Caribbean, México, Central America, and South America. Normative cultural values are defined as the beliefs, ideas, and behaviors that a particular cultural group such as *Hispanics* as a whole values and expects in interpersonal interactions.

According to Welch (2000) five Hispanic common normative cultural values have been described. *Simpatía* or kindness in Spanish, as a value places priority on politeness and pleasantness in interactions in the face of stress and avoidance of hostile confrontation. *Personalismo* or formal friendliness includes patient expectations of developing a warm and personal relationship with the provider. This value is expressed as interactions that occur at close distances to the patient. Physical contact between the patient and provider is an expectation and includes personal gestures as handshakes, body contact like placing a hand on the shoulder, and in certain situations more physical direct contact such as hugging may be expected. *Respeto* or respect includes appropriate deferential behavior that is expected by the patient and is based on a position of authority, age, gender, social and economic status. Since health care providers are viewed as authority figures they must be shown *respeto* by patients. Reciprocal *respeto* from the provider is also expected, especially when the provider is younger than the patient. The value of *familismo* is a collective loyalty to the extended family that takes priority over the needs of the individual. All important decisions are made by the extended family and not just the individual alone. Welch stated that there are three basic dimensions to this value including: familial obligations or providing material and emotional support to

family members; support from the family or the perception that family members provide help and support when solving problems; and family as referents, which means that decisions and behavior should be based on pleasing and consulting with family members. Lastly, *fatalismo* or fatalism is the belief that the individual can do little to alter his or her fate that could lead to less access to preventative healthcare.

This ethnonursing study examined culture care beliefs and practices of Mexican Americans including those about diabetes to further explicate how culturally congruent care can be provided to improve health outcomes. It discovered and increased understanding of conflicts and incongruities that may arise between generic and professional care practices when caring for Mexican Americans with DM. Academics, healthcare providers and Mexican American leaders have questioned the healthcare system's ability to provide culturally appropriate care to Mexican Americans Retrieved 1/31/07 from http://faculty.smu.edu/rKemper/edu_6315/EDU_6315_Kemper_Mexicans_in_US.htm.

Integrating generic and professional care practices can increase the provision of culturally congruent care. Varied care beliefs and practices make it imperative that the culture care beliefs of Mexicans Americans are considered in order to maximize healthcare outcomes and eliminate health disparities.

Assumptions

These assumptions are derived from the literature and Leininger's (1991) Culture Care Theory assumptions and are related to the DOI for this ethnonursing study.

1. Human care and practices become understandable when viewed within the person's cultural context and worldview.

2. Culture care practices about DM for Mexican Americans need to be identified from the person's point of view.
3. Folk and traditional care beliefs and practices are part of the generic care for Mexican Americans.
4. Western care beliefs and practices, clinical recommendations and care practices learned in an educational environment and used in clinical practice consist of the professional care for Mexican Americans.
5. DM is a chronic disease that cannot be cured but can be effectively managed to improve care outcomes.
6. DM and negative health outcomes disproportionately impact Mexican Americans increasing health disparities in the US.
7. Integrating generic and professional care practices can increase the provision of culturally congruent nursing care practices.
8. Providing culturally congruent nursing care practices can improve culture care and health outcomes and assist in managing chronic illness.
9. Mexican American participants will be honest in explicating their culture care beliefs and practices when interviewed by the researcher.

Summary

DM disproportionately affects Mexican Americans. Little is known about cultural and care beliefs of Mexican Americans including those about the chronic illness of DM as most studies have focused on the traditional majority group. Understanding culture care beliefs and practices including those about DM can increase cultural understanding and the provision of culturally congruent healthcare and nursing care to Mexican

Americans with DM. Increased culture care knowledge can impact positive health outcomes for this population at risk.

This ethnonursing study is relevant to transcultural nurses in that findings from the study can explicate how generic and professional healthcare systems compare and contrast for this group of Mexican American participants. Nurses can strive to integrate generic and professional care practices in order to increase the provision of culturally congruent nursing care practices. Nurses caring for this group of participants can also increase understanding of barriers to healthcare and individualize use of the nursing care modes to increase culturally congruent care for Mexican Americans with Diabetes Mellitus.

CHAPTER II

Review of the Literature

Introduction

The goal of this literature review is to examine and synthesize literature related to culture care beliefs of Mexican Americans about DM. Since 1988, several meta-analyses have been conducted on diabetes but none have focused on the needs of Mexican American (Brown & Hanis, 1999). A search of the literature revealed no integrative reviews on this topic. This literature review will address culture care beliefs of Mexican Americans about to DM with the aim of to provide understanding of current knowledge of the DOI.

Ethnohistory

The ethnohistory of México is important in understanding the lifeways of Mexican Americans. People have lived in what is now México since 20,000 years BC. The American continent remained isolated for many centuries, which explains the originality of its Amerindian civilizations. These civilizations coexisted in a region known as Mesoamerica, in spite of many ethnic and linguistic differences. Mesoamerican cultures shared a common cultural homogeneity in many areas. The six Mesoamerican cultures considered the most influential included The Olmecs, Teotihuacans, The Toltecs, The Mayans, The Zapotec, Mixtec, and The Aztec. They all cultivated corn, had a singular structure of government, and used the 365 day calendar. All of these cultures built pyramids and used similar rituals to worship gods and goddesses of the sky, nature, fertility and war. All of the cultures shared the same concept of cosmic duality or that there is a beginning and an end (Miller, 1985).

Early Mexican history may be divided into three periods. Nomadic natives became settlers during the Pre-Classic Period, from 2,000 BC to 500 AD. This period saw many accomplishments towards a Mexican civilization including advances in arts and sciences, agriculture and development of towns. The City of La Venta of the Olmec culture is one of the best examples of an Amerindian town with its ceremonial center (Miller, 1985).

Urban centers became more powerful than rural ones during the Classic Period from 500 BC to 800 AD. This was a period of renaissance for art and learning and great social change with many advances in architecture. Many archeological sites best represent this period including: Teotihuacán, Monte Albán, El Tajín, Palenque, Cobá, Labná, Bonampak, Dzibilchaltún, Kabáh, Sayil, Chichén Itzá (Miller, 1985).

Finally**,** the Post-Classic Period dating from 800 AD to 1521 AD is notable for its increasing emphasis on military rule. This was a time of great change for several important ceremonial centers and cities. Some of these centers began declining and dying while others grew in power and influence. Some of the best examples of centers this period include: Cholula, Xochicalco, Tula, Tenayuca, Tenochtitlán (the Aztec City), Yagul, Uxmal and Mitla. (n.d) Retrieved May 2007, from http://www.mexican-embassy.dk/history.html ; (Miller, 1985).

Colonial History of México

México was called "New Spain", during the colonial period which covered three centuries of its history. The colonial period stemmed from the date of the conquest of Tenochtitlán by the Spanish on the 13th of August of 1521, up until the consummation of the Independence movement in 1821.

Several events are of importance in the history of colonial México. Texas declared its independence from México in 1836. This event provoked a war between México and the United States. México was defeated in 1847 and lost half of its original territory to the US. This territory now encompasses the states presently known as California, Arizona, New México and Texas. (n.d) Retrieved May 2007, from http://www.mexican-embassy.dk/history.html ; (Miller, 1985).

The liberal and pro-European rule of Porfirio Díaz from 1876-1911, except for a four year period, brought México economic growth. Increasing foreign investment helped further develop the oil industry and enabled the construction of a cross country railroad system. Although this period known as the "Porfiriato," brought relative peace and prosperity, it was mostly undemocratic rule and benefited the middle and upper classes. The Amerindian indigenous population did not benefit from this economic development and continued to live in difficult conditions (n.d) Retrieved May 2007, from http://en.wikipedia.org/wiki/México#Mexican_Independence ; (Miller, 1985).

The dictatorial rule and regime of Porfirio Díaz led to social unrest and the political opposition which created a climate for political change. In 1911 Francisco I. Madero was elected as the new President but was assassinated. This event triggered the start of the Mexican Revolution. The dictator Victoriano Huerta had ordered the murder of President Madero and Vice President Pino Suarez. Various factions took up arms against the dictator. These revolutionaries were led by Emiliano Zapata in the south, Francisco Villa in the north and other factions. Venustiano Carranza became victorious and provided the leadership that led to approval of the Constitution in 1917. This document was regarded as one of the most advanced of its time due to its high social

content. (n.d) Retrieved May 2007, from http://www.mexican-embassy.dk/history.html ; (Miller, 1985).

People of México

Mexicans are a varied people comprised of many different ethnicities and religions with a total estimated population of 106,202,903 (July 2005) and an estimated growth rate of 1.17% (2005). *Mestizos*, a mix of Amerindian-Spanish, account for 60% of all Mexican ethnicities, while Amerindian or predominantly Amerindian account for 30%, white 9%, and other ethnicities account for only 1%, including those of African descent. Several religions are represented with Roman Catholicism 89%, Protestant 6%, and other 5%. Languages spoken include Spanish, various Mayan, Nahuatl, and other regional indigenous languages. Literacy rate for ages 15 and over is 92.2% for the total population. Mexicans are a young population with the median age 24.93 years. Health indicators include an estimated infant mortality rate total of 20.91 deaths /1,000 live births (2005), estimated life expectancy at birth total of 75.19 years (2005), and estimated total fertility rate of 4.5 children born/woman (2005). (n.d) Retrieved May 2007, from http://yahooligans.yahoo.com/reference/factbook/mx ; (Barry, 1992).

Religion and Ethnicity

The conquest of México by the Spanish brought Catholicism to México. The Pope granted the Spanish Crown of Carlos V authority over the Church within its domain making it an arm of the Mexican state. The pursuit of souls for salvation became the king's mission as an agent of the Vatican. During México's colonial era secular clergy worked closely with civil authorities. The missionary friars on the other hand, while laboring independently had greater influence over the common people. (n.d) Retrieved

May 2007, from http://www.mexconnect.com/mex_/travel/dpalfrey/dpcolonial2.html; (Barry, 1992).

The first missionaries sent by Carlos V at Cortés request, arrived in México in 1523 and 1524 and were Franciscan missionaries. Three hundred Franciscan friars at 80 missions throughout New Spain were established by 1559. These were followed by other missionaries including Dominicans in 1525, Augustinians in 1533, and Jesuits in 1571. About 12,000 churches were built during the three centuries that the Spanish ruled México. The missionaries gained the trust of the native population by protecting them from the excesses of the Spanish civilians. This laid the foundation for the fusion of the Spanish and Mexican cultures. (n.d) Retrieved May 2007, from http://www.mexconnect.com/mex_/travel/dpalfrey/dpcolonial2.html

The native Indians were not naturally inclined to resist conversion to Christianity since it was the tradition for Mesoamerican cultures to adopt the religion of the conquering tribes. Some of the Indian ancient religious customs were assimilated in the celebration of Christians holidays as the Catholic Church tried to find ways to eliminate what they deemed as pagan practices. The apparition of the Virgin Mary (1531) to a newly converted Indian baptized with the name Juan Diego became one of the most significant religious event of the Colonial period. Since that time, La Guadalupana, Reina de México (Queen of México), has become the religious patroness of all Latin Americans. (n.d) Retrieved May 2007, from http://www.mexconnect.com/mex_/travel/dpalfrey/dpcolonial2.html

With the growth of colonial society came a well-defined caste system. The top stratus of this system was Spaniards born in Spain, called *peninsulares* or *gachupines*. Most of these individuals came from titled families and as a result held the highest ranking posts in both the government and the clergy. Next in the caste system were the *criollos*, which were born in México of Spanish parents. Indians who turned the *criollos'* farms, ranches, mines and commercial ventures into productive enterprises helped some of them to live a life of leisure. The birth of many mixed-blood and mostly illegitimate offspring of Indian women and Spaniards led to the so-called *mestizos*. They were considered inferior by pure-blood Spaniards and were to remain poor and uneducated for many generations (n.d) Retrieved May 2007, from http://www.mexconnect.com/mex_/travel/dpalfrey/dpcolonial2.html; (Merrill and Miro, 1997).

Mestizos made up a rapidly growing socioeconomic class and today make up the vast majority of México's population. In New Spain's social ladder caste system, the native Indians were delegated to the next rung down. Indians were considered wards of the Crown and the Church and the law required that legal authorities, the clergy and the encomenderos protect their welfare. Spaniards depended heavily upon native Indian labor and hundreds of thousands of Indians were worked to death. Many other native Indians succumbed to new diseases introduced by the Spaniards. These included smallpox, measles, plague, tuberculosis, and even the common cold (n.d) Retrieved May 2007, from http://www.mexconnect.com/mex_/travel/dpalfrey/dpcolonial2.html; (Merril & Miro, 1997).

Even though at the time of the Conquest about nine million indigenous people inhabited México's central plateau, this population had been reduced to two and a half million by 1600. The reduction of indigenous people led to a labor shortage and importation of African blacks as slaves. Blacks added to the mix of races and ethnicities in Mexican culture. Other racial subgroups originated in subsequent generations, including mulattos (Spanish-African), castizos (Spanish-Mestizo), and zambos (Indian-African). In addition, large numbers of Filipinos, Chinese and Europeans of assorted nationalities emigrated to México which helped Mexican culture garnered the tag "la raza cósmica" or the cosmic race (n.d) Retrieved May 2007, from http://www.mexconnect.com/mex_/travel/dpalfrey/dpcolonial2.html (Merrill & Miro, 1997).

Artistic Traditions and Holidays

European artistic traditions were introduced to a land with its own culture and artistic heritage. These traditions produced the colonial Art of New Spain, which can be seen in the Mexican colonial cities. Indigenous techniques used in ceramics, textiles, lacquer and feather-work persisted while replacing the native artistic subjects with European subjects.

"Criollos", or ethnic Spanish that were Mexican born, became aware of a Mexican identity in the arts. European elements became something different in the 17th century, giving rise to the Mexican baroque style of art. The colonial period reached its heights in the 18th century with many Baroque styles including churrigueresco and rococo.

The neo-classic style began in 1783 with the foundation of the Royal and Pontifical Art Academy of San Carlos that represented the end of the baroque style. Mexican artists continued to follow the lead from Europe until the revolution of 1910. Diego Rivera, Jose Clemente Orozco and other Mexican artists began to paint unique murals and other works in the 1930's that melded the styles of the Old World and the

ancient Mexican cultures. (n.d) Retrieved May 2007, from http://www.mexican-embassy.dk/history.html

México has a great diversity of traditional musical styles. Mariachi music, originally form the state of Jalisco, centers around the marimba instrument and recalls the tropical weather of this region. Other styles include ballads or Corridos that recount stories or legends. Along with the diverse musical style come many style of traditional dances. These dances include the use of traditional instruments including carved drums and reed flutes.

Dance styles often have been blended with European and Spanish styles giving these traditions a definite Mexican flair. Some of the more popular dances include the "Viejitos" ("Dance of the Little Old Men") from Michoacán, The "Huapango", a dance from Veracruz, and the "Jarabe Tapatio", which is considered the national dance. This last dance is also known as the Mexican Hat Dance. A Mexican 'Fiesta" or party is one of the best places to see the myriad of musical and dance traditions.

The "Day of the Dead" is celebrated each November especially in Janitzio and in December, the traditional "posadas" are performed in cities and towns across the country. México's Carnival is celebrated each year at the beginning of Lent, especially in Veracruz and Mazatlán. Ancient rituals are performed each year at the "Guelaguetza" in Oaxaca by hundreds of native dancers and musicians. Another especial holiday is The Cervantes Festival celebrated annually in Guanajuato. Although México's artistic history is diverse and eclectic, there remains a consistent outlook on life that binds it all together. (n.d) Retrieved May 2007, from http://www.mexican-embassy.dk/history.html

Political Traditions with US

International relations with the US have been strained by the growing number of Mexican nationals crossing the US border illegally. Drug syndicates control the majority of drug trafficking throughout the country. In spite of efforts to eradicate illicit drug crops and keep levels low, México remains the major supplier of heroin, and largest foreign supplier of marijuana, and methamphetamine, and 70% of all Cocaine movement to the US market. Other issues strained water-sharing arrangements with the US are mainly due to prolonged drought, population growth, and outmoded practices and infrastructure in the border region (n.d) Retrieved May 2007, from http://yahooligans.yahoo.com/reference/factbook/mx ; (Barry, 1992).

Mexican Americans

According to 2002 US Census data over 25 million people identify themselves as either Mexican immigrants or Mexican Americans, making up a significant percentage of the US population. Mexican Americans reside in all areas of the US but can be found primarily in the West (58%). Significant numbers of the population may also be found in the South (34%) and the Midwest (9%) with the least in the Northeast (2%). Mexican Americans speak Spanish as their primary language and have retained many cultural traditions upon immigrating to the US. (n.d) Retrieved May 2007, from http://faculty.smu.edu/rKemper/edu_6315/EDU_6315_Kemper_Mexicans_in_US.htm; Retrieved May 2, 2007, from http://www.census.gov/prod/2003pubs/p20-545.pdf

The history of Mexican Americans is unique and complex and has been influenced by different origins and paths to becoming part of the US, including multiculturalism, wars, depression, treaties and the changing attitudes of the US towards immigration. Mexican Americans are some of the United States' oldest and newest

immigrants with a surge of immigration in the 20th-21st centuries. The reception of this group in the US has been varied depending on changing laws and attitudes towards Mexican Americans that have led to hostilities and acceptance as well as increasing social influence. Retrieved January 28, 2007 from http://memory.loc.gov/learn/features/immig/mexican.html

Spanish speaking people have lived in North America north of the Rio Grande dating to the 16th century, since these lands were colonized by the Spanish. Mexican Americans resided in New México since 1598 and established the city of Santa Fe in 1608. Although ruled by Spain as a colony for close to 300 years, the people were best known as mestizos, a combination of Spanish and indigenous heritage. One of several significant events in the history of Mexican Americans was the independence of México from Spain in 1821. Also, the treaty of Guadalupe Hidalgo was approved after the defeat of México in the war between the US and México that resulted from the annexation of Texas in 1846. As a result of this treaty the US received land that would later become California, Texas and other parts of the US West for a payment of $15 million. The Gadsden Purchase in 1854 allowed the US to acquire parts of Arizona and New México for $10 million, opening up the West to further US expansion. As a result of these changes, suddenly thousands of Mexicans were now US citizens. (n.d) Retrieved May 2007, from http://memory.loc.gov/learn/features/immig/mexican.html

Even though property rights were safeguarded by the treaty under principles found in the US Constitution, many Mexican Americans lost their lands in the 19th century leaving them unprotected in a region filled with hostilities. Survival become difficult in the turn of the 20th century as it became difficult to distinguish between

marauders and protectors of the law, including the Texas Rangers which especially came under attack for threatening Mexican Americans. To partly cope with this situation border ballads, a type of storytelling song were developed, which carried information across the region like musical newspapers. Retrieved January 28, 2007 from http://memory.loc.gov/learn/features/immig/mexican.html

The 20th century continued to bring the Mexican Diaspora of immigration with tremendous growth in the Mexican American population in three surges. The first was in the 1900's as many left México during the Mexican Revolution tripling immigration from 200,000-600,000 counted by the US Census between 1910 and 1930, even though actual numbers were greater. El Paso, Texas served as a gateway for entrance to the US. Immigration was not seen as permanent relocation by many Mexican Americans who could easily return home back to México. Changes in conditions in México and family concerns led to a return to México of 1 million immigrants by the 1920's. Openness of the border led to much immigration occurring outside the legal system. Many undocumented immigrants were left open to exploitation from employers and smugglers and lack of documentation made it difficult to establish the numbers of Mexican immigrants to the US during this surge (n.d) Retrieved May 2007, from http://memory.loc.gov/learn/features/immig/mexican.html; (Oleary & Levinson 1991).

Prominence of Mexican Americans in US public life increased as the community became larger, former territories became states and voters were courted. Mexican culture was courted by the entertainment industry and products were targeted to this population with the worst perpetuating ethnic stereotypes. Some groups saw assimilation as one way to eliminate social problems and negative aspects of Mexican American life. Deportation

became an additional threat during the great depression of the 1930's which created many hardships for Mexican Americans. Rising unemployment led to a program of repatriation of immigrants to México. Hundreds of thousands of Mexican Americans were sent back to México. Farm workers were hit especially hard and those that remained struggled to survive. Many took on a migratory pattern as they traveled far in search of work. Safe havens were created by The US Farm Security Administration in the form of migrant work camps. The camps provided support for families, ties within a community and protection from criminals. Mexican Americans were ingrained in all aspects of the workforce by the end of the 1930's including ranching, mining, and the railroad industry. Working in the railroads not only brought economic stability but increasing mobility and expansion into other parts of the US and urban centers. (n.d) Retrieved May 2007, from http://memory.loc.gov/learn/features/immig/mexican.html

Synthesis of the Literature

This literature search was delimited to Mexicans or Mexican Americans. Only articles that discussed culture care beliefs of Mexicans or Mexican Americans with regards to DM are included. The prototype methodology for this review is qualitative as the phenomena of interest seeks to increase understanding of health beliefs and attitudes regarding DM. Some studies combined both quantitative and qualitative methods and were included. Criteria for determining qualitative rigor include credibility, fittingness, auditability and conformability. Primary sources from professional healthcare journals were retained for this review. The search yielded seven articles that met the inclusion criteria.

Weller, S. C., et al. (1999) aimed to describe Hispanic beliefs about diabetes and assess heterogeneity in beliefs across different groups. The questions posed were: Was there a coherent belief system present at each site?; To what extent did the samples have similar beliefs?; Were demographic factors such as educational level, experience, with diabetes, or acculturation associated with beliefs?

A convenience sample was used with a total of 161 interviews from diverse communities of Mexican, Mexican American, and Puerto Rican and Guatemalan heritage. A convenience sample of 40 households was selected from each site. Respondents were primarily female. In Texas 93% were born and educated in US and of Mexican heritage. Ethnicity was Mexicans for Guadalajara, of Mexican American heritage in Edinburgh Texas, Puerto Rican heritage in Hartford, Connecticut, and rural Guatemalan heritage from Esquintla city area.

A non-experimental design using a cultural consensus model was used to analyze variations in responses using interviews and questionnaires. Sites were selected to maximize diversity among Hispanics. Multi-state random sampling was used for 3 urban samples. Neighborhood sampling strategies were used for Guadalajara. In Guatemala an equal number of households were selected from four villages. Preliminary 16 item open ended, free-listing questions were used to elicit descriptive information. Responses were tabulated for each site. A separate closed ended questionnaire developed included items mentioned by 10% of respondents at each site. Items were incorporated from the Cornell Medical Index. The final questionnaire included 130 questions about diabetes. Proxy variables were used to assess acculturation. All instruments were translated into Spanish (Weller, S. C., et al. 1999).

The cultural consensus model was used to evaluate homogeneity through an aggregation of responses. Goodness-of-fit model was used to see if data fit the model. Bayesian probabilities were arrived at for each answer. Confidence level of 0.999 was set for covariance method. Pearson correlations were used for interval level independent and T-tests for independent dichotomous interval variables. Agreement between samples was assessed by comparing the classifications of items with kappa. Prevalence of experience with diabetes was lowest in Guatemala, intermediate in Texas and México and highest in Connecticut. There was a high concordance among respondents with as single belief system at each site. All four sites met goodness-of-fit criteria for the model. The average competency or proportion of shared beliefs at each site ranged from 0.67 +/- 0.10 in Connecticut, 0.66 +/- 0.09 in Texas to 0.55 +/-0.19 in México and 0.48 +/- 0.12 in Guatemala (Weller, S. C., et al. 1999).

The model showed concordance of shared levels of beliefs across sites as well 0.56 +/- 0.56 +/- 0.15. ANOVA indicated competency levels in two US sites were higher than international samples. The Mexican sample in US was higher than the Guatemalan sample (p) < 0.00005, Scheffe (P) < 0.05. Answers tended to be concordant with the biomedical description of diabetes. In Connecticut greater knowledge correlated with longer mainland US residency p < .05. In México those with average educational attainment knew more p < 0.05. There was an average knowledge or experience with diabetes and not different beliefs. The level of shared beliefs was 66-67% for the Connecticut and Texas sample, 55% in the Mexican sample and 48% in the Guatemalan sample (Weller, S. C., et al. 1999).

Results indicated that homogeneous beliefs were present within four samples although variability increased from Connecticut to Guatemala. Answers agreed with biomedical description of diabetes. Widely held beliefs that are not in agreement with the biomedical model included some of the symptoms of diabetes such as pain in hands and feet and the role that emotions may have. Variations in responses tended to characterize less knowledge and experience with diabetes. The authors concluded that the cultural consensus model facilitated assessment of cultural beliefs related to diabetes and diabetes management. Overall beliefs were concordant with the biomedical model. Variation in responses tended to characterize less knowledge or exposure with diabetes not different beliefs (Weller, S. C., et al. 1999).

Alcozer (2000) stated that the purpose of the study was to explore explanatory models of diabetes from the perspective of Mexican American women with type 2 diabetes. Questions posed were: What are the explanatory models of diabetes from the perspective of Mexican American Women with type 2 diabetes?; and What differences and similarities exist in Mexican American women's explanatory models of diabetes by acculturation and socioeconomic status?

The convenience sample included 20 Mexican American women with type 2 diabetes, ages 27-45, born in the US. Average duration of diabetes was 6 years, average age diagnosed 28 years, 18 were married, and 2 partnered (Alcozer, 2000).

The design was non-experimental using Kleinman's (1978) explanatory model of illness as a sensitizing concept using interviews. There were 2-3 open ended interviews lasting 1-2 hours and 112 hours of observations of family and diabetes related activities. Secondary review of transcripts included analytical expansion of language of personal

experiences. The Hollingshead index for socioeconomic status and ARMSA scale for mean acculturation index was used (Alcozer, 2000).

Thematic and pattern analysis were completed with stringent secondary analysis of data. Data was coded and used analysis matrices to group data into categorizing descriptors based upon similarity. There were minimal differences in explanatory models by acculturation and social strata. Social strata scores were positively correlated with acculturation ($r = 0.90$, $p = .01$). Data was collapsed into an explanatory model categorized as defining, getting, having, describing, or taking care of diabetes. Diabetes was defined as: borderline (sugar in urine) or glucose intolerant and diabetes (sugar in blood, on renal dialysis, on insulin. Getting diabetes was defined as: heredity and eating too many sweets. Describing diabetes was defined as: insulin was described as scary and complications. Most regarded insulin as a consequence and a symptom of diabetes that could cause complications of diabetes. Having diabetes was seen as: high sugar, confusing, silent. Taking care of diabetes defined as: insulin, renal dialysis, and strict diet. Borderline diabetes as: oral medications. The meaning of diabetes was viewed as a life threat with complications and shortened life (Alcozer, 2000).

The authors concluded that Mexican American women's explanatory models about diabetes serve as a basis for negotiating therapeutic interventions. The biomedical model was dissimilar to participant's explanatory model. Assessments can be ethnocentric if they include only biomedical explanations of illness. Experience with diabetes influenced perceptions. Assessment should begin with illness characteristics not with conformity to biomedical nosological system. Women relied on what they were told by healthcare providers, family and community (Alcozer, 2000).

Brown et al. (2000) purpose of study was to describe metabolic control, knowledge, and health beliefs of Mexican Americans with diabetes. Questions posed were: What are the average differences in physiological measures of HbA1C, FBG, total cholesterol, and triglycerides associated with gender, controlling treatment modality?; What are the average differences in diabetes knowledge and diabetes related health beliefs associated with gender, controlling for treatment modalities?; What are the relationships among acculturation, age, body mass index BMI, exercise level, diabetes duration, diabetes knowledge, FBG, HbA1C, and triglycerides?

The sample included Mexican Americans with DM and 252 of 360 agreed to participate and were randomized to either treatment or control group. The majority was Spanish speaking females, mean age 54 (35-70), diagnosed with diabetes, with a mean diabetes duration of 8 years. Each identified a support person >/= to age 21. Excluded were pregnant or medical conditions such as kidney failure where changes in diet and exercise would be contraindicated (Brown et al. 2000).

The design was a longitudinal study using questionnaires and assessing selected physiological variables. A four year (1994-1998) longitudinal, randomized clinical investigation conducted in Starr County Texas of the efficacy of culturally relevant, community based intervention that met standard for diabetes care. One hundred and twenty-six subjects were randomized to weight listed control group and 126 to the experimental group (Brown et al. 2000).

Demographic variables were collected. An acculturation scale developed for the San Antonio Heart Study using a 4 question questionnaire was used. Psychosocial variables were measured using the Diabetes Knowledge Questionnaire instrument

designed for the population. Content validity was established by 6 diabetes experts and reliability with Kuder-Richardson was 0.88. The health belief instrument used had 76 items with 6 subscales. It was shortened to 25 items with internal consistencies for 4 subscales from 0-65-0.90 using a 2 stage approach with flash cards for Likert responses. Physiological variables included body weight and heights at baseline, calculated BMI, FBG and HbA1C, serum cholesterol and triglycerides. Instruments were translated into Spanish. SPSS-PC+ was used for data analysis. The data was checked twice for accuracy by 4 assistants prior to analysis. Ancova at alpha level p = .01 were used to determine main and interaction effects of gender and diabetes treatment modality, controlling for age (Brown et al. 2000).

Results reported were that males and females have different beliefs about ability to control their diabetes and degree of social support for diet. Males exhibited higher fasting blood glucose. The majority were treated with oral hypoglycemic agents, 26% with insulin. 57% had BMI > or = 30. One third of participants used home remedies such as herbal teas, chaya, and garlic and aloe vera to lower blood sugar. Sixty percent of items on diabetes knowledge were answered correctly. Subjects reported high social support for diet and beliefs in the benefits of therapy, and more moderate beliefs in ability to control diabetes. Males had a lower cholesterol levels than females F = 4.6, p =.004. Males expressed a stronger significant perception of social support for diet than females F = 6.1, p =.01. Higher acculturation levels were associated with greater knowledge of diabetes r = 0.36, p = <.001. Triglycerides were correlated with FBG r =.023, p = <.001 and cholesterol r = .033, p <.001 and between FBG and HbA1C r = .061 p = <.001. Using a predictive model health beliefs subscale of control and impact on job explained 16% of

total variance in HbA1C R=0.41 F=14.1, P<.0001. The higher the belief regarding control, the lower was the HbA1C. Conversely the higher the beliefs of impact on job, the higher the HbA1C. Other results included: 96% learned Spanish as first language, 11% preferred to speak English (Brown et al. 2000).

The authors concluded that males and females have different beliefs about ability to control their diabetes and degree of social support for diet. Higher acculturation was associated with increased knowledge of diabetes. The authors recommended that the impact of gender difference should be considered for future research. Subjects had high levels of diabetes knowledge despite formal diabetes education. Diabetes care needs to address unique gender and cultural needs of participants (Brown et al. 2000).

Mercado-Martinez & Ramos Herrera (2002) aimed to examine a layperson perspective of illness, the content of casual explanations of diabetes and differences in explanations according to gender. Questions posed were: What explanatory models do sick individuals use regarding the origin of chronic illness in disadvantaged socioeconomic sectors of an urban population?; What casual theories do persons with diabetes use?; Are there gender differences in casual explanations of diabetes?

After 780 people with diabetes were located in neighborhood, a non-probabilistic sample of 20 diabetic individuals participated in interviews in Guadalajara, México. Inclusion in the study was that they identified themselves as diabetic, 20 years old or older, and had no major impairments to prevent them from being interviewed. The ages were 35-71, with a mean of 57. Half the participants were women and had diabetes for 11.8 years. Eleven participants had diabetes alone while others had other chronic

conditions. Eighteen participants were married, average number of household was 6 (Mercado-Martinez & Ramos Herrera, 2002).

The researchers used interviews in an ethnographic design. Interviews were conducted at home lasting 1-2 hours. They included open ended questions, and were recorded and transcribed verbatim to a computer using the ethnographer's text editor and following Waitzkin's recommendations for content analysis. Categories were defined, codes created, and themes selected as text units. After rereading segments were identified under predetermined categories. Segments were coded and imported into computer program. Specific topics were printed and reread. Notes about emerging ideas were written as analytic or methodological notes (Mercado-Martinez & Ramos Herrera, 2002).

On the origin of their condition participants offered multiple explanations that neither matches the biomedical model nor any other formal casual theory. They attributed the onset of diabetes to socioeconomic circumstances linked to their life experiences and practices. Men attributed it to family life and domestic circumstances. Seven causal lines were identified; most common was social, economic or relational factors that caused fright (*Susto*). Second was attributed to anger and rage due to conflict. Other causes included consumption of soft drinks and problems and difficulties with families. Some attributed it to a single factor others to multiple factors. Perceptions are rooted in experiences of daily life. Participants visited traditional healers (Mercado-Martinez & Ramos Herrera, 2002).

The authors concluded that lay theories of causation of diabetes can be useful for reorganization of health services for diabetic care. Contact with healthcare providers constitutes or guarantees no change in perceptions and interpretation of health, illness and

healthcare. Providers need to move from an authoritative voice and search for a voice that incorporates the voice of diverse social actors. Ethnographic methods promote understanding of experiential evidence (Mercado-Martinez & Ramos Herrera, 2002).

Jezewski, & Poss (2002) stated that the purpose of the study was to develop a culturally specific explanatory model of diabetes mellitus from the perspective of Mexican Americans living in El Paso Texas along the US-México border. The participants were a convenience sample of 22 Mexican Americans with diabetes mellitus type 2 that were diagnosed with diabetes mellitus for more than one year. Inclusion criteria was Mexican American born in México or both parents born in México residing in one of 4 colonies or colonias in El Paso, age 21 or older. The sample consisted of 18 women and 4 men, ages 29-77 with an average of 53. The average years with diabetes were 14, with a range 1-45. Spanish was the primary language. Average education was 6 years of schooling with a range of 0-14. The average income was$865/month, with a range of $390-$4000/month.

The design was non-experimental and used interviews using Kleinmans (1978) explanatory model of illness as the theoretical orientation. Grounded theory method was used. Individual interviews using 28 open-ended questions to elicit beliefs and feelings about diabetes lasting 1.5-2 hours were conducted in Spanish and audio-taped followed by focused groups consisting of 4-6 persons. Data was analyzed independently by both investigators, coded and compared. Categories developed until consensus was achieved

The investigators recommended that providers be aware of synthesis of the biomedical model and traditional Mexican folk beliefs as both were interwoven by participants. Participants assimilated what they learned in diabetes classes with traditional

beliefs. Educational information was important but filtered through traditional beliefs. *Susto* was interpreted as a cause of diabetes as opposed in other studies were *Susto* was interpreted as a folk illness resulting in anxiety, insomnia, listlessness, loss of appetite, and social withdrawal (Jezewski, & Poss, 2002).

Kaiser et. al. (2003) aimed to explore the perceptions, beliefs, attitudes and behaviors related to diabetes and assess the needs for education in low-income Hispanic adults, primarily of Mexican descent. Participants included four focus groups in first stage and 28 Hispanics in the second stage. They recruited participants from the focus groups through agency staff from local clinics. All were adults 30-75 years of age, self-identified as Mexican American, Hispanic or Hispanic and diagnosed with diabetes. A total of 28 Hispanics (23 females, 5 males) participated. Of these 26 were born in México, 2 in US. Participants had diabetes for average of 6.5 years (range of 2 months - 26 years). Other demographic data was 22 were married, 3 divorced, 3 widowed, 2 single, and 57% had one close family member with diabetes (Jezewski, & Poss, 2002).

The researchers used a non-experimental design with focus groups questionnaires. In the first stage of design, four focus groups discussions were conducted among Hispanic adults with type 2 diabetes who reside in three California counties; Napa (2 groups), san Joaquin (one group) and Stanislaus (one group). In the second stage, a short questionnaire, based on themes discussed during the focused groups was administered to Hispanic participants and in the Expanded Food and Nutrition Education program (EFNEP) in San Joaquin and Stanislaus counties. Eight classes were selected for surveys. A total of 132 completed the EFNEP record form and supplemental set of 40 diabetes-related questions. Only client without diabetes were included (Jezewski, & Poss, 2002).

Questions for focus groups were guided by Krueger's guidelines. They explored perceived causes of diabetes, context surrounding the diagnosis, the participant's current experience with diabetes, intervening conditions, actions taken as a result of diabetes and consequences of these actions. All groups were moderated in Spanish. Each session lasted 90 minutes and was audiotaped and translated. Segments were independently coded and categorized using axial coding. Inter-observer ratings agreed in more than 82% of cases. Based on focus groups a set of questions developed and translated into Spanish and cross checked by diabetes educator and tested in discussion group with target audience. Weight and height were obtained and the country of birth was identified to measure acculturation. The relationship between health beliefs and acculturation was examined using Spearman Rho correlations (Jezewski, & Poss 2002).

Themes from the focus groups included: belief that shock, worry, anger, sadness or emotional event (*susto*) causes diabetes. Sixty-five percent of participants believed that *susto* was related to the onset of illness but specific reasons were not discussed. Other causes for diabetes included: Obesity (21%), fatty foods (21%), sugar or soda (21%) an unbalanced diet (11%) and medications (3%). Only 11% mentioned family traits or genetics as causal. Some heard that insulin dilutes the blood or causes blindness. Some expressed feeling ashamed and others believed that everyone has diabetes but in some it develops faster. Participants believed that it may be part of God's design but individual should not abandon self-care. Results of questionnaire: 44% never screened for diabetes, 4% considered themselves high risk, 44% believed stressors play role in onset while 71% were uncertain or 17% agreed that insulin injections may be harmful, 38% believed that diabetes cannot be cured, 60% not afraid to be screened. The authors suggested that those

participants that spent more time in US and were acculturated had greater knowledge of diabetes (Jezewski, & Poss, 2002).

The researchers concluded that results were consistent with other studies of Hispanics which site provoking events in addition to biomedical factors as cause of illness. Belief that *Susto* causes diabetes was more common in Mexicans that are less acculturated. Stress may be seen as acting as a trigger in the undiagnosed with diabetes making the condition apparent. The Take Care of Yourself: Diabetes Awareness prevention curriculum was implemented in San Joaquin and Stanislaus counties as a result of the research (Jezewski, & Poss, 2002).

Valenzuela et. al. (2003) sought to explore knowledge and beliefs regarding diabetes mellitus. Adults over age 40 were invited to participate from a small rural community in state of Morales, México with a population of 6,900. The town was divided into four sections and the investigators attempted to sample every other household. A total of 521 participated in blood screening project of these 56 were previously diagnosed with diabetes. Those previously diagnosed were invited for interviews. A total of 37 participated in the interviews, 29 females, 8 males, with a mean age of 59 years.

This non-experimental pilot study used structured interviews and assessed physiological variables. Structured interviews were used to learn about: Causal explanations, management strategies, local beliefs and perceived complications, sources of support in times of illness, and motivations for attempting to control their diabetes. Blood glucose levels were monitored using the Lifescan One-Touch meter (Valenzuela et. al. 2003).

The authors concluded that the prevalence of diabetes in the community based on blood glucose screening was 18%. The majority held causal explanations for diabetes based on non-scientific beliefs. Home remedies were used by the majority and blood glucose monitoring was virtually non-existent. The most important source of support was family members. Physicians were less important for support. Most participants wanted to improve management of their diabetes (Valenzuela et. al. 2003).

The authors concluded that lack of information and financial resources limited the availability of medical resources. Dietary changes may be modified through family and community influence instead of individual strategies used in US (Valenzuela et. al. 2003).

Whittemore (2007) conducted an integrative review to synthesize research with Hispanic adults with DM discussed that various interventions were used including diabetes education programs provided in the community and clinic settings, individualized diabetes education by bilingual community health worker, individualized nurse case management, education provided by bilingual workers, and specialized diabetes education programs. These interventions were mostly interdisciplinary and were provided by various providers including nurses, certified diabetes educators, registered dieticians, and community health workers and mostly provided in group settings. Efficacy of interventions was determined by clinical outcomes, behavioral outcomes and knowledge and found to be efficacious. Clinical outcomes assessed improvement in glycemic control, behavioral outcomes included dietary and exercise behaviors and knowledge gained was diabetes related knowledge. Providers included culturally relevant strategies by providing education in English and Spanish, and including participation of

family members, bilingual staff of same culture, and lay workers in community of same culture. Classes were provided in a community setting, cultural emphasis such as foods, health beliefs and music, and social emphasis to education sessions or support groups. The author concluded that providing culturally competent care is a complex process and that it warrants a multidisciplinary and multifaceted approach. "Addressing the complex array of factors that influence access to and participation in health care is an essential beginning to improving health outcomes in Hispanic adults with type 2 diabetes (p.165)". Among the recommendations for further research is the implication to assess and address health literacy and differentiate cultural traditions and needs of different Hispanic subgroups.

Summary

A total of seven articles met the delineated criteria for the search. Several of the articles encountered did not meet the criteria but were helpful in helping to frame the phenomena within its theoretical and conceptual ranges. The articles were published from 1999-2003.

All studies had similar purposes in that they sought to explicate health beliefs and attitudes or knowledge regarding diabetes for Hispanics. The majority limited the sample to Mexicans or Mexican Americans except one study which used other Hispanic groups (Weller, et. al). Two studies used Kleinman's (1978) explanatory model to guide the study (Alcozer, 200; Jezewski & Poss 2002). Most of the descriptive studies limited the questions to three questions. There were no hypotheses stated. Two studies examined differences based on gender and one looked at differences in physiological outcome measurements between groups.

Analysis of sample characteristics revealed that Mexican Americans were defined by most studies as persons of Mexican heritage and ethnicity that were born in México or the US reside in the US but a consensus did not exist on the definition. Description of integrative sample demographics revealed that the majority of studies were conducted on Mexican American adult females with diagnosed DM. All studies but two (Weller 1999, et al; Kaiser, et al. 2003) delimited the sample to participants with diabetes. Studies excluded pregnant subjects and those with complications of diabetes to obtain homogeneity of sample and thus allow for smaller samples sizes. Sample size ranged from 20 to 521. The study with a larger sample included quantitative analysis of physiologic variables (Valenzuela, et. al. 2003). Authors reported the length of time that participants had diabetes as this could influence the beliefs about the disease. Other important sample variables included educational level, acculturation level, individual and household income, marital status, experience with diabetes, preferred language and competency with English, acculturation and family members with diabetes. All required that participants would be able to participate in interviews and excluded participants with major complications of diabetes such as kidney failure and blindness. All subjects were located in the southwest of the US with several in rural poor communities on the border of Texas with México.

Sampling plans were mostly non-probabilistic and convenience. One study used a neighborhood non-probabilistic sampling plan and one assigned subjects randomly to a control group and an experimental group. Focus groups were used to elicit themes and assist with development of an instrument.

Design methods listed included two studies using Kleinman's (1978) explanatory model as a guide, ethnographic designs, and one longitudinal design (Alcozer, 200; Jezewski & Poss, 2002). All but one study were non-experimental. All of the studies included descriptive methodologies although some also included quantitative instruments for acculturation and for demographic descriptions of the sample characteristics. One study developed a questionnaire from themes obtained through focus group discussions. One studied used an experimental design to look at outcomes from an educational program but was included since it also reported health beliefs (Brown, et. al. 2000). Qualitative methods used included grounded theory, phenomenology and ethnography. Most studies were classified as level one research studies in that the authors attempted to describe and explain the phenomena of interest, one was level three and used an experimental design to compare responses to an educational plan (Brown, et. al. 2000).

The instruments included individual and focus group interviews. Several studies combined these methods to approach the question in different ways. Social support was described as a rationale for conducting focus groups as a way to get at the meaning of the experiences. Most interview tools were designed by the investigators and did not report validity or reliability statistics although content validity was discussed in one. Validity and reliability was reported for one study that used several instruments and these were within acceptable levels. Two instruments that were used included the Hollingshead Index for socioeconomic status and the ARMSA scale for mean acculturation (Brown, et al. 2000).

Thematic and pattern analysis were used to analyze the data in the qualitative studies. Little detail was provided on coding and analysis of data methodology except

axial coding was used in one study. The theoretical foundation that guided two studies was Kleinman's (1978) explanatory model of illness (Alcozer, 200; Jezewski & Poss, 2002). Understanding of constructs related to chronic illness and disease and culturally congruent or appropriate care were essential to understanding the theoretical underpinnings of measuring health beliefs and attitudes in these minority populations.

Findings varied as to the concordance of the individual's belief system to the Western biomedical system. Findings included that health belief explanatory models included concordance of beliefs among the same cultural group. Most studies supported that the participants had a health belief model that varied from that of the providers yet most participants followed the management plan by weaving aspects of both models together. The traditional Mexican folk belief model influenced theories of causation, symptoms and treatment options. There were inconsistencies in differences based on income or acculturation in health beliefs. There was lack of concordance with the Western biomedical model in three studies (Jezewski & Poss, 2002; Valenzuela, et al.). Two studies reported that there were difference in congruence of belief system for Mexicans born in the USA compared to those in México, and these were influenced by acculturation and educational level of subjects. Social significance and support were important explanatory components of the participant's explanatory model. Most participants had knowledge of diabetes consistent with the Western biomedical model although some misconceptions did exist as to causes and symptoms exhibited. *Susto* or effects of stress as cause of diabetes was identified in three studies. They reported variations in the commonly held view of *susto* or a frightful experience as a cause of diabetes. Other studies have classified *susto* as its own specific illness not as a cause of

illness (Jezewski & Poss, 2002; Kaiser et. al. 2003; Mercado-Martinez & Ramos-Herrera, 2002). Two studies documented specific herbal folk remedies used although consensus did not exist as to how they worked or were to be used (Brown, et.al.; Jezewski & Poss, 2002;.) *Nopal* or *Prickly pear* was used by several participants as a treatment for regulating or lowering blood sugar. One study included a detailed table that delineated the major remedies used by the participants (Brown et. al.). Most participants took their medications as prescribed, yet three studies reported misconceptions about insulin which was believed to lead to diabetes complications such as blindness as well as treat diabetes and could be addictive once started. Participants saw insulin with fear and something to be postponed as long as possible as it was associated with negative outcomes and even death. (Jezewski & Poss, 2002; Kaiser et. al. 2003)

Despite participation in diabetes education and being under the care of physician's or nurse practitioners certain folk beliefs were retained and integrated with the Western biomedical model. Other emotional responses such as rage were seen as causing diabetes. One study reported gender differences in causation beliefs with men attributing causes more to social circumstances and factors such as poverty. There were also gender differences in physiological outcome measures with men having higher fasting blood sugars, lower cholesterol and higher perceived social support (Brown, et. al. 2000). Subjects in one study reported ambivalence about disclosing their diabetes but were eager to offer advice or support for others with the disease. Participants relied on health advice from family providers and the community.

The investigators recommended that providers determine the health beliefs of clients and plan culturally congruent management plans and approaches that avoid

authoritative imposition of the Western biomedical model without taking the clients perceptions, beliefs and attitudes into account. They also cautioned that differences in beliefs may be seen among genders. Although participants had high levels of knowledge about diabetes the participants incorporated folk treatments and had misconceptions about the biomedical treatments that needed clarification and support especially related to insulin. The social support of families and the community were important variables to living with diabetes. Programs aimed at families or communities may be more effective. Developing culturally congruent diabetic management plans may improve self-management and disease outcomes. Recommendations were made for further study of health beliefs, explanatory models and implication for healthcare reform. A curriculum for diabetes prevention was implemented subsequent to one study as a result of the research.

Discussion

Synthesizing research approaches and findings and critical examination of the current research can add to nursing science and help identify gaps in knowledge about a given phenomenon. Most of the research on this topic is confined to the past five years, supporting the paradigm shift impetus on eliminating health disparities and increasing understanding on the impact of culture on health.

Sample sizes, although small, were appropriate for the quantitative and qualitative methodologies used. Most of the studies were conducted with women. The participants were located in the southwest in mostly rural areas reflecting geographic homogeneity. The sample selection was nonrandom and convenience which is common to the methodology as the findings attempt to increase understanding about the context of the

phenomena rather than to make inferences about the population from the sample as with quantitative studies.

The methodological approaches were appropriate for the status of the science in this area since little is known about the beliefs and attitudes of Mexican Americans with diabetes. Initial research should be descriptive and increase understanding about the variables under study before higher level research involving correlation or testing of variables in experimental methods is attempted. Thematic development based on grounded theory methods can provide rigor to qualitative studies when criteria for credibility, fittingness, auditability and conformability are addressed and followed.

Ethnography, phenomenology and grounded theory are appropriate methods for increasing understanding and explicating phenomena and meaning. Further theoretical development and testing is needed on middle range theories and models of health beliefs of Mexican Americans in different settings and with different sample characteristics. Kleinman's (1978) explanatory model provided a framework for comparing the perceptions of the participants to those of the providers and finding ways to negotiate care and improve healthcare management. This model has value in increasing awareness of the ethnocentric view of imposing the Western biomedical model on clients without regard to the client's explanatory model. These studies, though few in number and lacking operationalization of variables for true theory testing, supported that this model may be useful to nursing practice and the further development of middle range theories.

The studies reviewed added to nursing knowledge in that several studies concluded that there was consistency in beliefs and that these beliefs mainly coincided with the biomedical model for diabetes identification and care. Participants often weaved

the two models together to draw meaning about their illnesses. All the studies concurred that culture impacts the perception of health beliefs and attitudes. One of the components of the traditional Mexican health belief system that was further explicated in two studies was the use of natural remedies for the care of diabetes. One common ingredient that was used was *Nopal* or prickly pear which is believed to have effects on lowering blood sugar.

The participants continued to adhere to the Western treatments even when using the traditional remedies and there was little consensus on which remedies to use and how they helped. Increasing knowledge of folk remedies used and their effects is another important addition to the science on folk belief systems. Providers do need to be aware of misconceptions about causation, treatment and medications and how this can impact the diabetic educational and management plan of care. Reluctance to use insulin may be a culturally bound phenomenon. Providers can use knowledge of health belief systems and models to develop culturally congruent healthcare plans that avoid ethnocentric authoritarian paradigms of cultural imposition and promote models that help participants weave the Western biomedical model with existing frameworks to maximize treatment negotiation, adherence and outcomes.

Research Gaps

There is a paucity of research on the health beliefs and attitudes of Mexican Americans regarding DM. There is lack of consensus about the causality of diabetes and the explanatory models used and their concordance with the Western biomedical model. More research is needed to explicate the effects of gender on health beliefs and misconceptions related to medications such as insulin which may impact the management

plan. Future studies based on recommendations to fill gaps in the science can improve research development and outcomes. This integrative review concurred with previous authors' concerns that little research exists about the health beliefs and attitudes of diabetes for Mexican Americans with DM and this has resulted in a gap in nursing knowledge for this emerging population-at-risk.

One issue encountered with the samples is the definition of Mexican American. Residency of participants without measuring acculturation seems to have little meaning. Are Americans residing in México referred to as American Mexicans? It is important to denote what is meant by the term as cross comparisons are not as significant when comparing Mexicans residing in their native land and those that have been acculturated to American value systems. Further research is needed with Mexican Americans in other geographical areas and with urban populations. This would increase understanding of the heterogeneity of beliefs based on geographic location, acculturation and subcultural American influences. The delimiting criteria were not consistent among studies.

Several authors described that gender differences existed for this population yet most of the studies were conducted on adult females. Little is known about the specific beliefs of adult Mexican American males and if they correlate with generalizations about the role of machismo on the cultural beliefs. Further study is needed on the influence of machismo and traditional roles on health perceptions and Hispanic value generalizations and their impact on health beliefs and attitudes.

One important methodological recommendation, especially when interviews are the cornerstone of instruments used in qualitative methods, concerns language. Either fluency in Spanish or access to excellent interpreters and translators are essential for the

trustworthiness of findings. Many of the participants preferred to use Spanish even when they had a command of the English language. Accuracy of translated materials is a concern when collecting data from participants who speak a language other than that of the investigator. New instruments developed by investigators should require pilot testing to report pertinent validity and reliability statistics.

There was also lack of consensus on conceptual definitions and operational definitions of key concepts such as health beliefs, attitudes and culturally congruent or appropriate healthcare. Several theoretical issues warrant consideration. Although Leininger's model has been substantially used in research with diverse populations it was not used as the theoretical underpinning for any of the studies in this review. Leininger's (1999) theoretical framework, enablers and ethnonursing may provide organizational clarity and help further develop middle range theories related to caring and transcultural nursing practice. This theory has received prominence and support of validity in nursing and has been used in multiple research studies with issues of culture and the impact on health. This would contrast with the utility of Kleinman's (1978) explanatory model for theory testing and development. These studies bring further light onto the concepts of adherence and compliance which judges client's ability to follow the treatment plan without regard to the clients own lived experiences with chronic illnesses and the challenges inherent in overcoming obstacles and barriers. Additional research is needed to explore the links between imposition of provider health beliefs and adherence to treatment.

Variances existed in coding and methods of arriving at themes. Several studies gave little information on data analysis which would make replication impossible.

Improved data analysis would address issues of rigor with qualitative methods and thematic development.

These studies provided a beginning understanding of folk belief systems and traditional perceptions on cure and caring for chronic illness and disease management. Additional research is needed on the prevalence and efficacy of folk remedies and their impact on health outcomes.

Understanding chronic illness can also provide meaning to the care beliefs and practices of Mexican Americans with the chronic disease of DM. Lubkin and Larsen (2002) distinguish between chronic disease and chronic illness. The term disease is given to a problem, an alteration in structure or function that the provider views from a biomedical model. The term illness is more concerned with the human experience of symptoms and suffering, how the disease is perceived, the responses shown and how it impacts the lives of individual and families. The Commission on Chromic Illnesses described chronic illness as all impairments or deviations from normal. The characteristics must include one or more of these: permanency, residual disability, non-pathological alteration, required rehabilitation, or a long period of supervision, observation and care. No consensus exists on a definition of chronicity although many have been proposed (Lubkin & Larsen, 2002).

Chronic illness differs from acute illness in that it continues indefinitely and may often become the person's identity. Chronic illness may occur suddenly or insidiously over time or have remissions and exacerbations in symptoms. Healthcare management of the lives of people with chronic illness often requires balancing many factors to maintain some degree of wellness. Older adults, who were the fastest growing segment of the US

population in the last census, also have the highest prevalence of chronic illness. Other vulnerable populations with chronic illness are children, and working adults, especially those that are minorities or have a low socioeconomic level. Longer anticipated life spans are anticipated to tax limited resources as more people will be living with chronic conditions. Understanding chronic illness, such as DM and cultural and care beliefs about the disease are important to the discipline of nursing. It is essential for the healthcare system to develop a new paradigm for effective management of clients with chronic illnesses in the continuum of care (Lubkin & Larsen, 2002).

Kleinman (1978) proposed that explanatory models can be elicited from patients, family, and providers to explain a particular illness. Each model are the stories people construct to make sense of illness within the context of their culture and provide an explanation of the etiology, onset of symptoms, pathophysiology, and course of illness, and treatment for the illness and increase understanding of the perspective of the patient in contrast to that of the provider. Explanations of health are based on sets of meanings that can influence how individuals act in regards to treatment. Providers can negotiate the differences between the provider's model and the patient and thus improve use of health services, and adherence and satisfaction with the treatment regimen. Lack of congruence between models may contribute to poor management of the illness and poor outcomes. Jezewski (2002) stated that using the explanatory model framework puts equal emphasis on provider and client models as a way to provide sensitive and competent healthcare.

The Health Belief Model (HBM) has been accepted as a theoretical framework and predictor of health related behaviors and compliance in several studies not involving Mexican Americans. The model speculates that adherence to the recommended medical

management plan is influenced by perceived susceptibility, severity of disease and perceived benefits versus barriers to following the recommended actions. According to the model the extent to which health is valued influences health seeking behavior. Modifying variables such as demographic, socio-psychological and structural factors may influence the individual's perceptions. Schwab, Meyer, and Merrell (1994) designed a culturally sensitive instrument to measure health beliefs and attitudes of Mexican Americans with diabetes and concluded that in this study the HBM was not an effective tool for assessing this population. The authors found that only barriers and benefits, two of the subscales of the model were reliable with this sample. Additional factors found to modify the interpreting of results were measures of acculturation and fatalism. They concluded that the culture of poverty and fatalistic beliefs of this population could have explained why the HBM was not useful in this study.

Whittemore (2007) conducted an integrative review to synthesize research with Hispanic adults with DM looking at the impact of culturally competent interventions on improving outcomes. Eleven studies met the inclusion criteria. Various interventions were used including diabetes education programs provided in the community and clinic settings, individualized diabetes education by bilingual community health worker, individualized nurse case management, and education provided by bilingual workers, and specialized diabetes education programs. The majority of interventions were provided in the Southwest US and with Mexican-Americans in rural settings. These interventions were mostly interdisciplinary and were provided by various providers including nurses, certified diabetes educators, registered dieticians, and community health workers and mostly provided in group settings. Efficacy of interventions was determined by clinical

outcomes, behavioral outcomes and knowledge and found to be efficacious. Clinical outcomes assessed improvement in glycemic control, behavioral outcomes included dietary and exercise behaviors and knowledge gained was diabetes related knowledge. Culturally relevant strategies included providing education in English and Spanish, participation of family members, bilingual staff of same culture, lay workers in community of same culture, classes provided in a community setting, cultural emphasis such as foods, health beliefs and music, and social emphasis to education sessions or support groups. The author concluded that providing culturally competent care is a complex process and that it warrants a multidisciplinary and multifaceted approach. "Addressing the complex array of factors that influence access to and participation in health care is an essential beginning to improving health outcomes in Hispanic adults with type 2 diabetes (p.165)". Among the recommendations for further research is the implication to assess and address health literacy and differentiate cultural traditions and needs of different Hispanic subgroups.

Summary

An integrative search revealed that little is known about the health beliefs of diabetes of Mexican Americans regarding DM. Further descriptive and qualitative research is needed on this timely topic to develop nursing science and the transcultural nursing discipline. Inconsistencies in research finding in regards to Mexican American beliefs about causality of DM and the effects of insulin on the management of the disease also need further study. Research is needed with populations outside the US West and with more males to further explicate care beliefs and practices and transferability of findings. Increasing understanding of culture care can impact the development of

culturally congruent, community based diabetic management plans. It seeks to uncover what nurses can do to promote health regarding DM and how to assist clients to best manage this chronic illness. Miscommunications may be decreased as nurses plan professional care based on Mexican American generic care beliefs and practices thus making adherence to the DM management plan more likely. It can also improve diabetic outcomes, and have implications for health care reform and reduction or elimination of health disparities that support US national priorities. Increased knowledge of culture care about DM can significantly impact nursing practice, theory testing and development and research.

Guiding Framework: Culture Care Diversity and Universality

The theory of Culture Care Diversity and Universality will be used as the guiding framework and orientational theory for this ethnonursing study. It is the only theory to have ethnonursing as its own research method (Cohen, 1991; Leininger, 1997e). In order to understand what makes the ethnonursing method unique, it is essential to review the discipline and theory from which it developed. Leininger (1990c) stated that nursing was a culturally based profession with its roots of knowledge and practice grounded in culture and that this knowledge was necessary to help nurses care for clients, families and communities of diverse and similar cultures (Leininger, 1997e). Leininger's definitions of transcultural nursing have evolved over time. She first referred to transcultural nursing as "a formal area of study and practice of diverse cultures in the world with respect to their care, health and illness values, beliefs and practices, in order to provide culture specific or universal nursing care that is congruent with the client, family or community's cultural values and lifeways (Leininger, 1989, p. 89)". This definition was later expanded to

"transcultural nursing is a formal area of study and practice focused on a comparative study of human cultures with respect to discovering universalities (similarities) and diversities (differences) as related to nursing phenomena of care (caring), health (wellness), or illness patterns within a cultural context and with focus on cultural values, beliefs, and lifeways of people and institutions, and using this knowledge to provide culture-specific, or universal care practices"(Leininger, 1990c, p. 536)".

Transcultural nursing has involved the identification, documentation, and interpretation of the emic or local perspective related to human care, health and other related nursing phenomena. This emic or people's viewpoint or people's truths contrasted with the etic or more universal professional views held by nurses and other professionals. Comparing these two knowledge domains remains central to the discipline (Leininger 1988; 1990c).

Leininger (1989) stated that the purpose of transcultural nursing is to provide knowledgeable, sensitive and skilled nursing care to people of diverse cultures. She also emphasized providing culturally congruent care, or that nursing care which is safe, beneficial and meaningful to clients of similar or diverse cultures and institutions, as a major focus of the theory. The outcome of culturally congruent nursing care is to see positive signs in clients of healing or wellbeing and to help clients to face meaningful or peaceful death experiences (Leininger, 1990c; 1998; Leininger & McFarland, 2002). Providing nursing care based on caring that is congruent with the worldview of the person is likely to increase the effectiveness of nursing actions for health promotion and cure (Leininger, 1996).

Culture Care Diversity and Universality

Leininger developed the theory of Culture Care Diversity and Universality or Culture Care to facilitate a researcher's aim to discover and explicate meaning, expressions, and patterns of culture care from different cultures. One of the assumptions of the theory was "that all humans are cultural beings who have been born and live within a cultural frame of reference, and that cultural factors can greatly influence a person's state of well-being, health or illness condition (Leininger, 1989 p. 90)". The definition given to the theory was "patterns or sets of interrelated concepts, constructs, meanings, and expressions that describe, explain, predict, and account for some phenomena or domain of inquiry through an open, creative, and naturalistic discovery process (Leininger 1995, p. 41)".

"The central thesis of the theory is that different cultures perceive, know and practice care in different ways, yet there are some commonalities about care among all cultures in the world (Fawcett, 2002, p. 131)."

Leininger (1997f) stated that her "aim as a theorist was to develop: a theory that met

criteria such as a) being global in scope and therefore useful in all cultures; b) including realistic lifeways and care-health influences in diverse and similar cultures; c) providing comparative dimensions to tap differences (diversities) and similarities (universals) among and within cultures; d) using research methods that fit a culture with meaningful indicators to tap the people's emic (insider's) knowledge, but also the etic (outsider's) views; e) having a knowledge-generating mode, but also an action practical modality; and f) embracing care as the essence and central, dominant domain to explain health or wellbeing in nursing and transcultural nursing worldwide (p. 342)".

Leininger depicted her theory since 1965 using the evolving Sunrise Theoretical/Conceptual Model of Culture Care Diversity and Universality, which views humans as inseparable from their cultural background and social structures (Figure 1). The model provides a gestaltic view of the theoretical components but is not the theory. The model, portrayed as a rising sun, provides structure for theory generation at the micro, macro and middle levels. It includes two phases of generating research knowledge and focuses on culture care and the study of universality and diversity of aims of care (Cohen, 1991; Cohen, 1992; Leininger, 1988). The model presents "different factors that needed to be considered to arrive at a holistic picture of individuals, families, groups, cultures, communities, or institutions related to culture care patterns and needs (Leininger, 1995, p. 74)". The Sunrise Model used with the theory depicts "the cultural care worldview, social structure dimensions, environmental context, language, ethno-history as the influence and are influenced by culture care and health (Rosenbaum, 1997, p. 27). The model was also later used as an ethnonursing research method enabler (Leininger & McFarland, 2002).

One unique feature to the model is its combination of theory and methods to help distinguish levels of abstraction and methodological approaches. Two phases of knowledge were initially identified. Phase one was identified as discovering substantive knowledge and focused upon discovering basic or substantive knowledge in order to know the phenomenon fully. Phase two was identified as applying the knowledge to practice situations (professional focus) and focused upon critical testing of knowledge for practical or applied uses. Several of the constructs in the model were classified as taxonomy to assist nurses to conceptualize, order, and study phenomena (Cohen, 1991).

The model has evolved over time and has had more than ten versions published (Leininger, 2002). The model focuses "on multiple care influences (not causes) that can explain emic and etic phenomena in different historical, cultural, and environmental contexts. Emic and etic data are collected and analyzed from the model in relation to the researcher's specific domain of inquiry and the major tenets of the theory (Leininger, 1997a, p. 40)".

Leininger (2002) identified four major tenets of the theory: These "four major tenets were formulated to systematically examine the theory with the researcher's stated domain of inquiry (DOI) and the ethnonursing method (p. 192)". The four major tenets were: 1. culturally based care has diversities and some universal features; 2. worldview, that cultural, and social structure factors and others in the Sunrise Model influence outcomes related to culturally congruent care; 3. generic emic practices and professional etic nursing practices influence care practice outcomes; and 4. the identified three modes of nursing action are used to provide culturally congruent and beneficial care.

Leininger's theory encompasses the use of concept synthesis, concept derivation and theory synthesis strategies in its development. The model incorporates elements of theory synthesis by pictorially depicting "the interrelationships (symmetrical) between the model's concepts such as technological factors, religious and philosophical factors, kinship and social factors, cultural values and beliefs, political and legal factors, educational factors, and economic factors and their relationship (symmetrical) within language and environmental contexts with care and health patterns and expressions (Cohen, 1991, p. 907)". Leininger also shows how these patterns related to nursing care actions and how the nursing subsystems act as a bridge between the person and the

healthcare system. The term nursing interventions is avoided because it implies imposition of Western lifeways on people (Rosenbaum, 1997). The theory and model includes three modes in which transcultural nursing decisions are made and nurses take action: cultural care preservation and/or maintenance, cultural care accommodation and/or negotiation, and cultural care restructuring and/or repatterning (Cohen, 1991; Leininger, 1997a).

Leininger (1997a) stated that the creative integration of these three modes of major care actions would provide care that was tailored to fit "worldview, social structure factors, and other cultural dimensions, valued by participants in the discovery process (p. 39)". Culturally congruent care would result when the three modes were developed with care recipients. These modes differ greatly from the nursing actions of the present, which primarily focus on the medical model.

Leininger (1997c) explicated caring as being generic and professional. She introduced the term generic care to refer to folk and traditional healing modes. This mode is older than professional caring. Generic care is culturally transmitted while professional care knowledge and practices are learned through formal education. Generic care was defined as "the folk, familiar, natural, and lay care that is used and relied upon by cultures as their basic primary care practices (Leininger, 1995, p. 72)". Professional care in contrast was defined as "the learned and practiced care by nurses prepared in schools of nursing and used largely in clinical professional contexts (Leininger, 1995, p. 72)". These two types of care may not always be congruent (Rosenbaum, 1997). Leininger advocated integrating generic care with professional care to provide culturally congruent care (Leininger, 1997f).

Leininger developed a culturological assessment of cultural patterns. This was seen as "a systematic appraisal or examination of individuals, groups, and communities as to their cultural beliefs, values, and practices to determine explicit nursing needs and intervention practices within the cultural context of the people being evaluated (Rosenbaum, 1997, p. 28)". This assessment is holistic and does not focus on signs and symptoms of disease.

Leininger (1998) identified dominant or emic culture care constructs that were found to be universals or commonalities among diverse cultures studied. The most universal were identified and ranked according to relevance. These included in order of priority: respect for or about; concern for or about; attention to/with anticipation of; helping, assistive and facilitative acts; active listening; giving presence; understanding their cultural beliefs, values, lifeways; being connected to or relatedness; protection of or for; touching; providing comfort measures and showing filial love. These constructs were all culturally constituted and found to be embedded in the social structure of over 40% of cultures examined. These constructs needed to be congruent with the nurse's etic perspective to avoid cultural clashes, conflicts and unfavorable nursing outcomes. According to Leininger one of the major focuses of nursing care should be how to preserve and maintain respect for families. Caring as a construct was present in each culture and there are more communalities between and among cultures than there are within a particular culture (Zoucha, 2002).

Leininger (1990a) the founder of Transcultural Nursing, described knowing and understanding people in their familiar and naturalistic environments around the world as one of the greatest challenges of nursing. This challenge was supported by Leininger's

major goal of establishing the field of transcultural nursing and spearheading the study of human caring. Meeting the challenge requires processes that were a significant shift away from empiricism and positivism, as the scientific method of the times or "scientism" and towards qualitative methods of inquiry used to learn about cultural beliefs, values, and lifeways of living. Leininger advocated a shift towards a qualitative methods paradigm to generate nursing knowledge. These qualitative methods are essential to help establish the ontological and epistemic base of nursing knowledge (Leininger, 1989; Leininger, 1997a; Leininger, 1997d; Leininger, 1999b).

Conclusion

An integrative review of the literature synthesizes knowledge of an area of concern to nursing and is one tool used in the development of the structure of a discipline. Given the state of the science on health beliefs and attitudes of Mexican Americans regarding DM, further descriptive and qualitative research is needed to help explicate the impact of DM as a chronic illness that disproportionately affects Mexican Americans. Expansion of the science on issues of culture, chronic illnesses and healthcare can be a key to reducing or eliminating health disparities and meet individual outcomes and national health goals. The guiding framework for this study will be the theory of Culture Care Diversity and Universality. Additional research is needed using the ethnonursing method to uncover and discover culture care beliefs and practices for Mexican Americans including those about DM and to uncover what nursing can do to promote health and wellbeing in regards to DM in Mexican Americans.

CHAPTER III

Methodology

Introduction

The ethnonursing method was used for this study. Leininger's Culture Care Theory served as the guiding framework. The ethnonursing method aims "to explicate the complex, covert and overt features of culture care related to generic and professional care values, beliefs and practices (Leininger, 1995, p. 42)". While ethnographies focused on broad cultural areas, ethnonursing taps deeply into nursing care phenomena and perspectives (Leininger & McFarland, 2002). The ethnonursing method is a qualitative method of inquiry that includes participant observation and formal and informal conversations with participants to establish a comprehensive data base for knowledge attainment (Leininger, 1996). Once the data are explicated the goal is not generalizability but transferability, which is one criteria of qualitative research. This refers "to whether particular findings from a qualitative study can be transferred to another similar context situation and still preserve the particularized meanings, interpretations, and inferences of the completed study (Rosenbaum, 1997, p. 28)".

Study findings may lend support to the theory of Culture Care or provide evidence to refute it, thus adding to transcultural nursing science. Research findings may be used to generate theory that would describe or explain phenomena, and generate research questions for further research. Finding will enhance understanding of human experience and provide in-depth quality data that is not generalized data, yet may have transferability and be applicable to other participants in similar environmental and cultural contexts with similar participant characteristics.

Use of Enablers

The Stranger to Friend (SF) enabler was used as described by Leininger. There may be a shorter time period needed to proceed to trusted friend since the investigator has been immersed in this community for over five years and is seen by many as a trusted friend. The investigator has interacted with many of the potential participants as clinic clients since 1999 and broadcasted a weekly one hour health radio show "To Your Health" for one year from the largest Catholic Church serving the Mexican American community in 2002-2003. The SF enabler will "serve as an assessment or reflection guide for the researcher to become cognitively aware of own behaviors, feelings, and responses, and as one moves into and works to collect data for confirmation of cultural truths (Leininger 1991, 2001, p.92)".

The OPR (Observation-Participation-Reflection) enabler was used and the distinction between key and general participants will be made by the investigator after the first observation and interview period depending on the depth of knowledge that each participant provides. The researcher devoted time to observation before becoming an active participant. The researcher has devoted time to observing the Mexican American culture by writing field notes in a 2003 ethnography class to develop skills in observation and documentation. The notes reflected on non-verbal, verbal and contextual data observed in the community. Reflection is a key step in this enabler especially in the last of its four phases (Leininger 1991, Leininger 2001).

The ethnonursing researcher uses skill with the OPR enabler to tease out "people's ideas about human care meanings, expressions, forms, patterns, and general care experienced as lived using a relaxed, open-ended, non-aggressive and non-

confrontational ways (Leininger, 2001, p. 85)". The investigator used open-ended conversations and semi structured interviews conducted in English or Spanish depending on the participant's preference. The investigator is fluent in Spanish and it was the investigators first language. The investigator clarified the purpose and goal of the study as needed with each participant and maintained a genuine interest as he immersed in the culture. The ethnohistory or how beliefs and values related to care have evolved over time was explored.

The Sun Rise Model enabler provided assistance in developing questions for the demographic and semi-structured interview tool to assure a holistic approach to the culture. The selected questions aimed to elicit the understanding about DM and care that participants held and their perspectives, perceptions, meanings, symbols, and lifeways to explicate the culture care worldview about DM for Mexican American participants. It allowed teasing out of the data by keeping in mind all the dimensions that encompass culture and culture care including those about DM.

Setting

The setting for selection of participants was Charlotte, the largest city in North Carolina (NC), US. The primary setting for initial contact with participants was the Charlotte Community Health Clinic (CCHC), a NC free clinic for the underserved. The clinic provides health care to eligible children and adults that reside in Mecklenburg county in NC, are within 200% of the federal poverty rate and do not qualify for any other existing health programs. The clinic serves a highly diverse population and has a large Hispanic population with most of those being Mexican Americans. The investigator practiced as a nurse practitioner in the clinic for 5 years up to 10 years ago and has

remained active as a clinic community advocate and volunteer. The clinic administrator was contacted and permission to conduct the study was obtained from the clinic board of directors. Attempting a snowball effect, participants identified at the clinic were asked to recommend or give introduction to other adults from the neighborhoods or city that met the inclusion criteria and would be willing to participate in the study.

Inclusion Criteria

The inclusion criteria for participants were self-identified Mexican Americans without DM of either gender, over the age of 19 that spoke either English or Spanish. Mexican Americans with DM were excluded as they were likely to have adapted culture care to the biomedical model during treatment of their disease in the US. The investigator was interested in exploring the DOI: the culture care values, beliefs and practices of Mexican Americans about DM. In order to provide culturally appropriate care the nurse needs to understand the culture care values, beliefs and practices and these may reflect the allopathic or professional care values, beliefs and practices once the person begins care for DM. In this study the researcher selected 30 key participants that met the criteria. The final participant total was dependent on data saturation obtained according to the method. Key participants are said to be the keepers of cultural knowledge and can provide data from an emic perspective that is descriptive and deep with meaning. Concurrent data analysis at the time of the first interview revealed key participants from general participants. Each interview with a key participant lasted about one to two hour and each person was interviewed to saturation (Leininger & McFarland, 2002). All subjects were undocumented, and to the current negative political climate on immigration and fear of persecution, planned subsequent interviews were unsuccessful. Participants

often did not have telephones for contact, or the numbers had been disconnected when calls were attempted. The transient nature of the participants, with many residing in temporary housing, and the fear of deportation made home visits unobtainable. Even though participants did not have DM they each knew persons with DM that were family, friends or members of their community. Due to prevalence of DM, participants were all indirectly connected to people with DM even though they did not have the disease.

Human Subject Considerations

Approval was sought from the Duquesne University (DU), Institutional Review Board (IRB) for the protection of human subjects. The investigator attended a meeting of the clinic's board of directors (BOD) and gave a presentation about the purpose and goal of the study and the protection of human subjects. The informed consent form was presented in English and Spanish (see Appendices A & B) that details the protection of the participant's rights. Consent for using the clinic as a setting for the study was obtained from the clinic BOD.

The investigator explained the consent form to potential participants and stressed that there are no risks anticipated for participants in this study. Benefits of the study to participants included providing the opportunity for the person to state cultural and care values, beliefs and practices about diabetes; this expression may lead to greater personal understanding and increased scientific understanding of the Mexican American worldview about diabetes. Increased understanding of DM could also provide greater insight and impact their interactions or care of those people with DM within their family, friends, and community. The investigator stressed that there was no compensation or cost for participation and that refusal to participate did not affect the person's status at the

clinic. At any time, a participant could withdraw and ask any questions related to the study without repercussions.

Interviews were audiotaped. All data collected remained pseudonymous in regards to the participant or anyone else mentioned. The data was kept in a locked drawer at the investigator's office and destroyed when all aspects of the study were completed. The data collected was kept confidential except for the researcher and the dissertation committee chair and committee. The participants were told that certain verbatim or expressions may be used to explicate the data but that their names will not be used in any publications developed from the study. A copy of the Spanish language consent form (see Appendices A, B) and a business card with contact information were given to each participant.

Procedure for Data Collection

To collect data the investigator attended scheduled clinic sessions and approached Mexican American clients in the clinic lobby while they waited to be seen. If interested in learning more about the study, the clinic participant was asked to go to a private area in the clinic where they could still hear if they were being summoned for clinic purposes. A brief introduction and purpose of the study was given. If the person qualified for the study and was interested in participating in the study, he/she was interviewed and audiotaped at that same time if the participant chose. The participant had the choice to conduct the interview in English or Spanish, but all chose Spanish and all the interviews were conducted in Spanish. At the end of the interview the investigator asked participants if they knew of anyone who might know about the topic. Participants were asked if these individuals could be contacted or were asked to contact any other Mexican American

clinic clients that they know of who are not present or other members of the community and ask if they would like to be part of the study and for them to contact the investigator. If they have a name and telephone number and address that they could give the investigator they could be contacted directly. If the participant was accompanied by someone who met the inclusion criteria they too were approached to see if they wanted to participate in the study. Participants could also give the names of other contacts which could then be contacted by the investigator. None of the participants were willing to disclose this information.

At the interview the investigator provided a formal introduction, and explained the purpose and goal of the study and the nature of participation and commitment. The investigator asked if there were any questions and provided any needed clarification. The participant signed the consent form and if they choose to continue with the first interview or could schedule additional interviews at their convenience. A copy of the consent form and a business card with contact information was given to each participant. Participants were guided by demographic questions and those in semi-structured tool for the interviews (see Appendices C, D). The tool was adapted by the investigator from other tools using the Sun Rise Model for the culture and language of potential participants. Specific questions regarding DM care beliefs and practices were part of the semi-structured interview guide.

Data Analysis

Using the four phases of data analysis as described by Leininger (2001), the researcher analyzed the data from the study to creatively explore and synthesize patterns and themes of emic data revealing embedded and undiscovered cultural and care

phenomena. This analysis was for the purpose of increasing understanding of the DOI and the provision of culturally congruent nursing care. Data was analyzed concurrently with data collection.

Research findings described or explained phenomena, to generate additional research questions for further research. Findings provided in-depth quality data that was not generalized data, yet may have transferability and be applicable to other participants in similar environmental and cultural contexts with similar participant characteristics.

Phases of Ethnonursing Data Analysis

The four phases of ethnonursing data analysis developed by Leininger provide a systematic process for analyzing the study data. According to Leininger (2001) six qualitative criteria; transferability, credibility, dependability and confirmability, meaning-in-context, saturation and repatterning should guide the analysis process and were used by the researcher to support and substantiate the findings throughout the study.

In the first phase "the researcher collects, describes, records and begins to analyze data related to the purposes, domain of inquiry, or questions under study (Leininger 2001)." After at least one period of observation and conversations with each participant the investigator determined that participants qualified as a key or general participant based on the depth and thickness of data provided. The investigator conducted interviews with each key participant with each interview lasting 1-2 hour sessions.

The investigator systematically documented all observations and work throughout the study. Field notes were kept where the investigator wrote personal verbal and non-verbal observations, feelings, meanings, interpretations of experiences and other etic data during the study period. All interviews were tape recorded, coded with participant

numbers and transcribed verbatim and translated to English prior to data analysis. Selected questions on the semi-structured interview focused on confirming people's knowledge about cultural values, beliefs and practices, care, ways to keep well, how they become ill, disabled and explore their knowing of these areas in regards to diabetes. Participants confirmed, refuted or reconfirmed the findings with the researcher in order to present a truthful account of emic data (Leininger & McFarland, 2002).

In the second phase of analysis "data are coded and classified as related to the domain of inquiry and sometimes the questions under study (Leininger 2001 p. 95)." The emic and etic data for participants was examined within their context and studied for recurrent components and meanings. A qualitative data manager software program ATLAS.TI 6.2 was used to code, organize and analyze the data for categories, as described for the ethnonursing method.

The third phase of analysis scrutinized data "to discover saturation ideas and recurrent patterns of similar of different meanings, expressions, structural forms, interpretations, or explanations of data related to the domain of inquiry (Leininger 2001 p. 95)." The researcher strove for confirmation and credibility by showing patterning with meaning-in-context. ATLAS.TI 6.2 qualitative data manager software was used to code, organize and analyze the data for patterns as described for the ethnonursing method.

The last phase or phase four is the highest phase of analysis and interpretation. In this phase the researcher aimed "to present major themes, research findings, recommendations and sometimes theoretical formulations (Leininger 2001 p. 95)." The researcher used synthesis and creativity to concurrently analyze the data. ATLAS.TI 6.2

qualitative data manager software was used to code, organize and analyze the data for themes as described for the ethnonursing method.

Conclusion

This is an ethnonursing study that used Leininger's Culture Care Theory as its theoretical orientation. Participants who met the inclusion criteria were approached at a free clinic in a major Southeastern city for initial contact. A snowball approach was attempted to contact other participants. Human rights were protected through informed consent and approval from IRB review. Participants were interviewed using a semi-structured interview tool adapted by the researcher to elicit emic data from a naturalistic perspective to let the participants explicate their worldview.

Data was analyzed concurrently and key participants were determined from the quality and depth of data presented. Key participants were interviewed until data saturation was reached. Enablers were utilized to elicit data that is thick with description and meaning.

Using the four phases of data analysis the researcher creatively explored and synthesized patterns and themes of emic data revealing embedded and undiscovered care phenomena and how these compared to etic beliefs of health professionals for the purpose of increasing understanding of the culture and provision of culturally congruent healthcare.

CHAPTER IV

Results and Findings

Introduction

This chapter presented data generated from interviews with key participants within the environmental context of the free clinic where the study took place. Findings were derived from the emic or generic insider perspectives of the participants and the etic or professional perspective of the researcher. The ATLAS TI 6.2 qualitative data manager software program was used to code, connect, classify, organize and analyze the data using Leininger's four phases of analysis for qualitative research. The interviews were translated to English from Spanish by the researcher who is a first language native Spanish speaker and transcribed into Microsoft Word files to be imported into the software program for coding and analysis.

In the first phase of analysis the researcher collected, described, recorded and began to analyze data related to the purposes, domain of inquiry, or questions under study (Leininger 2001). After the initial interview and observation of the participant in the field it was determined that the participant offered in depth descriptive data regarding the domain of inquiry. The participants in the study were classified as key participants. The investigator systematically documented all observations and work throughout the study. Participants confirmed, refuted or reconfirmed the findings with the researcher in order to present a truthful account of emic data (Leininger & McFarland, 2002).

In the second phase of analysis data were coded and classified as related to the domain of inquiry and the questions under study (Leininger 2001 p. 95). The emic and etic data for participants were examined within their context and studied for recurrent

components and meanings. The qualitative data manager software program ATLAS.TI 6.2 was used to code and organize the data.

The third phase of analysis scrutinized data to discover saturation ideas and recurrent patterns of similar of different meanings, expressions, structural forms, interpretations, or explanations of data related to the domain of inquiry (Leininger 2001 p. 95). The researcher aimed for confirmation and credibility by showing patterning with meaning-in-context, saturation and repatterning.

In the last phase of analysis, or phase four, the researcher used evaluation, creativity and synthesis to concurrently analyze the data and present major themes, research findings, recommendations and theoretical formulations and model (Leininger 2001 p. 95).

The initial phase of the qualitative analysis yielded thirteen descriptors or categories. Additional analysis for recurrent patterns yielded four distinct patterns that were further abstracted into three themes guided by the study domain of inquiry, questions and framework of Leininger's Culture Care theory. The DOI for this proposed ethnonursing study is the culture care values, beliefs and practices of Mexican Americans about to DM. The significance of DOI to nurses is that understanding care beliefs and practices about DM can increase the provision of culturally congruent nursing care to Mexican Americans and improve health and wellbeing, and management of the illness. This is very important now that there are increasing numbers of Mexican Americans with DM receiving healthcare and nursing care in the US.

The research questions for this study were:

1. What is the Mexican American culture care worldview about DM and health?

2. What are the culture care generic and professional values, beliefs and practices of Mexican Americans about DM?
3. What culture care expressions, patterns and practices are important in the provision of nursing culture care with DM to Mexican Americans?

According to Leininger (1997) participants may be categorized a key or general participants. Key participants contribute in-depth data that is thick and saturated with meaning. General participants contribute data but have a more limited understanding of the domain of inquiry and do not provide confirmation of data. All participants were deemed to be key participants as described in the ethnonursing method due to unanticipated difficulties with obtaining repeated interviews with the study participants because to the transient nature of free clinic clients and participant's fears and concerns resulting from undocumented status along with a lack of consistent telephone and address access.

Since the researcher was unable to connect for second interviews the data collection included opportunities for confirmation of data. Saturation was obtained after completing thirty interviews with key participants. The researcher adapted the initial structured interview questions to explore categories that were emerging from the data and give participants flexibility to explicate their worldview. Verbal, non-verbal and abstract cues were used by the researcher in context to help guide the process of the interviews.

All of the participants were Mexican Americans born in México and living within Mecklenburg County, NC that is the eligibility area served by the free clinic. None of the participants were affected directly by DM although most had close relatives, friends and members of the community that were affected and thus were indirectly impacted by this

common health problem affecting persons of Mexican descent. All of the participants were undocumented and unable to qualify for any existing government or private healthcare programs and were uninsured. They had been selected as free clinic clients after meeting an eligibility requirements assessment by the clinic staff and partners. Some were clients of the clinic while others were relatives or friends that accompanied the patients. None of the participants were fluent in English and used Spanish as their primary language although several had children attending public schools that were fluent in English and often assisted their families as interpreters and translators to navigate US systems when professional interpreters and translators were no available. Participants' quotations already translated from Spanish presented here to support the finding are unlinked to participants' identity and listed numerically to protect the study participants. Of the thirty participants 23 were female and 7 males. All but two were married and one was single and another divorced. All but two had completed a primary education. One had completed high school and another had a university degree in chemistry. The ages ranged from 21 to 54 with the majority of participants in their early thirties. The number of years in the US ranged from 2-15 years. All of the participants were originally from several rural parts of Mexico with several participants emigrating from Michoacán.

Presentation of Categories

The second phase of data analysis using the ethnonursing method was identification and categorization of descriptors and components. There were thirteen categories identified from the data after several revisions and refinement with assistance of the dissertation chair with expertise in using the method and in view of the DOI and research questions. The thirteen categories identified from the data were: health, faith and

religion, natural living, tranquility and stress, support, strong emotions, susto, immigration, life in US, family advice and support, cultural beliefs, treatments of diabetes, care, and communication.

Health

Many participants' worldview placed priority value on health and self-care and viewed health as essential to life, wellbeing and function within the family. A participant stated: "Health is something very important because your life depends on it. If health is not well then one can't help their family or children". Another participant confirmed that: "Health is everything, without it you have nothing, no money, no work; it is everything."

A participant concurred that: "People worry too much about paying bills or material things over going to have their health checked this is not good because you can't take things with you. It is more important to have your health instead of a nice dress." Self -responsibility was affirmed by another participant stating: "Health is our responsibility and if we get sick then it is probably our own fault for not doing something right. We are responsible for our health and making sure we eat right and exercise". Participants viewed health as a top priority in their lives and that supported the view that a person has responsibility for maintaining own health and reducing risks to health.

Faith and Religion

Faith and religion are integral to the participant's worldview and were often linked to health and wellbeing. To these participants health is not affected by destiny or fate and is not viewed as a punishment from God. God was seen as helping and religion and faith promoted coping and wellbeing. One participant stated: "I don't believe that illness is a punishment from God. One does not get sick because you behave poorly or

stay well because you behave well. Some people always behave well and they still can get very sick." Another participant stated: "I believe that God created us but he gave us the means to care for ourselves so we humans can harm ourselves as well as help ourselves. I don't believe that illness is a punishment from God."

For this group of participants faith and religion were linked to wellbeing, coping and health and God was seen as a caring and helpful God not one that punished by making people ill. Participants did not see that persons are destined to be well or ill but more placed responsibility for health on the individual rather than destiny or fate. Inheritance was often discussed as a causative link to illness.

Natural Living

Participants viewed living a moderated, balanced and natural life as health promoting. Some relied on home and folk practices such as herbs to self- care when ill and to promote health. Some viewed medications with concern as they were not seen as natural. Family members, friends and folk healers or *curanderos* were used by some for health advice. Folk practices such as plants and herbs were used for self- treatment. One participant described that: "In the past when one grew animals they were grown normally but now they are forced to grow and they give them vitamins. All of that is harmful because in México children did not grow like they do here. Here they are 10 years old and are already bigger than oneself. It is the same because of all the vitamins that bring things from here."

Another participant agreed that: "Nutrition is one of the things that have been changing in my country because in the past it was more balanced and people ate more greens and vegetables. Not like here in the United States, where people eat more fast

foods and hamburgers, which don't have a lot of nutritional value. I know that red meats are more difficult to digest and contain more harmful things. Chickens can be a problem because of the hormones they use. Fish I think is best because it's more natural."

Participants viewed health as being promoted by natural life choices, nutrition and traditional cultural practices. Some explained that deviations from traditional practices and nutrition were responsible for disturbing the balance of the body and leading to a higher risk for illness. Several spoke of the body's defenses and that one could become ill when these where overcome. The idea of illness as an imbalance in the person's system was discussed by several participants. Several explicated that when ill most seek first to help themselves by using traditional practices. If these practices did not help a curandero may be sought for advice. Lastly a health professional may be sought if natural practices do not improve health. Providers were not sought initially mostly because of a lack of resources rather than an inherent mistrust of professional care.

Tranquility and Stress

Many participants discussed the role of preserving tranquility and maintaining a calm environment as key to promoting health and of worry and stress as factors affecting illness. One participant asserted that: "Life here is very stressful. There is more work than the ability to rest. I believe that what affects most people here is stress. Life in México is calmer even though work is work everywhere. There work hours are more regular and life is more natural there. Here one has parks for diversion but there one can relax in open air and it is more natural." Stress was commonly discussed as harmful as one participant stated: "Stress is very harmful to your body, because when one feels depressed or very sad or worried, one notes the difference. One feels fatigued when one has too many

worries. That's what I tell my family, not to worry too much, because sometimes one worries more than one takes care of the situation. Then you go to sleep with that worry, and that takes away your tranquility and your sleep, and from there, that takes away your health."

Reducing worry and protecting others from worry was described as important as one participant stated: "I don't get to talk much about this with my mother. She doesn't want to worry us. Especially at this time when one worries about work you don't want to add to the worry." Participants discussed the effects of the environment of tranquility and of making life choices to preserve tranquility. Living a life of tranquility was discussed as a factor in maintaining balance and good health and as a factor in living a natural life. Avoiding or mitigating stress was seen as promoting health and wellbeing.

Strong Emotions

Many participants expressed the view that it is important to stay calm when facing life events and avoid strong emotions as these could be harmful to health and disturb tranquility and natural balance. All manners of intense emotions were viewed with concern including *coraje*: a strong angers response, *alegria*: a strong joyful response, *gusto*: fulfilling a major life desire, and *susto*: a fright or fearful response to an unexpected event. Participants agreed that strong emotions can affect your body's defenses and balance and increase the risk for illness.

One participant confirmed that: "If you have an extreme emotion then it will develop because your body does not have the necessary defense to support all that. It is said we all have diabetes because we all have glucose in our bodies but it is its balance that is important. Yes the basic is this, when the body gets angry it can also develop it, if

there is a lack of defenses."

Many agreed that emotions could contribute to the development of illness. One participant stated: "I believe that worries and intense emotions can also cause elevations in blood sugar. If you get very upset and then drink some soda it can make you feel bad and make your sugar go up. Over time this can lead to diabetes, being unhappy, sad or having a bad trauma like death of family or having someone very sick in the hospital. I believe the person can worry so much that it can make them sick." Another participant confirmed: "I think it depends on the emotional response how diabetes advances. It could take days, weeks or years depending on the emotion."

Controlling emotional responses were seen as health promoting. One participant stated: "For me if I was in a situation where I was very happy, I wouldn't want someone to tell me to calm down. But if it was a response to a frightening event, then yes, it would be important. Having control of your emotions is the most important for living well."

Participants shared examples of events that brought forth strong emotions and how they were counseled or they themselves counseled others to moderate their emotional responses to the events in order to prevent illness. Strong emotions disturbed natural balance and tranquility that were described by many as needed for the body to defend itself against illness.

Susto

Susto or intense fright was viewed by many participants as being a major cause or precursor to developing diabetes to warrant creating a separate category. Protecting others from fright is believed to help maintain tranquility, promote health and prevent illness. One participant discussed that: "Many people believe that *susto* can also bring

diabetes but I'm not so sure. I have seen people that have had a great scare like an accident which we call susto and then they have developed diabetes."

Several shared specific instances and events that were seen as triggers to diabetes "well, my sister has diabetes, and supposedly hers was caused by a strong emotion. She had a *susto*. My father had an argument with someone and they had a fight, and as a result the man died. So they took him away to jail and this created a very strong emotion for my sister because she was the closest to him. That's what caused her diabetes."

While another participant stated: "Well her son was fighting and she became very frightened with a *susto* and in a short time they took her to the clinic and then diagnosed her with diabetes and she died with diabetes". For many susto was one of many risk factors that could contribute to the development of diabetes and may be the one things that tips the balance causing illness with one participant stating: "I have heard that if someone has a very strong *susto*, such as if someone dies and they don't tell them in a soft way, then this could be a factor that contributes. But I believe there are other things as well, such as not eating well or not exercising, and this causes a body to deteriorate and then with the smallest thing become sick."

For the majority of participants susto was seen as being linked directly to DM while for others it could also lead to any type of illness. For many *susto* was seen as a tipping factor that could be the final stress that leads to the development of diabetes. The stronger the emotional response to the susto the more harmful it could be to the person. Protecting persons from worry and susto were seen as important to health. Communicating bad news carefully to a person was also discussed by several participants as key to preventing the deleterious effects of susto. Participants shared stories of telling

others to calm down so as not to get sick or of withholding frightening information especially to those already seen as frail and at higher risk like the elderly.

Immigration

Immigration and the current political and economic climate were forces that many saw as impacting health and wellbeing as participants tried to mitigate the stress of living in the US while undocumented. Some shared incidents in which they felt that they were treated differently based on their national origin, ethnicity and status. One participant stated: "Immigration issues frustrate us because we are always scared. We can't travel. If the kids are born here but not the parents then the parents can get deported and you should not separate a family. There are many cases where kids stay here and parents are sent away."

Many believed that they were treated differently because of ethnicity as one participant stated: "The political situation affects children because here they see us as all the same, perhaps it is where I live so close to South Carolina. You see a lot of racism here that I never experienced in New Jersey and that affects our children. I think political leaders should help those immigrants here that are doing the right thing. If they don't behave well then they shouldn't expect to be helped."

Issues related to immigration contributed to stress and worry and disturbed natural balance and many advocated for a political solution. One participant stated:

"I feel that in the last two years people have had more stress and illness since they are scared to go out. They fear the people from immigration. Will I be able to return home and see my children again, so all of that affects their stress and fear level and this can affect health. There should be some system that political leaders can do so that people

who are already here can work freely. And for those like myself that have children born here, that we don't get separated. There should be a solution; it just means coming to an accord but it is not necessary to separate people because people will continue to come. It is better to make an accord with all that are here and another with those that want to come. People come here because the level of work in my country is that one works hard for a very little salary, it is enough to survive, but not to have your own house or to take care of more than six children."

The current political climate in the US in relation to immigration was described as a major stressor by most participants. The immigration concerns were seen as robbing persons of tranquility and affecting health and wellbeing. Several participants shared stories of being treated differently or harshly by law officers because they were Mexican or could not speak English.

Life in the US

Participants explained how life was different for them in the US compared to México. Some viewed life here as better while others discussed that there were increased opportunities in the US but also increased stressors and risks. They discussed the ways that they mitigated threats and adapted and adjusted to the new environment and how this affected their health. One participant shared that: "I was born in a small community called Michoacán. Life is better here than in México. Here what one needs you can usually get eventually. In México life is very hard."

Another participant sated: "For us that come from other countries, here it is very different. Life here is very stressful. There is more work than the ability to rest. I believe that what affects most people here is stress. Here I have to work but in México is more

common for women to stay at home. There are always women who work there as well just like me but there one can worry less, you can take your family outside without fear that a bad person may harm them."

Some participants spoke about adapting to their new environment. One participant stated:

"When it comes to families I think there people are more united and protective. With other things it depends on the person. You have to adapt to the system here. Here there is not the corruption like in México. There they stop you but if you give them 20 dollars then they let you go. Here it is different. People that come from the country have more difficulties. I would preserve some things like when it comes to the nucleus of the family but other things you have to adapt. Like they say take the good and leave the bad."

Many participants adhered to the view of preserving traditional Mexican values, beliefs and practices when living in the US while in addition assimilating to US practices that they appraised as good or beneficial. Most agreed that the sacrifices they made to live in the US were taken in order to provide increased opportunities for their families and children. Several participants also assisted their families back in México by remitting money often to help care for them.

Family Advice and Support

Participants voiced that family advice and support were often sought as a way to cope and maintain and promote health and wellbeing. Separation from family back in México was seen as a major stressor impacting their lives in the US. One participant explained: "The family is very important so that all are together and have communication. I live with my wife and daughters. It's difficult not to get together with

my other family only by phone."

Yet another stated: "The family is very important for health. Many people have depression for lack of family support. I try to communicate often with friends and family for support. My daughter's father helps me a lot. I work every day then I spend time with my daughter and help with homework. If I'm sick I turn to family but thank God I have not been very sick. I have always gone to the doctor when sick."

The way family promotes wellness was described by one participant as: "Family represents calmness and tranquility. If you are with your family you feel well. I live here with my wife and children, my parents are in México but I have brothers here. It makes me sad when I can't see my parents often but I feel supported by family here." Some participants linked family and faith and religion as positive factors in promoting balance, health and wellbeing.

Cultural Beliefs

Participants shared various cultural values, beliefs, traditions and practices in regards to health, illness and diabetes as a health problem. Maintaining culture care practices, good nutrition, activity and maintaining a healthy weight were seen as health promoting and reducing risk for illness. A participant explicated:

"I feel that incorporating our customs is important because it very different here where they have more care for people with diabetes. In our country we mostly may take the medicine and not necessarily follow a balanced diet so it very important to tell us that on top of taking your medicine you must follow this diet. If we combine both our beliefs and the care they provide here one can little by little become accustomed to what one must do, such as balancing the diet little by little. But I believe that it is also very important not

to take away all the beliefs that the person has. I'm a Catholic but not 100% since that would mean I would have to attend church every day, which I don't, but I do follow Catholic believes. Here one does not have the time for activities and begins to lose our customs for lack of time, not faith because one always keeps that, but yes our customs. I believe that our children must have respect, especially respect for oneself and to value the things that we have. One may have little or at least to others it seems like you have little, but for you it can seem like a lot. If you values what one has, you will not seeks to get many things, so I believe that respect and valuing what one has are very important values to pass to your children. It is not difficult to teach these values but sometimes one does not have the time that is necessary to help our children understand these values, like when one works like me. I'm very fortunate that I have my mom here to take care of my kids, but if I didn't, I would either have to stop working or leave my children with others. If I taught them certain values, they could lose these if they were with other people that could teach them different values than mine. This could affect them in that they will lose our values."

Passing on family values to future generations was seen as important as stated by one participant:

"I would like to teach my children to value life, not to see everything as simple but to have real value for life and honesty as well. I believe that the values here are good but like everything some people don't have good values, some are irresponsible while other behave well; others try to take advantage of others. I'm Catholic; religion helps health because if you feel spiritual peace it can help your health by making you feel tranquil and in peace."

Yet another participant explained about the importance of respect as a cultural value in that: “It is important for children not to lose their culture and take on the roots here. They must be respectful especially to older persons; they must respect women and their spouses. They must use the correct words to speak to women to show respect so that they are not making themselves equal when they shouldn’t. The teacher always tells me that my sons are very respectful of others.”

The value of personal responsibility for health was described by many participants; one discussed that:

“I need to teach them to eat healthy so they can make good decisions about their style of nutrition. The fact of emigrating from one country to another I don’t believe contributes because it is within you, it is personal. I don’t think that because you leave México and come to the US you are going to change your nutritional style. Here we are better off obviously so we can have better nutrition here than there. So I think. We Mexicans when we don’t have enough to eat we will eat beans with tortillas and that is not as good as here getting a bit of meat. I think it has to do with the education you have about nutrition.”

Although participants were aware that DM has become a major health problem for Mexicans they expressed varied views on DM and its causes, symptoms and complications not coming to a clear consensus as one stated: “I don’t believe that it is inherited since my father has diabetes but none of my brothers or I have it. Depends on how one controls their food. More than anything this is something that our parents did not teach us-to do exercise. With my own children I think it is important for them to have exercise. Take them to the park and play ball and stay active. From there I think that

since they are small you must teach them to exercise and eat healthy. We often don't do this until one has an illness."

Good nutrition was often discussed as very important to health as one participant stated: "Basically it has to do with nutrition. From generation to generation we bring a nutrition saturated in fats mostly and too many people don't know how to eat right and it is part of our culture, obviously. Fortunately, in my family no one is a diabetic but my wife is a diabetic so I have learned some things about the disease. Basically, it is mostly due to bad nutritional habits. There are two types the juvenile and the normal type but there are others that believe in other types because of lack of information. When we left México 11 years ago, back then there was very little information."

Some participants confused DM with other illnesses or made incorrect assumptions about DM as stated by one participant: "I think diabetes is when the sugar drops. I think that. And for that it is necessary to eat, that is what I think and that is what I tell my husband because he does not eat on time. His blood sugar has dropped and it is because he doesn't eat. He needs to eat or drink something sweet. For me I believe that diabetes grabs you because you don't drink enough water. In México people go eat and they have breakfast and grab a soda, they have lunch or dinner and drink a liter of soda, and if they don't have soda they don't feel happy. I believe that contributes to people getting sick that the people don't drink water."

Inheritance was seen by many as a contributing factor but often not the sole factor as stated by this participant: "I think that inheritance has to do with diabetes but one can prevent it if you eat right, maintain good weight- that is principal and do exercise. I know I carry it but if I do all the advice it may come later. All my family has it. So when it

comes it will come late in my life. If you don't take care it will come early".

Many described the role that healthy lifestyles and choices have on DM as stated by this participant: "Diabetes is a risky disease. One must take good care of you and have a healthy nutrition. If one does not have nutrition it can affect the cholesterol, I believe. One must have good exercise and maintain a good weight". The symptoms of diabetes were often confused with heart disease as participants explained that high blood pressure or high cholesterol were signs of diabetes.

Treatments of Diabetes

There was widespread disagreement on how DM was to be treated to warrant a separate category. Participants expressed various views on how DM is treated or should be treated and both professional and generic care practices were discussed. There is no consensus on a definitive treatment plan and medications are viewed with concern as being both helpful and harmful. Interestingly, insulin was often viewed as promoting serious complications like blindness or amputations and kidney damage and sometimes worsening DM and should be used by diabetics as a last resort. *Nopal* or prickly pear cactus and *savila* or aloe, were two of several folk practices often discussed as helping diabetics.

One participant explained the role of *nopal* and nutrition: "Yes it came to my head I now remember I have seen my mother fixing *nopal*. She makes it with eggs and olive oil. I asked are you going to eat that and she said yes when you diabetes you have to select your type of food and change your life style. That is why I have in my head that you have to change your bad nutrition habits. My uncle I told you about told me you can live with diabetes but simply you have to change what your way of eating and nothing bad

happens."

Most agreed that following the professional plan of care was important as stated by this participant:

"One has to follow the plan given by the doctor to get better. If one does not take the medicines or follow the plan one will get worse. Some people say they don't have the disease and they don't follow the treatment. In my family my husband's brother got diabetes and they gave him insulin and medications but once he returned to México he stopped taking everything and he is still well. He always said that he didn't have diabetes."

However some discussed how fear of the treatments could lead to loss of tranquility and to non-adherence to the treatment plan as stated by one participant that:

"With severe diabetes the person may be reluctant to take medications and they become sad in their way of thinking and many become aware that they have to take medications a lot and become very sad that they have to do this. One must take the news of diabetes with calmness and not get upset and follow the plan given by the doctor to get better. If they don't follow the care or take their medicine or take the right nutrients it can make it worse. There are many medicines that can help."

Yet another discussed the idea that medicine contradicts that which is natural and should be viewed with caution as stated:

"I believe that medicines are chemicals and that these can hurt you. I have heard this, that over time instead of helping it will hurt. That is why they say "take this remedy". So over time they start listening to this and give up on the medicine. They lose hope and start doing what others say. It can help the sugar but hurt other things. There is always that

fear. Sometimes we combine natural treatments and medicine. My mother, she would take the medicine and the natural remedies and this would help her a lot. One of my relatives has to take insulin since they can't control the sugar. But this is given once they have tried all other treatments. It is very strong. I have heard that this is a last effort. Once you start taking insulin you will soon die as it is so strong that it can kill you and it can cause depression. So if they inject me with insulin then what more?"

Another participant described the long term effects of diabetes:

"Diabetes can be treated by following a diet and checking the blood sugar. If you don't care for yourself you can lose your sight quickly and begin to lose parts of your body if you don't take good care of yourself. One must follow a strict diet and balanced diet, and even so if you have a bad impression or anger you can have pain; like my dad, he has neck pain when he gets upset. My dad is not too strict with his diet but I know a lady that is strict but she still gets sick. If you eat a lot of red meat and not check your blood sugar or control your feelings so that you don't get upset you will get worse."

Most participants expressed trust in seeking professional help to manage DM as stated by a participant:

"I believe that the treatment is for all of life; if it has advanced then the disease cannot be cured. If the person's defense is low then the blood cannot be regulated so it is for life. Diabetics need to be smart and learn how to seek help because there are many people that can help, so one must seek and become informed in that manner to help themselves. One should see the doctor, it is better because he is more informed of the science. It is not convenient to try to treat one because one does not have all the information needed."

Yet fear of medication could lead to a person not following medical advice as stated by a

participant:

"At my work there is a woman that washes dishes and she told me that they gave her insulin but she was afraid to use it so she threw it away. I told her "what are you doing? You are hurting yourself."

Care

Participants discussed their worldview of care and caring. The therapeutic role and how professionals comport themselves was seen as very important by many participants as stated by a participant:

"Treating persons with respect, a calm, warm demeanor, listening carefully in an unhurried manner without judgment and offering specific directions for self-care and to improve health are examples of caring. Nurses must be of good character and be patient. Professionals must have understanding of patients' values, beliefs and practices and treat these with respect".

The role of the provider in providing teaching, counseling and respect was seen as important by many participants as one stated:

"A nurse can help a person with diabetes by telling them which foods to eat or not eat, and medications to take. With my mother and her doctor my mother does not receive an acceptable care, I would like to see her taken care of with respect and affection because when a person feels they are treated well then they want to return for care. A good nurse always cares for the patient and attends to him, treats him with affection and respect. It's important for the nurse to understand the beliefs of patients because they can understand each other better. It's important that the nurse speaks the same language because if they can't understand each other they can't help heal. Without communication you can get

worse. If the nurse does not speak Spanish an interpreter can be used or someone can come with the patient that can speak Spanish".

Attending to the needs of the patient, providing personal care and showing flexibility without judgment was discussed as important by several participants as one stated:

"A nurse must behave well, kindly without blame. She attends to the person even of any class. If they don't care you have to report it. A bad nurse does not give respect. It's important that the nurse understand the beliefs of people because they can provide better care and attention. If one cares they support me and the family. Some are not very caring and give medicine and that is all; they don't ask how you are ."

Many explained that excellent communication, maintaining calm and providing care in a careful and leisurely manner were essential to good care as described by this participant:

"A nurse should be calm and explain what diabetes is so you can be calm about it. The majority of nurses are good. If you have that profession, one is like a psychologist and can deal with many types of diseases. It is important that the nurse speak Spanish or use help to interpret. Care means that we have to be aware of our bodies what is around us our health, cleanliness and nutrition. A caring person can care, provides support and encouragement."

Being thorough in dealing with the patient's needs and dedicated to resolving issues were also seen as caring attributes by many participants.

Communication

Participants discussed the value of communication. They expressed concerns about communicating other than in Spanish but found interpreters and translators an

acceptable alternative. *Confianza* or trust developed over time and clear, easily understood communications were described as being essential to caring professional relationships. Unhurried, personal communication was often discussed as preferable in promoting *confianza* or trust. Giving bad news should be done with care and in a non-direct way to let the person slowly listen to the news so as not to frighten the person or cause *susto*. Not all bad news may be shared with others that may be seen as fragile or at risk for fear of harming them especially if the person cannot help the situation. Truth telling while preserving hope was preferred when it came to giving news about health rather than obscuring the information.

The manner of communicating the information rather than the information itself was more of a concern. *Confianza* was discussed as important to caring relationships and open communication as stated by this participant:

"The nurse must inform the patient well, what harms them, their risks-that's the most important. A non-caring nurse does not encourage the person, or pay attention to the person, or talk to the patient about what they are not doing well. It is important to have *confianza* so the patient can explain everything well to the nurse."

Although speaking Spanish was preferred it was not seen as essential by all participants as stated by this participant:

"It's important that the nurse speaks the same language because if they can't understand each other they can't help heal. Without communication you can get worse. If the nurse does not speak Spanish an interpreter can be used or someone can come with the patient that can speak Spanish."

Several participants shared examples of how poor communication could lead to

poor care or even harm as stated by this participant: “It happened to me with a dentist. I was explaining that I had pain but she didn’t understand and did not give me any more anesthesia in my gum, so I was in a lot of pain. It is very important for communication. Using an interpreter can help especially if the person is very sick.”

Interpreters and translators were valued by most participants as stated by this participant:

“It is vital that the nurse speak the same language as the patient. If you can’t speak the same language as the nurse then all that we can explain are the basics. For example you couldn’t say this I would like, but I would like this more than the other, so it is vital that they can communicate. Here in the systems of health we can count on interpreters to help us if the nurse does not speak the same language. You can count on a third person that will translate what we need to say. If you take the care to help me, not so much that you see yourself as doctor and me as patient, but that you see me as a friend, that you leave outside the technical; that it to say that doctors speak with words that are familiar to the patient. There are many words that one does not understand, so that if the doctor uses words that are more familiar then the patient is more likely to say what they think in details. If not they will say that they feel bad and that is all; they won’t feel comfortable giving you more specifics. I have not ever been treated poorly by a nurse or doctor but I believe if the person is very short with the patient that is to say if the person says take this and eat this and stay well, then I think this is a very bad way for a doctor or nurse to behave. A bad manner is not to have time for the patient, not have patience or not to listen to the patient; this is a bad way for a caregiver to behave.”

Several explained how care was different in México as providers took more time

to develop *confianza* as stated by this participant:

"The difference in México is that doctors try to gain *confianza* the quickest way possible, they break the ice and talk about the family. Here they get right to the point and ask about sugar etc. They take no time to socialize and do it gradually. I think that if you have *confianza* then it works differently and obviously the person will give more information. Sometimes they are nervous because they don't know where to start because everyone is in such a hurry. Hispanics sometimes like to tell a story instead of giving the direct answer to questions and they may get annoyed that the person is not answering the questions. My wife has told me that she forgets what to ask. I have told her make a list because everything here is direct and quick. They need to see the next one. So most of all, I believe that the person who cares for you should give you information step by step so you can feel better. It is important that the person has *confianza* with the patient."

The idea that *confianza* is developed over time as a therapeutic trusting relationship with a provider was discussed by one participant as:

"*Confianza* is given based on how one knows the person that is how it develops. One cannot give *confianza* right away because knowledge of the person over time is basic. If you know a patient over time there is more comprehension and looseness with the patient and more *confianza*; you can't get it right away it has to develop over time. Respect must be mutual."

Truth telling by providers was important to most providers but the manner in which bad news is given and explained were key as one participant explained:

"A friend of mine went to the clinic and had gestational diabetes. When she left the clinic she was crying and I asked her what was happening and she said I was told I have

diabetes. But they did not explain to her well that she was pregnant and this is common and can go away when the baby was born. She was very scared and upset. She thought she was the only one and had many worries in her mind that the baby was not going to be well". Developing professional relationships based on trust and mutual respect was discussed by many participants as essential to professional care."

The grouping of data using the qualitative ATI software into thirteen classifications gave way to classifying the data into meaningful categories. As the categories evolved several appeared to be linked as some of the same perceptions emerged repeatedly giving guidance to the development of patterns and themes guided by the DOI and study questions.

Presentation of Patterns

The third phase of analysis was used to scrutinize data to discover saturation ideas and recurrent patterns of similar of different meanings, expressions, structural forms, interpretations, or explanations of data related to the domain of inquiry (Leininger 2001 p. 95). The researcher strived for confirmation and credibility by showing patterning with meaning-in-context. Analysis of the thirteen categories using the phases of qualitative analysis for the ethnonursing methods described by Leininger revealed five patterns and three themes. The five patterns emerged from analysis of the categories, interpretation of verbal, non-verbal and abstract communication and field notes of observations recorded during the interviews.

The patterns identified are:

1. A pattern of concern about DM with much confusion and uncertainties about the disease.
2. A pattern of maintaining balance and body defenses towards health.

3. A pattern of integrating self-care, generic and professional values in care.
4. A pattern of adaption to change and stressors.
5. A pattern of valuing nursing and professional care.

The first pattern identified was: *A pattern of concern about DM with much confusion and uncertainties about the disease.* Participants were aware of the impact of DM on the Mexican population in México and the US. Many participants shared personal experiences with diabetes as it impacted friends and family. The participants expressed varied views on the natural history of DM and some confused the disease with cardiovascular disease and hypertension. One explanation for this may be that they had awareness of the metabolic syndrome or syndrome X. These persons suffer from hyperlipidemia, hypertension, obesity and hyperglycemia as comorbid indicators. The causes of diabetes were seen as both genetic and environmental. Many were aware that diabetes can be familial or inherited and that it is impacted by lifestyle choices including poor nutrition, sedentary lifestyle and obesity. Many added the effects of strong emotions and susto as a cause of DM and described it as perhaps being the tipping point that causes the disease to be expressed if the person is already at risk due to genetic and environmental factors.

As one participant described that:

"Diabetes comes from Susto and bad impressions, someone dies that you care for. There are different types of diabetes. Nutrition and being overweight can also contribute. Diabetics can become mad over anything; some people lose weight or gain weight. Diabetes can last for a long time or not so long. If it's bad the person starts to *secando*, dry up and dry up over time, they can cut their finger or foot. This type is more

dangerous. Diabetes cannot be cured but can be combated a little. People mostly have a lot of thirst and they drink a lot of liquids. It can be combated with herbs and medicines. If you don't take care of yourself or eat things that you shouldn't it makes it worse."

There was widespread confusion as to symptoms, complications and management and treatments of DM. Some associated DM with cholesterol or blood pressure while others associated it with sugar but described low sugar rather than elevated blood glucose levels. Even though good nutrition was discussed as essential to diabetics there were varied beliefs on which foods were beneficial and which were harmful. Many described eliminating fats from the diet without also making a link to the effects of carbohydrates on DM. Several mentioned overeating and that the excessive drinking of sodas over water was a factor in the increase of DM as Mexicans often preferred to drink sweet drinks instead of water or juices. Another participant explained that:

"I don't know much about diabetes but they say that it can develop because of obesity and drinking too many sodas. I think there are different types but not sure of the cause. I have heard that if someone receives bad news or becomes very angry that at that moment one can develop diabetes as well as when one gets pregnant. Diabetes lasts for life. It can be cared for but not cured. I don't know the symptoms."

The idea that DM could be transient was described by this participant in that:

"With severe diabetes the person may be reluctant to take medications and they become sad in their way of thinking and many become aware that they have to take medications a lot and become very sad that they have to do this. Diabetes may last years, all your life until God takes you or variable with care. It can be cured by treating it in time. As a woman I have to be aware of my physical care and blood sugar. Blood sugar comes on

because of anemia of the blood and goes down. One must take the news of diabetes with calmness and not get upset and follow the plan given by the doctor to get better. If they don't follow the care or take their medicine or take the right nutrients it can make it worse. There are many medicines that can help. Some of my family has diabetes if one cares in time then it can disappear. If you normalize your sugar you get better."

The misconceptions in regards to DM were interesting given that even though the participants themselves did not have diabetes most had immediate family or friends with the disease.

The second pattern that emerged from the categories was *a pattern of maintaining balance and body defenses towards health.* Participants viewed modern changes in nutritional and lifestyle choices as deviating from traditional ways of living in a more natural way, relying on home grown food and folk practices and remedies to promote health and cope with illness. Disturbances in the balance of the body as well as threats to the body's defenses often mitigated by forces deemed as unnatural as well as the effects of stress and strong emotions were seen as increasing the risk for illness. Living a natural life of tranquility and moderation was viewed as necessary for maintaining health, function and wellbeing and managing illness including DM.

As described by one participant:

"Diabetes is balance, the balance of glucose in the blood, the grade of glucose in the blood. There are three grades of diabetes, I have observed in some pamphlets. There are Types A, B and C, at least that is what I understand. I believe that the cause of diabetes is the lack of vitamins in the body if you take vitamins it helps your body to develop, so I believe that nutrition is principal, but they also say that when one has a susto that it will

develop. But that goes in accord with how one is nourished, so if one if weak from poor nutrition and then one has a susto then it will develop. If you have an extreme emotion then it will develop because your body does not have the necessary defenses to support all that. It is said we all have diabetes because we all have glucose in our bodies but it is its balance that is important. Yes the basic is this, when the body gets angry it can also develop it, if there is a lack of defenses."

In discussing the role of self-care and tranquility a participant explained that: "To me health is tranquility and being proud of having good health and taking good care. We have been lucky to have good health. If one is sick you can feel very sad but there is help from the family and the community and one can get ahead of course if you take care of it in time. There is a future ahead. Death is sad and one does not want to die but our belief is that God gave us but a minute of life and it's hard to answer if there is a future when one dies. You have to eat right. Sadness and depression can cause susto and this can lead to illness. I believe that. I use herbs sometimes. If I have a headache I take aspirin or chamomile tea."

Yet another participant explained about stress that: "It is important to have a good environment you can get depressed. Here, life is busy and there it is more tranquil. Here there is a lot of stress. Worries can hurt you. If you worry a lot this contributes to you being sick."

The third pattern that emerged from the categories was *a pattern of integrating self-care, generic and professional values in care.* Participants valued self-care, generic and folk beliefs and practices for promoting health and treating illness and professional care including for DM. A participant described:

"In our country we mostly may take the medicine and not necessarily follow a balanced diet so it very important to tell us that on top of taking your medicine you must follow this diet. If we combine both our beliefs and the care they provide here one can little by little become accustomed to what one must do. Such as balancing the diet little by little, but I believe that it is also very important not to take away all the beliefs that the person has."

Not seeking professional care was a result of a lack of resources not a lack value for professional care. Most agreed that persons with DM needed to be under the care of health professionals and follow a prescribed plan of care. Participants often tried folk practices first and then sought professional care or medications if the generic practices were ineffective. Another participant explicated that:

"He takes insulin and he takes pills. The medicines help control his blood sugar. If he does not take the pills he gets sick and the blood sugar gets low. Insulin can help too. It helps because when he takes it, it helps him right away. *Nopal* is very good. You take the thorns out and clean it and you can put in a frying pan and cook it a little without anything. My husband says he feel much better when he eats it. He does not eat it every day but sometimes. I have heard that *savila* is also good. You use the sap or you can cut it in pieces and put in the freezer and you can eat it. It does not taste like anything. You can buy it at the market. Both *nopal* and *savila* are very good. You can make a salad with *nopal*."

Participants discussed integrating these practices and relying on self-care, the advice of family and friends and healers or *curanderos* as well that of professionals for managing their health. Even though medications were seen as necessary for treating

illness they were often taken with concern. *Curanderos* or folk healers were used by some participants. A participant explained that:

"There are various *curanderos* and some have more experience. Some take advantage of others, not all are good. Others accept what you can give for the help. Some will help and accept an animal as payment. People tell others when someone is not good. In a town they usually talk to others about a remedy or natural treatments. They don't go to the doctor first. Sometimes they want to go to a doctor but may not have the resources to go so they try home remedies."

The fourth pattern to emerge was a *pattern of adaptation to change and stressors.* Participants made great sacrifices to make a new life in the US for themselves and their families. Many valued the opportunities that were presented in the US and the potential for improved outcomes for the present and future. Adapting to life in the US was described as challenging and many relied on their faith and religion, support from family and preservation of cultural beliefs and practices as ways to mitigate stressors and facilitate adaptation. Immigration and the current political and economic climate in the US were major stressors impacting participants. Participants mitigated stressors and relied on family support, faith and religion and preservation of Mexican generic cultural values, beliefs and practices.

One participant discussed the differences in life in US and health care when there are a lack of resources and explained that:

"In México there is not as much help. One has a better quality of life here. Your earn more. In México fruits are very expensive and most can't afford it. I used technology like telephones and computers and they help. My mother has a machine to check her blood

sugar frequently. Immigration issues frustrate us because we are always scared. We can't travel. If the kids are born here but not the parents then they can get deported and you should not separate a family. There are many cases where kids stay here and parents are sent away. I get care here for free I have no insurance. We are low income and we heard about the clinic from others. I can't afford to pay for care it's too expensive. My husband was ill and went to the emergency room and couldn't stay. They took his blood pressure and temperature and sent him a bill for $200. My husband has assistance from Physician's Reach Out. Once he was urinating blood and had to be admitted to the hospital overnight and got a bill for $4000. So one says why should I go? Not having money can affect health very much."

In discussing the family another participant commented that:

"In México life is very hard. I like my neighborhood here, it is very calm. There are other Hispanics there and also blacks but we all get along. The family is very important so that all are together and have communication. I live with my wife and daughters. It's difficult not to get together with my other family only by phone. I make decisions in my home and provide everything for the home my wife stays at home. If I'm sick my wife takes care of me since I have no family. It's important to maintain the traditions and teach the children so they believe the same as me."

The fifth pattern to emerge was *a pattern of valuing nursing and professional care.* Health professionals providing care were viewed positively as caring and helpful by participants. Cultural values, beliefs and practices integrated into forming trusting relationships with health professionals were viewed as beneficial. Therapeutic communication, caring, informing, teaching and support for self-care were valued by

participants as carative behaviors. Professional care is based on mutual respect, trust, communication and acceptance and accommodation of generic cultural care beliefs and practices.

When discussing the professional care a participant explained that:
"Care means you always concerned for the person if something happens make sure they are taking their medicines and so on. Not too many differences between care here and in México. Today they gave me good care. I had an appointment for nine but I forgot about it so I was upset that I would lose my appointment and have to make another one, but they called me and told me to come at another time. I felt that they really helped me since they were so flexible to my needs. My mother received poor care because the doctor said she couldn't receive certain care because she couldn't pay for it. I didn't say anything about money. But one is treated differently. Just because we don't have money does not mean we should be treated poorly. If we had money we would receive better care. One asks things and they don't try to help. In this clinic they have given me excellent care; it is magnificent. I like their care. They try not to let me wait long. I really appreciate all they do for me here."

In describing nursing another participant explained: "A nurse should be calm and explain what diabetes is so you can be calm about it. The majority of nurses are good. If you have that profession one is like a psychologist and can deal with many types of diseases. It is important that the nurse speak Spanish or use help to interpret."

Presentation of Themes

The final phase of analysis of the ethnonursing method is the highest phase of analysis and interpretation. In this phase the researcher aimed to present major themes,

research findings, recommendations and sometimes theoretical formulations (Leininger 2001 p. 95). The researcher used synthesis and creativity to concurrently analyze the data. Using the last phase and further reflection and analysis of the five emerging patterns along with the impressions and interpretations of the researcher after interviewing, discovering meaning in context and observing the participants over a period of time revealed three distinct and integrative themes to realize the DOI for this ethnonursing study: the culture care beliefs and practices of Mexican Americans about DM. In addition reflecting on the three research questions for this group of participants gave impetus towards the themes. Immersion in the data and reflection on the experience of spending time with the participants over time and taking note of verbal and nonverbal cues gave meaning to the emergence of the themes.

The three themes for this ethnonursing study that emerged are:

1. Mexican American participants value balance and health yet have many uncertainties and concerns about Diabetes Mellitus that impact their culture care worldview.
2. Mexican American participants' culture care worldview of Diabetes Mellitus integrates self-care with generic and professional care values, beliefs and practices.
3. Mexican American participants' culture care worldview of professional care of Diabetes Mellitus emphasizes culturally acceptable, compassionate, personalized care, based on communication, mutual trust and respect, provided within the context of the family that supports the person's struggle for balance, health, wellbeing and function.

The first theme is Mexican American participants value balance and health yet have many uncertainties and concerns about Diabetes Mellitus that impact a culture care worldview.

As one participant summarized:

"Health is something very important because one's life depends on it. If health is not well then one can't help their family or children. I try to get help to stay healthy, you can't ignore it. I use certain medicines from México that they mail them to us if needed. Nutrition is very important. Illness is a physical defect and it's bad. Death is difficult to describe is sadness. If one becomes very scared or Susto it can result in diabetes."

Inheritance, lifestyle choices and Susto are seen as major contributors to the rise of DM in the Mexican population. The uncertainties over DM are reflected by a participant that stated:

"My father has diabetes but never knew why. Maybe it was from bad nutrition, since we Mexicans tend to have bad nutrition. There are believes that it could be due to a bad Susto. There are different types, type A which is the worst and a type that affects children and this is the very worst. I believe that bad nutrition contributes the most to diabetes. People with diabetes have a lot of anxiety; they eat rapidly and drink a lot. My father became aware that he had diabetes because his injuries to his skin would not heal well. Injuries don't heal like with normal persons. It lasts for life and cannot be cured. It can be treated by following a diet and checking the blood sugar. If you don't care for yourself you can lose your sight quickly and begin to lose parts of your body if you don't take good care of yourself. One must follow a strict diet and balanced and even so if you have a bad impression or anger you can have pain; like my dad, he has neck pain when he gets upset. My dad is not too strict with his diet but I know a lady that is strict but she still gets sick. If you eat a lot of red meat and not check your blood sugar or control your feelings so that you don't get upset you will get worse. Some people lose weight and faint when it

is very hot. A disease not cared for can lead to many complications. I know insulin is used and can help but don't know any other medicines."

One participant expressed an integrated worldview of DM and its management stating:

"Diabetes is sugar in the blood. I know several people with diabetes. People who I work with and several people in my family have diabetes. Cholesterol and eating too much sugar can cause diabetes. It lasts all your life and can be controlled. My godmother has to inject herself every day and my husband's sister had it when she was pregnant. To treat it you have to take insulin and avoid alcohol and things with too much sugar. Symptoms can be loss of vision. I confuse diabetes with heart problems, fatigue can be a problem. I don't know what else. The person must take care and not eat what they are not supposed to. If they eat the wrong foods they get worse. I'm not sure about complications. I don't know the names of medications for diabetes. Good foods are chicken, greens, vegetables, they must avoid fatty foods. Exercise is good but getting old can interfere with good exercise. People with diabetes often have heart problems. I'm not aware of remedies but my family does drink teas for health. Insulin can control the disease but not cure it. They must take good care of themselves, go to the doctor."

The second theme to emerge is Mexican American participants' culture care worldview of Diabetes Mellitus integrates self-care with generic and professional care values, beliefs and practices. Many participants argued that risk for illnesses including DM are enhanced by an unbalanced system which renders that organism at risk due to low defenses.

As one participant summarized:

"I think all people have sugar. But for some it could develop stronger or sooner than others. For some it could be worse perhaps because they have risk factors or if they have a susto or something like this it could happen. It hard to tell if it 100% the risk or the susto. I think some people who have a weaker system, neurologic as they say and propensity for diabetes and that a susto could trigger it. My mom when she got diabetes by working hard she did not take vitamins, medicine or anything to strengthen her and believes that a susto triggered her diabetes."

As another participant summarized this theme balance and moderation in lifestyle as:

"Our beliefs are that if a person has a strong disposition and gets upset or angry easily that that can also bring on diabetes. Many people believe that susto can also bring diabetes but I'm not so sure. I have seen people that have had a great scare like an accident which we call susto and then they have developed diabetes. I believe that diabetes cannot be cured but it can be controlled. When someone has diabetes there is variation based on the organism of the person as to what symptoms the person has. Some people are more affected and others not as much. Some are affected in their vision, in their mood in that they are more irritable, in the skin, and some are more fragile for their skin, more frequency of urination. I know these are some symptoms. Nutrition is very important in control. You have to lead a healthy diet; this is the most important thing. The diet has to be balanced and how one handles the carbohydrates, the proteins. Breakfast can really affect the blood sugar most of all. You have to eat in moderation most of all. You must avoid what mostly contains carbohydrates and salt. I believe that with diabetes

as well as any illness, exercise is fundamental. Especially with diabetes one can combine nutrition with exercise and this helps a lot. The same with being overweight, if you lose weight the can help a lot."

Mexican American participants' culture care worldview of professional care of Diabetes Mellitus emphasizes culturally acceptable, compassionate, personalized care, based on communication, mutual trust and respect, provided within the context of the family that supports the person's struggle for balance, health, wellbeing and function. As one person described specific skills associated with nursing care of diabetics as:
"Nurse helps by checking blood sugar and weight and asks about what they eat or don't eat. A caring nurse checks the person well and makes sure the information that the person gives is perfect. If they are bad they are quick and weigh the person but don't ask much. A good nurse wants to make sure that the person feels well about answering questions. It's important that the nurse speaks Spanish or have an interpreter."

Another participant expressed a more holistic worldview of care stating:
"Care means that we have to be aware of our bodies what is around us our health, cleanliness and nutrition. A caring person can care, provides support and encouragement. Nurse show affection and respect for the person. The nurse makes you take your medicine and watches after you. I have never had a bad experience with a nurse, they have all been caring."

One participant gave a summary of caring that expressed many of the ideas portrayed by others linking professional care, generic care and self-care as:
"A person that cares or tries to help such as nurse, principally has to explain about your illness. Tell you about what symptoms you will have, what you should practice to stay

well. Tell you the benefits of what you should eat and the harm of other things that you may eat. Most of all help you so that you can handle your own illness and that they provide you with examples of things that are helpful in daily life, not so much medical terms but at the level of the patient. That will say you can treat yourself at home and teach you what you should eat rather than how to follow a very rigorous diet. Thus give you examples as to how you can live with diabetes. Many times they can say you shouldn't eat a tortilla. I know that tortillas are bad for you for diabetics but in the customs of us Mexicans the tortilla is something essential for our diet. So instead of saying don't eat tortillas they can say just eat one, or if you eat a large plate of beans you can eat a smaller portion. That is not to take everything away that is important to the person, instead start acting in moderation little by little until you can help yourself with your health. So most of all, I believe that the person who cares for you should give you information step by step so you can feel better. I feel that incorporating our customs is important because it very different here where they have more care for people with diabetes."

Using the phases of ethnonursing qualitative analysis as described by Leininger and in view of the DOI and study questions, thirteen categories were identified and described. The categories were further analyzed and yielded five patterns. The final phase of analysis led to the emergence of three distinct themes. Further discussion and explications of the themes and finding of the study will be presented in the next chapter.

CHAPTER V

Discussion of the Findings

Introduction

This chapter will discuss the interpretation and discussion of the findings as well as recommendations from the author. To summarize, the themes were: Mexican American participants value balance and health yet have many uncertainties and concerns about DM that impact a culture care worldview; Mexican American participants' culture care worldview of DM integrates self-care with generic and professional care values, beliefs and practices; Mexican American participants' culture care worldview of professional care of DM is consistent with most common care values of Hispanics.

Themes

The first theme to emerge is Mexican American participants value balance and health yet have many uncertainties and concerns about Diabetes Mellitus that impact a culture care worldview. Participants often discussed that if you don't have your health then nothing else really matters. Some participants chastised those that placed greater emphasis on obtaining material things over redirecting limited resources to health promotion and maintenance. Several spoke of materialism being more prevalent in the US than in México.

Interestingly this group did not see health as something that is something that is entirely beyond their control and impacted by the whims of fate or luck. This contradicted previous findings that *fatalismo* a prevalent value of Hispanics as a group is present in every group of Hispanics. Participants often spoke of the person's responsibility for guarding and maintaining health. Even though health could be impacted

by many factors that were beyond a person's control like family inheritance, many participants still saw a role in making good life style choices and modifying environmental factors to mitigate the negative effects of genetics. These participants predominantly adhered to the professional view of health as being impacted by both genetic and environmental factors. Since DM is so prevalent in this population most participants had direct familial links to persons with DM and spoke of their own increased risk for the disease. None considered their increased family risk as an absolute predictor or determinant of their own DM illness manifesting. Participants expressed many ways that they could alter their life styles through healthy lifeways and choices and perhaps delay or completely negate their risk for DM.

Most participants supported the current understanding of DM as being caused by multifactorial factors. The one variant was that participants often spoke of the effects of strong emotions especially susto as a direct cause or tipping factor for the onset of DM. Some participants expressed uncertainty as to what factors impacted the development of DM. Several participants spoke that persons at risk for diabetes due to family inheritance may not develop DM themselves if it were not for their response to a strong frightening event. These frightening events often centered on catastrophic sudden incidents involving accidents, conflicts or unexpected deaths of family members.

The response to the event was the determining factor rather than the event itself. Persons that responded to the frightening event with a strong reaction of fear risked bring out DM which could have been avoided if they had only reacted with moderation and maintained balance. *Susto* was a seen as a significant factor that destabilized the body's defenses against illness. The greater the emotional response to the *susto* the more likely

that illness would manifest. *Susto* appeared to be generic belief passed forth from family members or cultural influences. Several described the belief as "that is what people say". Some participants were adamant that although *susto* was a prevalent belief that it was not rooted on current scientific knowledge of DM and was thus not a valid causative factor. Several reported incidents where they witnessed groups of Mexican-Americans discussing *susto* and its impact on health especially DM in places like church or community gatherings.

All types of strong emotions were met with caution and trepidation for being harmful. Interestingly strong responses to a happy event could be as harmful as to a traumatic event. Two responses to positive events are *alegria* or joyful/ happy response and *gusto* or intense sense of satisfaction.

Study finding also added support for some of the findings described by Alcozer (2000) that concluded that for that study's participants diabetes was defined as: borderline (sugar in urine) or glucose intolerant and diabetes (sugar in blood, on renal dialysis, on insulin. Getting diabetes was defined as: heredity and eating too many sweets. Describing diabetes was defined as: insulin was described as scary and complications. Most regarded insulin as a consequence and a symptom of diabetes that could cause complications of diabetes. Having diabetes was seen as: high sugar, confusing, silent. Taking care of diabetes defined as: insulin, renal dialysis, and strict diet. Borderline diabetes as: oral medications. The meaning of diabetes was viewed as a life threat with complications and shortened life (Alcozer, 2000).

Alcozer (2000) concluded that Mexican American women's explanatory models about diabetes served as a basis for negotiating therapeutic interventions and that the

biomedical model was dissimilar to participant's explanatory model. Alcozer asserted that assessments can be ethnocentric if they include only biomedical explanations of illness. Experience with diabetes influenced perceptions. The author concluded that assessment should begin with illness characteristics not with conformity to biomedical nosological system. Women relied on what they were told by healthcare providers, family and community (Alcozer, 2000). Participants in this study supported the belief that emic views have value and should be included by providers in assisting with management of DM.

Mercado-Martinez & Ramos Herrera (2002) concluded in their study of Mexican laypersons with diabetes that on the origin of their condition participants offered multiple explanations that neither matched the biomedical model nor any other formal casual theory. They attributed the onset of diabetes to socioeconomic circumstances linked to their life experiences and practices. Men attributed it to family life and domestic circumstances. Seven causal lines were identified; most common was social, economic or relational factors that caused fright (*Susto*). Second was attributed to anger and rage due to conflict. Other causes included consumption of soft drinks and problems and difficulties with families. Some attributed it to a single factor others to multiple factors. Perceptions were rooted in experiences of daily life. Participants visited traditional healers.

In the study by Jezewski & Poss (2002) participants described their perceptions of diabetes using these constructs; causes, symptoms, treatment, and social significance. Each of the components of the EM contained elements of both the folk and the biomedical perspective. *Susto* or fright was perceived to be the primary cause of diabetes,

although biomedical causes were also incorporated including obesity, diet, heredity, lack of exercise, not taking care of one self. Symptoms of diabetes included, weight loss, visual problems, fatigue, weakness, headache, thirst, increased urination, dry mouth and skin.

This study also supported that multiple lack of concurrence for causes of origin were described for DM. It also supported the role of *susto* and strong emotions such as *coraje* or anger in contributing to the development of DM. These participants also discussed the role of *curanderos* or natural healers in the provision of healthcare. The increased consumption of soft drinks in lieu of water was also described by several participants as contributing to the increase in prevalence of DM.

This study's participants concurred with the role of inheritance and poor diet in contributing to the development of DM as well as there being several classes of DM although most concurred with the current categorization of DM as adult onset or juvenile onset. The participants also viewed insulin with concern as potentially harming as well as necessary for DM management but only as a last recourse. Even though many participants viewed excessive consumption of sweets as a problem others also mentioned fats or spoke only of fats as contributors. This could be a reflection of greater public awareness of the harmful effects to health of dietary fats and confusing or associating DM with cardiovascular diseases.

The second theme identified is Mexican American participants' culture care worldview of Diabetes Mellitus integrates self-care with generic and professional care values, beliefs and practices. Lifeways associated with Mexican Americans were described as being in a state of flux both here in the US, and back home in México. This

was explained by some participants as representative of México's modernization and emergence as a developing country with more people living in large cities and urban centers similar to those in the US. Participants discussed that those in the cities tried to emulate life in the US associating US lifestyles with progress and modernization. As one participant stated "persons may choose hamburgers from a drive through restaurant like those in the US over home cooked meals thinking themselves as being more modern even though this is not good for their health". Modern lifestyles and choices were deemed as factors in contributing to a higher incidence and prevalence of illness in persons of Mexican ethnicity. Living a natural live was often aligned with a life of moderation and balance thus avoiding excesses; this included moderation in nutrition, exercise, weight, maintaining a tranquil environment and in expressing emotional responses.

Natural living and moderation were seen as promoting and maintaining the organism's defense system against illness. Traditional lifeways were described as being tied to a natural way of living, depending on what a person could grow in the ground or raise organically for food and associated with a rural, tranquil environment. In traditional Mexican lifeways, persons relied heavily on agriculture or farming and the social support of immediate family, neighbors, and the entire village. This support often also included health advice. Due to lack of modern transportation, movement by foot and working at home and in the garden provided a source for an active lifestyle. Home remedies based on herbs, plants and substances commonly found in nature were often sought for health maintenance and to reduce risk of illness and manage illness.

In the perspective of these participants, that which was deemed natural was viewed as good and nurturing for the body and health promoting. That which was seen as

being created by man, including medications, and animal hormones or chemical fertilizers, was seen as unnatural and thus suspect of causing harm by these participants. Good nutrition of fresh foods grown naturally or organically were described as essential to health living. Many participants expressed concern over animal products as they described a diet high in fats as being detrimental to health. Foods prepared outside the home were often also viewed as suspect and not as health promoting as those grown and prepared at home. Some described that they would be uncertain if these foods contained additives or preservatives or how fresh they were. Verduras or greens, vegetables and fruits were described as being healthier than animal products, especially beef or pork. One participant discussed how Mexican American children grow so much bigger in the US than in México and attributed this to growth hormones added to meats in the US. A shift away from natural lifestyles was often described as a source for poor health outcomes and associated with the recent prevalence of obesity in the population.

One factor that was brought up by many participants was the change in drinking habits as the population became more modern and urban. Several stated that persons of Mexican origin now drank an excessive amount of sweetened sodas in place of water or natural juices. Some stated that some of these persons viewed drinking sodas with pride or as an example of changing with the times and being more progressive and modern, like in the US. However, most agreed that drinking sodas was unnatural and unbalanced the system and was a factor in promoting obesity and in some cases DM. The lack of drinking enough water, described as a natural substance, was often mentioned as a factor leading to illness by several participants.

Maintaining a healthy weight was described by participants as being a factor that promoted health. For these participants a healthy weight was not having a thin endoderm body type like in the US, but more of not being of an ectoderm body type, not being grossly overweight, fat or obese. Several expressed a preference for a full figured, mesoderm body type, even in infants and children. A thin infant was described as sickly and in need of good nutrition.

A sedentary lifestyle was often associated with modernization and improved transportation. People now drove to work instead of walked. Many more people in the cities were said to work in offices where they sat for most of the day rather than toil in the fields in villages as in the past. Lack of exercise was seen as a contributor to obesity. Not having enough time for exercising and attributing working as equal to adequate exercise for health purposes were also seen as promoting a sedentary lifestyle. Many participants named walking as a healthy way to exercise and reduce weight. In the past persons were said to walk everywhere for lack of transportation. They walked to work, to obtain goods and services and for social purposes like visiting family and friends and attend church or community functions. Modernization and improvements in transportation has decreased the need to walk and this has contributed to obesity as described by some participants.

Participants repeatedly stated that living a life that is calm and tranquil promotes balance, coping and wellbeing. Participants described health as being aligned with wellbeing and also function. Those persons that stated that they felt well and were able to fulfill role responsibilities and functions deemed appropriate by the participant were described as healthy. Thus for these participants health was not always the absence of

disease but the ability to continue to feel well and function as a contributor to the family, including working, taking care of children, maintaining a home and caring for the family. Persons with known diagnosed illnesses including DM were often described as healthy as long as function was maintained and the person communicated wellbeing. As one participant stated "My uncle had diabetes all his life but he was well because he was able to continue to work into his eighties".

Participants described the body's defenses in more holistic ways. Only a few associated body defenses with just physical defenses, immune function and defenses against pathogens. Strong body defenses can also protect the person from stress and promote coping. A person's constitution can also impact defenses. A person could be deemed to have a strong or weak constitution based on age, and other variables like perceptions, coping mechanisms, past experiences, and resilience. Seeking natural remedies and practices were described as factors in returning the body to a state of balance. Anything that could disrupt these body's defenses had the potential for unbalancing the system and creating illness.

Stress was often described as a threat to balance and moderation and thus directly linked to illness. Participants strove to live in and create environments that were filled with calm, peace and tranquility. Worry or preoccupation or loss of peace of mind was described as one of the main factors that can disturb tranquility. Some participants associated worry with losing sleep and eating poorly thus creating imbalance in the system. Stressful situations have the potential for promoting strong emotions and these responses can disturb tranquility and balance and impact the body's defenses placing the

person at risk for illness. Participants advocated that person manage stress, moderate their responses to stress and contain emotional responses under control to prevent illness.

Having peace of mind is a factor that promotes coping with difficult situations. Maintaining tranquility was viewed as a priority over veracity, truth telling and transparency in communication. Participants discussed withholding information from others that was deemed as having the potential of disturbing tranquility and causing worry or preoccupation and stress. This was to occur more likely if the person was seen by the participant as frail, have a weak constitution or at risk, such as the very young and very old. If the person was deemed as not having a key role in solving a problem then the information that a problem existed was withheld so as not disturb the peace and tranquility and thus the balance of the person. Modifications enacted in order to create a calm environment were described as promoting coping and health. Persons were to avoid worrying, especially over those things or situations that they can't control or have an impact on. Protecting others from worry was described as a caring behavior as it promoted balance. One participant stated "I don't tell my mother back in México about most of my problems. What for? Since there is nothing she can do but worry".

Even though most participants were grateful for the many opportunities that living in the US provided for their families adapting to living in the US was seen a stressor by most participants. Several participants expressed fears that Mexican cultural values, beliefs and practices would be replaced in their children by US ones over time. Preserving generic values, beliefs and practices were stressed as important. One value that was repeatedly stressed was demonstrating respect for elders and men respecting women. Some also spoke of understanding your place in society and being humble as

desired cultural values. A concern for materialism was often discussed and that children needed to be taught to value what they had over seeking materials things. Many participants spoke about Mexicans being more family oriented than persons in the US.

A major stressor of living in the US included the effects of immigration and un-documentation with fear of separation of the family from deportation. Many spoke of a need for a political solution that would lead to citizenship for those Mexican Americans already in the US especially for those who had children that were born in the US and were deemed American citizens. Un-documentation created many difficulties with transportation since undocumented persons were denied drivers' licenses in this state. Many participants drove anyway but were in constant fear of being stopped for any small infraction. Most of the driving was back and forth to work as they walked whenever possible to decrease the risk of being stopped while driving and risk jail or deportation.

Economic factors were described as the main reason for emigration to the US. The US was described as a land of opportunity where persons could survive and thrive with hard work. Living in the US often provided the minimal resources for living a better life and for helping those family members left behind in México. This placed additional pressures on not being deported as the lives of many in the family depended on the ability of one or two persons in the family to work in the US. The recent recession impacting the US was especially difficult for these participants as their opportunities are limited without proper documentation. Joblessness and decreasing resources were seen as worsening since many were involved in construction, an industry that has suffered recent economic difficulties in the US. Lack of economic resources led to some participant women in the family having to be employed to meet the financial needs of the family. This change in

the traditional Mexican female role from homemaker to working outside the home was discussed as an additional stressor and a threat to traditional cultural values by some participants as the care of children was entrusted to those that promoted US values over than traditional Mexican American values.

The changing political climate where immigration rose to national prominence and debate with emphasis on deportation of undocumented persons was discussed as a source of fear and a factor affecting loss of tranquility and peace of mind. Some participants made distinctions among undocumented immigrants agreeing that those that failed to live by the law and contribute to society should be deported, while those whose aims were to work and contribute to their families and were law abiding should be granted a path to documentation.

Additional stressors discussed to living in the US were coping with concerns about perceived discrimination and racism towards persons of Mexican ethnicity, language and cultural barriers. Interestingly a few participants described events that created conflicts between Mexican Americans and African Americans. One described an incident in which the participant perceived harsh treatment by an African American policeman with an intervention by a white policeman to assist them. Lastly the fast pace of life in the US as compared to life in México was often discussed as a stressor. Many participants worked long hours leaving home early in the morning and returning late at night. This schedule left little time for family time, recreation and exercise and forced many to purchase meals outside the home. For some participants long work hours also influenced the ability to be involved in community and religious events and celebration of traditional holidays.

Americans were described by some participants as being in constant motion moving from one thing to another, being involved in may activities and having many responsibilities. Some participants discussed that American children are involved in many school, sports and community activities that don't involve the whole family and parents are relegated to role of providing transportation. According to some participants an American culture that promotes material things requires that person work long hours or have multiple jobs to provide the monetary resources to meet this lifestyle. These activities were seen as interfering with family time and destabilizing the balance of family unit. Participants wanted their children to value what they had rather than always seeking the next material thing. This fast paced American lifestyle contradicted the quest to seek calm, tranquility and peace of mind. Some participants felt pressured by their children to take on American values, beliefs and practices and described this as a threat to maintaining and transmitting traditional Mexican American values, beliefs and practices to their families while living in the US.

Even though stressors were negative factors impacting health, participants did not see themselves as completely defenseless against them. They often spoke of the balancing effects of *familismo* or family social support and advice and faith and religion. Family unity was a key cultural value described by participants and a factor in promoting health. The family represents love, calm, tranquility and peace of mind. Spending time with the family was seen as a way to promote coping and health. Opportunities for recreation were most often spent with family members instead of with others outside the family. Several described walking around their neighborhoods as a shared family activity. Participants tried to stay in contact with extended family back in México by mail or

phone. Many described long periods between seeing family members left behind and this separation was described as a source of worry and loss of tranquility.

Conversations with distant relatives sometimes omitted news about financial difficulties or problems encountered while in the US so as not to worry those relatives that were seen as not being able to help in the situation. Participants described being able to share worries and concerns that affected them more readily with friends than with family. Although most participants had family members with DM their knowledge of how DM impacted these individuals was limited. They too shared stories of family members limiting what was disclosed about their experiences with DM in order not to upset or worry the family member. One participant stated "my mother does not tell me much about her diabetes because she does not want to worry me." One detail that was often shared with family members was the particular incident of *susto* that was related by the family member as contributing to the onset of DM. These incidents were crises or sudden events that were seen by the person as being very distressing and elicited fright and emotional distress. These stories were shared as a warning to others to protect themselves from the effects of susto and to guard against strong emotions so as to avoid also becoming ill themselves.

Religion was described as important and most participants were Catholic. Many discussed the inability to participate in religious services or activities due to their work requirements or difficulties with transportation. Faith was described as being a source of strength and promoting coping and wellbeing. The belief that God is good and is there to help and protect provided a feeling of safety and peace of mind that problems would eventually resolve themselves to the benefit of the person even if at first glance it did not

seem so. God was never seen as a wrathful God that punished those that sin but rather a source of solace and protection. Faith helped to maintain a state of tranquility and calmness as participants believed that they were being protected and guided to do God's will. Faith also led to peace of mind and reduction of worries especially with events beyond the person's control. For these participants persons were viewed as responsible for their lives and doing all in their power to deal with problems and arrive at solutions but God was always there to mitigate stressors, support the person and assure good outcomes even when the person was unable to control or effect a situation. Persons were not at the mercy of fate thus *fatalismo* was not a value expressed by these participants. These participants were eager to access healthcare resources when available and take preventive actions to promote health and prevent disease.

Reflecting on the finding of previous literature and studies and contrasting these with this study provided additional insight and support for the themes identified. The results of this study supported in part the finding by Weller (1999) that homogenous beliefs were present within each group of participants that included a Mexican group and a Mexican-American group. Findings were that these participants' views primarily agreed with the biomedical description of diabetes. Participants in the Hernandez study supported congruence of primary agreement with biomedical or etic professional beliefs but also reflected the lack of consensus among participants as to the correct natural history of DM and its management. It also supported that widely held beliefs that are not in agreement with the biomedical model included some of the symptoms of diabetes such as the role that emotions may have. Variations in responses tended to characterize less knowledge and experience with diabetes. The participants with immediate family

members with DM were more knowledgeable. Weller concluded that the cultural consensus model facilitated assessment of cultural beliefs related to diabetes and diabetes management and that overall these beliefs were concordant with the biomedical model. Variation in responses tended to characterize less knowledge or exposure with diabetes not different beliefs (Weller, S. C., et al. 1999). Participants in this Hernandez study were not affected by DM but many knew of at least one affected person with DM within their social circle.

Brown et al. (2000) concluded that for their study of diabetics, males and females had different beliefs about ability to control their diabetes and degree of social support for diet. In this Hernandez study a few participants discussed differences in how women and men view diabetes and how to manage it. One participant discussed how her husband refused to be treated for DM because he was to work and provide for the family instead of taking time to seek healthcare. Another participant discussed that men report more embarrassment for being ill and are less likely than women to seek social support for fear of being made fun of or feeling less manly. Although interesting, these participants' views did not recur for this group to the point of congruence, saturation and interpretation. The effects of gender on perception of DM needs further study to explicate. Gender differences in attitudes and perceptions for Mexicans are supported by the Mexican ethnography.

In the study by Jezewski, & Poss (2002) treatments included the use of both herbal and biomedical modalities including diet regulation, herbal remedies, prescribed medications, regular exercise. The use of herbal remedies was not well understood by the participants despite the fact that some used herbal therapies to control diabetes. Social

significance included: family support is essential, ambivalence towards disclosing diabetes, willingness to advise others about diagnosis and treatment. All participants were under the care of a physician or nurse practitioner and believed it was important to take medications as prescribed. Insulin was viewed with fear as it may be a cause of complications or could lead to addiction. Herbal medicines used included *Diabetil* tea, *Malabar*, *catarnilla*, *Changarro*, *Guayacán*, *tronadora*, *Nopal* (prickly pear), *Gobernadora*, *Sábila*, and *Lágrimas de San Pedro*. The researchers concluded that results were consistent with other studies of Hispanics which site provoking events in addition to biomedical factors as cause of illness. Belief that *susto* causes diabetes was more common in Mexicans that are less acculturated. Stress may be seen as acting as a trigger in the undiagnosed with diabetes making the condition apparent. The Take Care of Yourself: Diabetes Awareness prevention curriculum was implemented in San Joaquin and Stanislaus counties as a result of the research (Jezewski, & Poss, 2002). Integration of self-care and emic and etic beliefs were valued by the participants of this study.

The third theme to emerge Mexican American participants' culture care worldview of professional care of Diabetes Mellitus emphasizes culturally acceptable compassionate, personalized care, based on communication, mutual trust and respect, provided within the context of the family that supports the person's struggle for balance, health, wellbeing and function.

Whittemore (2007) explained that in the study providers included culturally relevant strategies by providing education in English and Spanish, and including participation of family members, bilingual staff of same culture, and lay workers in community of same culture. The author concluded that providing culturally competent

care is a complex process and that it warrants a multidisciplinary and multifaceted approach that addresses the complex array of factors that influence access to and participation in health care.

Warda (2000) asserted that perceptions of culturally appropriate care supported the concepts of *personalismo* (personal care), and *simpatia* (harmony and positive feelings in social relationships). Family support was identified as an important factor as were respect, caring, understanding, and patience and personal processes in healthcare encounters. The influence of the culture of origin remained strong in spite of the Western biomedical healthcare system.

Welch (2000) summarized that five Hispanic common normative cultural values have been described as: s*impatía* or kindness, *personalismo* or formal friendliness, *respeto* or respect *familismo* or a collective loyalty to the extended family and *fatalismo*, or fatalism is the belief that the individual can do little to alter his or her fate that could lead to less access to preventative healthcare.

Values in this study correlated well with those of Warda and Weller with the exception of *fatalismo* or fatalism. Participants in this study associated health with personal responsibility and did not attribute illness including DM to fate or punishment from God. An additional cultural value to emerge is that of *confianza* or trust in which a relationship is developed over time with providers and that this enhances trust and ability to be authentic with providers in expressing all concerns or preferences. Awareness of common cultural values and integrating these in the provision of professional care would be culturally congruent with these participants worldview of professional care and carative behaviors.

Pictorial Model

The culture care worldview of Mexican American participants that every person harbors or is at risk for developing DM, yet health, wellness and function are attainable, while illness and death may be mitigated by the person's struggle to maintain balance and seek care, is at the nexus of all three study themes. *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model* Hernandez © (2013), (see Figure 2) abstracted by the author from the literature, findings and themes depicts the person struggling to keep DM at bay by enacting a balancing act to maintain health status. Like an explanatory model as described by Kleinman (1978) that provide a framework for comparing the perceptions of the participants to those of the providers and finding ways to negotiate care and improve healthcare management. A pictorial model also has value in increasing awareness of the ethnocentric view of imposing the Western biomedical model on clients without regard to the client's explanatory model. By reflecting on the pictorial mode the nurse can develop insight on potential ways to provide Nursing Culture Care to Mexican Americans in regards to Diabetes Mellitus.

In *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model* To maintain balance the person adjusts, shifts weight, slides or moves back and forth on a see-saw or teeter-totter that represents health status relative to self-determined health, wellbeing and function. The person juggles balancing forces under a protective arc of defensive forces to neutralize or mitigate threatening forces while integrating culture care and relying on supportive forces.

Inability to maintain balance and be overcome by threatening forces would lead the person to develop DM, and/or lead to a change in health status towards illness or death.

The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model depicts the four metaparadigm concepts of nursing. The *person* seeks *nursing* culture care to assist in the struggle for management of *environmental* forces: threatening, defensive, balancing and supportive forces to maintain balance and *health,* wellbeing and function to eliminate or reduce risk for DM and manage DM once it manifests. Key concepts reflected in the pictorial model are defined by the author based on abstractions from the literature, findings and themes.

The *Person* is depicted as holistic being that is always at risk for manifesting DM but reduces risk for manifesting DM or manages DM by struggling to maintain balance and defensive forces to negate, ameliorate or mitigate threatening forces. The person has free will, makes choices and adapts using balancing forces, is upheld and assisted by supportive forces and seeks culture care to promote, preserve, support, maintain and restore health.

The *Environment* is external and internal to the person and is impacted by modifiable and non-modifiable factors. The person manages environmental forces: threatening, defensive, balancing forces and supportive forces to maintain balance. The environment can promote or threaten balance and health.

Threatening Forces are harmful genetic factors, environmental factors, and strong emotions such as *alegria*, *coraje*, *gusto* and *susto*. Genetics, inheritance and familial health problems are non-modifiable threatening forces. Harmful and modifiable environmental factors include pathogens, poisons, pollutants and contaminants, un-

natural substances and chemicals, stress, injury and harm. Strong emotions to situations, events or crises are modifiable threatening forces regardless of whether these are positive or negative. Threatening forces interact and have a synergistic effect on each other and can overwhelm the person's defensive forces, disrupting balance and affecting health status.

Defensive Forces protect the person from threatening forces and are part of the environment. These forces are comprised of internal factors such as constitution and immune responses, and external factors such as safety and maintaining an optimum environment for growth and development and impact the person's ability to negate, ameliorate or mitigate threatening forces.

Balancing Forces are adaptations under control of the person. These forces enhance defensive forces and are part of the environment. The person adapts and makes choices that can promote or upset balance. *Balancing Forces* are natural living, tranquility, stress management and healthy lifestyles including nutrition, exercise and weight management. The person adapts and juggles *Balancing Forces* in the struggle to maintain balance, and health.

Supportive Forces include family, faith, religion and culture. These forces promote wholeness and coping and lift, uphold and assist the person's efforts to use balancing forces to enhance defensive forces and protect the person from threatening forces.

Health is a status, desired goal and the outcome of maintaining balance. *Health Status* is self-determined by the person's perceptions of wellbeing and function and is a dynamic state that is in continuous flux and not permanent or static, or the absence of

illness. Health is holistic and includes physical, emotional, social, cultural and spiritual dimensions among others. *Health Status* is dependent on balance and may fluctuate between levels of maximum wellness, maximum illness, disability or death.

Diabetes Mellitus (DM) is a manifestation and alteration in health status as a result of imbalance. Every person harbors and has the potential for manifesting DM. DM is triggered by threatening forces once they overwhelm the effects of defensive, balancing and supportive forces. A person is not perceived as being sick just because DM manifests as a result of imbalance. The person with DM is perceived as fluctuating towards relative illness when it impacts wellbeing and function; otherwise the person is perceived as relatively healthy. A person with DM that feels well and is able to maintain function and role responsibilities like parenting, work and family and community roles is deemed to be healthy.

Culture Care is the integration of self-care, generic care and professional care. The person seeks culture care as needed to protect, preserve, support, maintain and restore health, wellbeing and function. The person makes choices reflective of self-determined health status, needs and expectations in consideration of the family, faith, religion and culture, emic or generic values, beliefs and practices. The person values professional care and nursing and seeks this care based on perceived alterations in health status, needs, threats and resources available.

Self-Care is a component of culture care where the person makes health appraisals, develops a plan of care, takes actions and evaluates effects of choices, decisions and resources needed to protect, preserve, support, maintain and restore health, wellbeing and function.

Generic Care is a component of culture care where emic, traditional or folk values, beliefs and practices, and for some *curanderos*, are used as resources to protect, preserve, support, maintain and restore health, wellbeing and function.

Professional Care is a component of culture care where etic, scientific or evidence based care from interdisciplinary healthcare professionals are used as resources to protect, preserve, support, maintain and restore health, wellbeing and function.

Nursing Culture Care uses cultural humility and cultural knowledge, competencies and skills to reflect on *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model,* to provide culturally congruent and appropriate healthcare and assist the person to integrate all aspects of culture care and maintain balance and health. The nurse integrates the culturally acceptable values of *simpatia*, *personalismo*, *confianza*, *respeto* and *familismo* in culture care to protect, preserve, support, maintain and restore health, wellbeing and function. Nursing culture care is an example of care described by Leininger as transcultural nursing or culture care.

The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model (see Figure 2) is a visual, pictorial representation abstracted by the author from the literature, study findings and themes. Beginning at the top of the model are the *Threatening Forces of* genetic factors, environmental factors and strong emotions such as *alegria, coraje, gusto and susto*. The *Threatening Forces* lie outside and above the person's arc of *Defensive Forces* and are constantly attempting to penetrate or overcome it by acting in synergy affecting the person in greater ways than

the sum of their parts and creating risk for manifestation of DM, illness, disability or death.

Defensive Forces lies beneath the *Threatening Forces* and provides an arc of protection from these forces. This arc represents a barrier of defenses that preserves wholeness, protects the person from threatening forces and enables the person to maintain balance, health, wellbeing and function.

Underneath the arc of *Defensive Forces* and at the center of the model is the person. The Person is the recipient of *Culture Care* and model's central focus. The person seeks balance and is in a continuous struggle and state of vigilance to maintain defenses and balance. The outcome of maintaining balance is health, wellbeing and function. Alterations in balance can lead to the manifestation of DM, illness, disability and death. The person and health are impacted by the environment and threatening forces. The person has free will and makes appraisals and determinations of health status and needs based on perceptions of wellbeing and function and seeks *Culture Care* as needed.

The *Balancing Forces* represent adaptations and life choices that are under the control of the person and assists efforts to maintain balance. The person struggles and attempts to maintain balance by adapting or juggling the four balls that represent the *Balancing Forces* of Natural living, tranquility, stress management, and healthy lifestyles or choosing proper nutrition, exercise or active lifestyle and maintaining a healthy weight. The person's ability to effectively adapt and juggle the *Balancing Forces* holds up, protects, supports and maintains the integrity of the arc of *Defensive Forces*. Ineffective struggling or juggling of the *Balancing Forces* may lead to instability, imbalance and weakening of *Defensive Forces* which may allow the *Threatening Forces*

to penetrate and affect the person's balance, perhaps even throwing the person off balance thus changing health status. *Balancing Forces* assist the person to struggle, adapt and negate, ameliorate or mitigate *Threatening Forces*.

While attempting the struggle for balance, adapt and juggle the *Balancing Forces* the person adjusts, shifts weight, slides or moves back and forth in an attempt to maintain balance and *Health Status.* This balancing act preserves health, wellbeing and function. Inability to adapt and maintain this balancing act leads the person to lose balance, change health status and manifest DM, illness, disability or death.

Supportive Forces promote wholeness and coping and mitigate threats by adding stability for the person. These forces of family, faith, religion, and culture, ground, lift, uphold and assist the person and provide a base of support *Health Status* from which the person is to enact the balancing act. Absent, insufficient or ineffective *Supportive Forces* may negatively impact the person's ability to maintain balance.

Culture Care is represented in the model by arrows that gyrate around the person and operate in tandem to assist the person to maintain or restore balance. The person utilizes *Balancing Forces*, and integrates *Self-Care*, *Generic* and *Professional Care* in *Culture Care* in order to preserve *Defensive Forces*, negate, ameliorate or mitigate *Threatening Forces* and uphold *Supportive Forces*, and adjusts to shifts in balance and *Health Status* to preserve health, wellbeing and function.

At the base of the model lies *Nursing Culture Care*. The nurse reflects on the entirety of model using cultural humility and cultural knowledge, competencies and skills to provide culturally congruent and appropriate healthcare and assist the person to maintain balance and health. The nurse integrates the common cultural values of

simpatia, *personalismo*, *confianza*, *respeto* and *familismo* in culture care to assist the person to protect, support, maintain and restore health, wellbeing, and function.

The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model, the person is not a pawn or puppet affected by *fatalismo* or fatalism but must use free will to make choices, expend personal energy and remain forever vigilant if not balance could be easily disrupted and lost. Inability to maintain the struggle for balance overwhelms *Defensive Forces* allowing the *Threatening Forces* to penetrate and usurp the *Supportive Forces* thus causing the person to lose control of or drop the *Balancing Forces* and lose balance and fall and change *Health Status*. The lack of adaptation, unbalance or fall places the person at risk for manifesting DM, illness, disability or death. For these participants DM would be represented by an inability to struggle for balance or a mishap in adapting, maintaining the balancing act and a shift or fall and change in *Health Status* to illness.

In providing *Nursing Culture Care* the nurse reflects on the model and provides nursing culture care, teaching, counseling and referral to assist the person to eliminate or reduce modifiable risk factors or threatening forces, preserve defensive forces, and promote the person's ability to adapt using balancing forces to maintain balance. The nurse promotes access to supportive forces and facilitates the person's efforts to integrate self, generic and professional care to assist the person to protect, support, maintain and restore maintain health, wellbeing and function. The nurse uses cultural humility and cultural knowledge, competencies and skills and integrates participants' cultural values of *simpatia, personalismo, confianza, respeto and familismo* in the provision of culturally

acceptable *Nursing Culture Care*. The nurse uses the nursing process and nursing modes in the provision of *Nursing Culture Care*.

Orientational Theory

The purpose of study is to describe, explain, and interpret perspectives, perceptions, meanings, symbols, and lifeways to explicate the culture care worldview about Diabetes Mellitus for Mexican American participants. The interpretation of the three study themes for discussion and recommendations was guided by the orientational definition and review of the literature for universalities and diversities in findings. According to Leininger (1990) "transcultural nursing is a formal area of study and practice focused on a comparative study of human cultures with respect to discovering universalities (similarities) and diversities (differences) as related to nursing phenomena of care (caring), health (wellness), or illness patterns within a cultural context and with focus on cultural values, beliefs, and lifeways of people and institutions, and using this knowledge to provide culture-specific, or universal care practices" (p. 536).

By implementing the tenets of transcultural nursing the researcher or nurse can identify, document, and interpret the emic or local perspectives related to human care, health and other related nursing phenomena. This emic, or in this study the participant's viewpoint or truths, may be contrasted with the etic or more universal professional views held by nurses and other professionals. Comparing these two knowledge domains remains are central to the discipline and provided guidance in the discovery of the themes related to this study (Leininger 1988; 1990c).

The Sunrise Model (see Figure 1) provided guidance for constructing the semi-structured questionnaire and orienting the interviewing techniques used to facilitate the

participants to tell their stories. Reflecting on the model with the analysis of the data provided assistance in moving through each phase of data analysis for the ethnonursing method and acted as an enabler as explicated by Leininger. The author found that the discussion naturally fell into the dimensions identified by Leininger and that in turn these dimension influenced the culture care worldview of the participants supporting the use of the model as a facilitator and guide in interpretation of data to draw meaning in explicating the worldview of these participants.

The theory and model includes three modes in which transcultural nursing decisions are made and nurses take action: cultural care preservation and/or maintenance, cultural care accommodation and/or negotiation, and cultural care restructuring and/or repatterning (Cohen, 1991; Leininger, 1997a). Leininger (1997a) stated that the creative integration of these three modes of major care actions would provide care that was tailored to fit "worldview, social structure factors, and other cultural dimensions, valued by participants in the discovery process" (p. 39). Culturally congruent care would result when the three modes were developed with care recipients. These modes differ greatly from the nursing actions of the present, which primarily focus on the medical model.

Culture Care Preservation and/or Maintenance

Using cultural care preservation and/or maintenance the transcultural nurse for these study participants would support self-care, generic care, emic values, beliefs and practices held by participants that emerged in the themes that cause no harm or interfere with adherence to the appropriate plan of care to manage DM. Emic beliefs associated with natural living, moderation, maintaining balance and preservation of defenses, self-care and making healthy lifestyle choices in regards to nutrition, exercise, and weight

management would be preserved. The nurse would support that stress reduction, tranquility and calm are associated with health promotion.

The nurse would encourage life style choices that encourage natural foods, moderate intake of carbohydrates and fats, and minimize animal proteins. The nurse would encourage vegetables, fruits and grains and promote drinking water over drinks high in sugar such as sodas or concentrated fruit juices, coffees or teas. A discussion on pros and cons of using organic foods would be in alignment with these participants' views. Since there is no harm associated with consuming *nopal* in the diet the nurse would support use of this cactus in its many ways of preparation except cautioning against excessive use of fried foods. The nurse would promote an active lifestyle and explore acceptable forms of exercise with participants. The nurse would provide information on range of acceptable weights for height, age and gender and promote a healthy weight and BMI.

Professional Care values of these participants should be incorporated in culture care when providing healthcare to Mexican Americans. The nurse would be aware of culturally acceptable ways to show respect or *respeto*. The person may prefer to be addressed by their last name or by the first name preceded by *Don* or *Dona,* the Spanish equivalent for sir or madam. Care must be taken when conveying respect if the nurse is younger than the person. The nurse would ask how the person would like to be addressed or address the nurse. The person may be uncomfortable in addressing the nurse by the first name or in informal ways as is more current in the US.

The nurse would provide care with warmth and compassion in order to promote *simpatia* and making small talk and inquire about the person's family before rushing into

the reason for seeking healthcare or completing the history or exam. The cultural expectation that care should be provided in an unhurried manner may require that additional time be set for health care visits especially when the therapeutic relationship is being initially developed. This may run counter to productivity and efficiency expectations in the US healthcare system that limit the amount of time that providers can allot to each person seeking care.

One cultural expectation is that the nurse would provide personal care or *personalismo*. The nurse would be aware and use no-verbal expressions to convey personal care such as listening carefully without rushing the person, maintaining eye contact, smiling, gently touching the patient in culturally appropriately ways such as shaking hands or touching or patting the shoulder or even hugging the person once the relationship has been established.

The nurse would communicate awareness that major health decisions may require consultation and approval by the whole family and not just the individual and promote family support or *familismo*. Persons seeking care may be accompanied by family members and request that the family member be present for the entire health visit. The person may also request that all personal medical information must be conveyed to all members of the family. The healthcare agency may require that release of medical information forms be completed in order to release the institution from legal prosecution related to US federal guidelines for maintain patient medical information protection.

The nurse would be aware that in contrast to other groups that for these participants, fatalismo or fatalism, is not a common cultural value. These persons would be more amenable to health promotion teaching, screening, risk reduction education and

strategies for providing health self-care. Because health is so highly valued these participants are likely to amenable to teaching and counseling that would promote healthy lifestyles and choices. The nurse would be aware that the person would view health as a personal responsibility rather than attributing poor health to fate or punishment by God. Since teaching and counseling are viewed as culturally appropriate demonstration of professional care the health plan should include appropriate strategies for teaching and counseling.

The nurse would make every effort to promote *confianza* or trust by integrating the commonly held Hispanic values in professional care. In turn the nurse would have awareness that the person may not be forthcoming with all health information needed until the nurse-patient relationship has been well established over time. As *confianza* develops the person may be more comfortable in revealing sensitive information that the person would reveal only to a trusted healthcare professional.

Culture Care Adaptation and/or Negotiation

An example of the nurse using culture care adaptation and/or negotiation is recognizing that strong emotions are perceived as stressful and illness inducing. The nurse would support that participants moderate their responses to situations that illicit strong emotions as would be congruent with emic beliefs and cause no harm to the person. The nurse could explain that scientific studies have not supported or have yet to support that strong emotions are directly associated with the onset of diabetes but that stress is a factor associated with increases in blood sugar due to hormonal influences on carbohydrate metabolism. If certain emotions responses are perceived as stressful they could be avoided without harm.

The nurse would listen patiently and with respect when participants express emic beliefs and practices that are not associated with harm or conflict with the plan of care even when they differ from etic beliefs. When asked about *susto* causing DM the nurse could respectfully assert that there is no scientific evidence that links this particular emotion to DM but that many participants have strong beliefs that *susto* is a cause of DM and that persons should feel open to discuss these beliefs with healthcare providers without fear of ridicule.

The nurse would also listen with respect when persons share stories on how all forms of strong emotions could be harmful to health and support the person's attempt to moderate their emotional responses to situations. This in turn would promote *confianza* and develop a trusting nurse/patient relationship based on mutual respect and care. Every effort should be made to avoid *susto* or frightening the patient when conveying information or managing a situation or crisis. The nurse would take a prudent and careful approach when giving bad news or conveying information that could be interpreted as promoting a strong emotional response. The information would be given gradually and with a preamble preparing the patient that what the nurse is preparing to say may be upsetting instead of directly or in a confrontational manner. The nurse would advocate for the person by making others in the healthcare team aware of how situations and information should be presented in order to avoid a strong emotional response or frightening the person and eliciting *susto*. The nurse would also teach others that a moderated response by patients or lack of enthusiasm for care provision or unemotional responses to bad news does not imply lack of interest or apathy. The nurse would explain that this is an intentional strategy used by the person to moderate emotional responses

and avoid *susto* to promote or maintain health. The nurse uses teaching, counseling and referral to promote adaptation and/or negotiation.

Culture Care Restructuring and/or Repatterning

One area that may support the use of culture care restructuring and/or repatterning is in recognizing, giving voice to and encouraging participants to express their concerns and fears over using medications that are seen as unnatural especially insulin. Using teaching and counseling techniques the nurse could explain that insulin is a hormone that is naturally produced by the person's body and substitutes for the absent reduced amounts that the person's pancreas produces and is the contributor to rising blood sugar and detrimental effects of DM on the organism. The nurse could provide best practice evidence that supports that early use of insulin and maintaining euglycemia delays the onset of severe complications of DM such as blindness, amputations and renal failure instead of promoting these complications. The nurse can explain that since insulin was used as a last resort by some persons in the past that severe complications were developing and that their manifestation at the time of insulin administration is coincidental rather than evidence that insulin caused the complications. Using all three modes of nursing care could strengthen the nurse /patient relationship and promote increased adherence by the person to the professional plan of care for DM.

At first view it would seem that for these participants emic and generic care influences would create a divergent worldview of diabetes from that of the etic or professional care perspective currently espoused by modern western healthcare. Yet, in spite of there being no firm consistent worldview of DM the perspective seems to be evolving closer towards what research and best practices for diabetes are currently

supporting.

One perspective that emerged from this study is that illness or DM or perhaps the risk for illness and DM lies within everyone and that this is influenced by certain non-modifiable risk factors such as ethnicity and genetic inheritance. However the individual is not a pawn without influence over the potential for developing DM but an active participant making day to day choices to maintain the organism in balance, protect body defenses and maintain homeostasis. This perspective on a dynamic health status based on balance is more consistent with the professional current worldview that views health as dynamic status rather than an absolute state. It also supports the concept of health as being more than the albescence of disease. This was confirmed by participants viewed that a person could be both diabetic and healthy for it is not the absence of disease that renders a person healthy but more the ability of the person to mitigate negative forces in order to preserve function and wellbeing in the face of threats from diseases.

The ability to remain healthy lies within the control of the person and choices that the person makes to mitigate and abet risk for illness. Illness is not the result of destiny or magico-religious forces that render the person helpless and at the whim of that which cannot be controlled. This is consistent with the view that lifestyle choices or modifiable risk factors determine whether a person develops DM or not. The current epidemic of DM across the world and just within the Mexican American population would support that even though certain groups have increased risk due to non-modifiable factors that all are at risk due to shifts in Western life choices that have changed the way people eat, exercise and respond to environmental stressors.

The paradigm that the organism struggles each day to maintain homeostasis in

spite of factors that threaten balance is consistent with the current professional worldview of health. These participants agreed that all persons have defenses against illness that must be preserved in order to reduce risk and maintain health. The belief that these defenses arise from immunity and other factors currently within the professional worldview was not clearly articulated by these participants, yet the belief that an unbalance of the organism threatens defenses and homeostasis is an idea that is consistent with modern professional views. For these participants the person struggles to preserve balance in order to protect defenses and ward off illness.

Many of the lifestyle choices often described by these participants as being under direct control of the person centered on the key modifiable factors espoused by professional care, that of promoting optimum nutrition, exercise and an active lifestyle and maintaining a healthy weight for the individual. Participants agreed with the current professional worldview that lifestyle choices that promote high caloric diets that include many animal products and are highly processed and preserved are unhealthy. Even though the participants were confused as to whether a high intake carbohydrates or fats were primarily to blame for causing diabetes this is consistent with evolving best practices that diets high in carbohydrates and fats are contributors to the epidemic of DM.

The belief that a natural lifestyle was balance and health promoting was explicated by participants as meaning optimum nutrition, activity and weight and reduction of stressors. This too is consistent with current professional views that inheritance only plays one part in expression of illness. The Pima indigent people on the Mexican side of the border that until recently espoused more traditional life ways associated with a diet made primarily of vegetables, fruits and grains, an active lifestyle

and an appropriate weight expressed a lower risk for developing DM in contrast to those persons of the same ethnic group that adhered to more western lifestyle choices across the border in the US. These finding lent support that in spite of great non modifiable risk such as ethnicity and genetics for this indigenous group, which suffers some of the highest incidence of DM in the world, that modifiable risk factors and lifestyle choices can mitigate these factors and reduce risk of DM expression.

Participants in this study were weary of highly processed and preserved foods and those prepared outside of the home and anything seen as artificial versus natural. Many agreed that these foods contained chemicals and hormones that were detrimental to health and contributed to the increased incidence of DM. Unhealthy eating and a sedentary lifestyle were linked with an increase in obesity for these participants as is the current professional worldview.

It was described by several participants that changes in occupation from agriculture towards service or manufacturing and improved transportation were associated with decreased activity and exercise and that this contributed to increases in weight gain and obesity. Living in a village or town was seen as preserving a more natural lifestyle associated with growing and tending to your own food, staying active in laboring in the fields and walking as a primary form of transportation. Modern Mexicans that rode to work and sat for hours were described as too tired to exercise once their work day was over. This too was described as a negative factor to life in the US where people worked long hours to make a living, yet work provided little benefits associated with exercise since most work was sedentary.

The suspicion towards unnatural substances and chemicals also extended to

medications for some of these participants. A preference for seeking the natural first in the form of home remedies, herbs and nutrients and leaving medication as a last resort, when natural healing was not successful, was described by many participants. However the majority of participants agreed that persons with DM needed to be under the care of health professionals and should adhere to professional treatments including medications if needed. Concerns over insulin being dangerous were linked to the belief that insulin is an unnatural chemical. None of the participants described insulin as being a hormone that replicated the natural effects of the body in the metabolism of sugar. Perhaps including teaching of insulin as a natural substance would change the negative perceptions associated with it.

Both the professional worldview and the participants' worldview were in accord when it came to the effects of stress on health. Both agree that persons have the ability to prevent, mitigate and reduce stress to some extent and that this would reduce the risk for illness and promote health. The effects of stress on hormones such as cortisol and the catecholamine having an anti- insulin effect leading to hyperglycemia in healthy individuals is well documented. Stress was seen by participants as being one of the major forces leading to the unbalance of the system and homeostasis. Where participants differ is in the effects of strong emotions as a precipitating factor that causes DM. Emic believes of participants supported the view that an event that precipitated a strong emotional response especially fright or susto was a leading trigger for DM. For these participants strong emotions were seen as causing stress for the system and disturbing balance.

Participants advocated for promoting a life style that preserved tranquility and

calm and avoidance of worries that could disturb peace of mind. Worrying about things one has little control of was described as a major source of stress. The response to events is more significant than the event itself. Responding to life events by controlling and moderating emotions was seen a health promoting. Responding with a strong emotion both negative such as strong anger or *coraje* and strong happiness or *alegria* was seen as both detrimental in creating unbalance. Participants advised family and friends not to respond to events in strong ways for fear that it may bring on illness. This was seen as the final straw or breaking point that could alter defenses unbalance the system and homeostasis. Encouraging others to try to calm themselves, preserve tranquility and not get emotionally agitated was discussed as common advice for promoting health. Persons must try to make life choices that would mitigate environmental stressors and preserve an environment of tranquility and peace.

Familismo or seeking family and spiritual support were seen as major sources of strength and ways to mitigate the effects of environmental stressors. Family and faith helped to establish the optimum desired environment of tranquility and peace. In turn participants protected family members from worries that could disturb tranquility, promote worry or task way peace of mind. The role of emotions on health reflects a holistic perspective of health in which health is not only physical wellness but a holistic balance of the organism that includes mental health. This mind/body connection is an evolving paradigm of professional care. As well as interventions that reduce stress are being seen as promoting health. For these participants persons may not always avoid a frightening situation or event but they could control how they responded to it. Thus responding with extreme fright or susto may lead to illness while responding with

emotional control would promote wellness. Whether *susto* promoted illness or not could be influenced by the extent of the response or the health state of risk that the person was in when the susto occurred; those persons that were already unwell, fragile and at risk for unbalance could be tipped towards illness if they experienced a susto while those that were less at risk could possibly endure it without negative effects. Since a person was never sure of the effects that susto or a strong emotional response may have on health it was best to avoid a strong emotional response whenever possible just to be on the safe side.

In summary, for these participants maintaining and promoting health involved a series of choices or lifestyles that the person could undertake in order to promote health, wellbeing and function. Traditional, natural lifeways associated with self-care, generic values, beliefs and practices were associated with moderation, balance and healthy lifestyles. Changes that are a result of modernization and development of México leading to a shift from traditional lifeways were viewed as less natural and excessive and often attributed to the rise in prevalence of illness. For these participants, healthy choices revolved around natural living, good nutrition, adequate exercise, maintaining a healthy weight and promoting a calm, tranquil environment free of worry and stress. When life situations, including those beyond a person's control led to problems and stress, responding to these with moderation and balance and avoidance of strong emotions were seen as promoting the body's defenses against illness.

Mitigation of stressors and adaptation to life in the US could be enhanced through family support and advice and relying on faith and religion and culture to promote coping and health. Communication and companionship, promotion of tranquility and peace of

mind and restoration of balance were described as functions within the family associated with wellbeing. Participants saw God as a benevolent presence that helps and protects and relied on faith and religion to promote health, wellbeing and function. Illness was not seen as punishment from God for sin or wrong doing or caused by fate by a single participant. In contrast participants relied on their faith to help them cope with stressors and adapting to life in the US and took measures to promote and maintain their health.

Nursing Implications for Theory Development

The findings of this study add support to Leininger's theory of Transcultural Nursing and the use of the Sunrise model as an enabler and model for theoretical understanding, interpretation and prediction of culture care phenomena. As depicted in the Sunrise Model, Cultural and Social Structure Dimensions exerted influence on the culture care Worldview of these participants. The dimensions include: technological factors, religious and philosophical factors, kinship and social factors, cultural values lifeways, political and legal factors, economic factors, educational factors; The factors were reflected in the categories that emerged from the data. The factors took into consideration environmental context, language and ethnicity of the participants. The model indicated that this tier, which is depicted as a half circle or sun rising half way at the isthmus of the sky, in turn influenced care expressions, patterns and practices and holistic health (wellbeing). Below the isthmus of the model with the sun rising above it lie the individuals, families, groups, communities, and institutions in diverse health systems. The model depicted how the whole of these influences represented in the sunrise in turn influence concentric circles of generic and folk system(s), professional system(s) and how these two care entities impact nursing in the middle of the two. Leininger

asserted that the model, portrayed as a rising sun, provides structure for theory generation at the micro, macro and middle levels. It includes two phases of generating research knowledge and focuses on culture care and the study of universality and diversity of aims of care (Cohen, 1991; Cohen, 1992; Leininger, 1988). The themes of this study support that participants integrated both generic and professional care along with self-care and that this in turn impacted nursing and the provision of culturally appropriate nursing care. Reflecting on the Sunrise model and the literature, findings and themes of the study the author created *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model* for further theoretical development.

The themes and finding supported identified dominant or emic culture care constructs that were found to be universals or commonalities among diverse cultures studied. Leininger (1998) asserted that the most universal of these constructs were identified and ranked according to relevance and in order of priority: respect for or about; concern for or about; attention to/with anticipation of; helping, assistive and facilitative acts; active listening; giving presence; understanding their cultural beliefs, values, lifeways; being connected to or relatedness; protection of or for; touching; providing comfort measures and showing filial love. These culturally constituted constructs were all found to be embedded in the social structure of over 40% of cultures examined as were relevant for these participants. These constructs needed to be congruent with the nurse's etic perspective to avoid cultural clashes, conflicts and unfavorable nursing outcomes. According to Leininger one of the major focuses of nursing care should be how to preserve and maintain respect for families (Leininger 1998). The author concurs that providing nursing care based on caring that is congruent with the worldview of the person

is likely to increase the effectiveness of nursing actions for health promotion and cure (Leininger, 1996). Further research using the pictorial model within the context of the orientational theory can provide guidance for further theory development and transference of findings.

Nursing Implications for Practice and Education

The finding of this study has provided additional insights into the culture care worldview of Mexican American participants about DM. Nurses providing care to these participants can utilize *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model* as a platform for reflection from which to understand universalities and diversities from the etic professional worldview of DM in order provide culturally appropriate and congruent culture care. The model has the potential for increasing cultural humility and cultural knowledge, competencies and skills which are essential components of transcultural nursing care. Nurses in practice and education can become increasingly aware of how a person's worldview is impacted by culture and how in turn this influences the provision of nursing culture care. Nurses can determine universalities and diversities from the model which can impact teaching, counseling and referral and may be incorporated in the plan of care to provide transcultural nursing care and improve health outcomes.

Nurses may be surprised to discover when reflecting on the model that there are many universalities in Mexican American participants' worldview when contrasted with the modern etic professional paradigm on the multifactorial causation of DM type 2. In the Western professional paradigm, both genetic and environmental factors contribute to the development of DM; this view is consistent with participants' concept of *Threatening*

Forces that attempt to throw the person off balance. The person is viewed as no able to control non-modifiable factors like genetic factors or certain environmental factors such as exposure to pollutants, toxins and pathogens. The person can impact modifiable environmental factors and make healthy choices in regards to choosing a natural living, proper nutrition, engaging in an active lifestyle, and maintaining a healthy weight.

Nurses in practice and education using the model would recognize that two of the Balancing Forces depicted in the model that promote adaptation to stressors and negate, ameliorate or mitigate the effects of threatening forces are also consistent with current emic professional worldview These include stress management, and choosing healthy lifestyles of proper nutrition, engaging in an active lifestyle and exercise and maintaining a healthy weight, both consistent with professional prescriptions for DM care. Indeed teaching, counseling and referral of patients to assist them to make life changing choices by adhering to healthy lifestyles that stress moderation and reduction of stress have become cornerstones in the management of DM in healthcare today and is supported by the model.

The paradigm of balance and adaptation for maintenance of homeostasis has also been a consistent thread in the modern Western understanding of health and is also a key paradigm of Eastern worldviews. Its prevalence and inclusion in most curriculums could have had an impact on these participants' worldview as well. The idea of moderation as described in the etic professional worldview is embedded in the *Balancing Forces* concept of natural living. Participants viewed modern excesses and lack of moderation and natural living as contributors to the prevalence of DM. Natural living is an emerging paradigm of health in Western worldviews as more Americans strive for a lifestyle that

promotes whole foods, and locally grown and organic foods. Included in this paradigm are concepts of mindfulness, stress reduction, and holistic alternative and complimentary strategies and modalities and medicine. Perhaps emic views described by these participants are examples of contributors to the changing best practices and development and refinement of this emerging etic paradigm.

The Western worldview also stresses the role of defenses and immunity in protecting the person from illness which is consistent with some of the views described by participants and embedded in the concept of Defensive Forces depicted in the model.

Nurses would have additional insights into the culture care needs of these participants by also recognizing the diversities inherent in these Mexican American participants' worldview. Participants linked maintaining defenses by balancing certain forces like natural living, tranquility, stress management, and healthy lifestyles. For these participants' the view of defenses encompassed more than just constitution or immune response that are more internal, but also included achieving and maintaining an optimum environment for growth and development and the person's ability to neutralize or mitigate threatening forces. The person's constitution is viewed more holistically and incorporates the view that the strength of the person to fight threats can be impacted by factors such age, perceptions, coping mechanism, prior experiences and resilience.

One of the diversities evident in the model is the key role of strong emotions as threatening forces to maintaining homeostasis. These participants made every effort to avoid responding strongly to life situations and communicated this cultural expectation to future generations. A *Threatening Force* that differs from the etic professional worldview was that of *Strong emotions*. Moderating responses to life stressors, both good and bad,

were seen as key to maintaining defenses against this eminent threat to balance and health status. *Susto* or a strong fear response was especially associated as a precursor to diabetes if it penetrated the Defensive Forces and unbalanced the person changing health status. Other strong emotions such as *alegria* or intense joy, *coraje* or anger and *gusto* or strong satisfaction were also viewed as threatening forces. Nurses can show respect and accommodate the common view that strong emotions such as *susto*, *alegria*, *coraje*, *gusto* are threats to altering health status while undertaking teaching, counseling and referrals for Mexican Americans.

Nurses using the model would also note that a Balancing Force that was of great importance for these participants was tranquility. Tranquility as a state differs and is more than the absence of stress much like moderating strong emotions is different and more than stress management for these participants. Modern living is seen as robbing persons of tranquility while promoting a culture of work centrism, career development and materialism as priorities over tranquility. Tranquility is associated with a calm, safe environment, having peace of mind and lack of worry or preoccupation seen as essential to supporting defenses and promoting health, wellbeing and function.

Nurses may also have additional insight to culture care of these participants by seeing how self-care, generic care and professional care were integrated to preserve and restore homeostasis. This worldview makes these participants especially amenable to nursing culture care. Teaching, counseling and referral of patients to assist them to make life changing choices by adhering to healthy lifestyles that stress moderation have become cornerstones in the management of DM in healthcare today and are supported by the model.

To promote adherence to the medical or health plan in provision of culturally congruent and appropriate nursing culture care, nurses could integrate the common Hispanic values of *personalismo, simpatia, respeto, confianza* and *familismo* into the plan of care. Nurses would also have increased understanding as to how these participants view family support or *familismo*, faith and religion as supporting forces that assist in coping and managing illness. The high value placed on family and sacred forces and culture may be in contrast to the prevalent American cultural value of individualism and increasing emphasis of secularism and standardization in healthcare. Family, faith, religion and culture were all seen as supportive forces that uphold the person and assist the person to maintain balance and health.

Participants place high value in professional care and nursing care and seek it readily when resources are available. Nurses can be aware that participants don't incorporate *fatalismo* as a value and do not view themselves as pawns in the hands of fate or God; this makes them respond to management strategies that aim at lifestyle modifications around nutrition, exercise and weight management. However, nurses also can increase their awareness that medications and insulin may be viewed with fear and trepidation as they are not seen as natural choices that may harm more than help. The nurse may use strategies aimed at negotiation or repatterning by clarifying the beneficial effects of insulin as a hormone that already occurs naturally in the body and is not an artificial drug but an enhancement of the organism's adaptation to glucose levels.

Perhaps other modes of DM management, lifestyle modification and oral medications should be first line treatments used by the healthcare team with these participants whenever possible before insulin is prescribed in view of the common fear of

insulin and concerns with treatment plan adherence. If insulin is include in the plan of care and health outcomes are not as expected the nurse should use *confianza* or trust to investigate if the person is taking the insulin as prescribed as it may be omitted in fear and not disclosed to the healthcare team. Nurses can support natural healing practices that are viewed as promoting health and balance such as the use of the *Nopal* cactus and *Savila* or aloe since are no known detrimental effects of these foods or herbals and supporting their use could promote *confianza* in the nurse as the person feels validated in his or her efforts at self and generic care.

Nurse may find it interesting that these participants see this daily struggle for balance as a part of life and being human and not the effect of fate or cause for despair. To struggle for balance is a natural state and expected for everyone not an aberration. Nurses reflecting on the findings of this study and *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model* may see relevance or transferability to culture care of other Mexican Americans with similar participants and in other like contexts or settings. The replication of findings similar to other studies on the effects of susto, use of folk remedies such as *nopal* and fears of insulin may have transferability to culture care of Mexican Americans in regards to DM in multiple settings and with different similar participants.

This study should also give caution to those that would assume that common cultural values associated with most Hispanic groups described in professional literature are always transferable and applicable to all Hispanics in all contexts. This assumption would have incorrectly led nurses to assume that the traditional beliefs associated with *fatalsimo* would be evident in these participants while the findings in this study support

that *fatalismo* associated with effects of fate and punishment was not a commonly held value by these participants. Nurses may have been reluctant to engage persons in DM healthcare management that involves lifestyle modification through teaching, counseling and referrals. This strategy may seem superfluous if the nurse believed that person's would be unlikely to adhere to professional recommendations since he/she believed that fate or God determines health outcomes and that the person or health professionals have little control over health.

A current trend in the management of DM is the development of strategies based on clinical pathways or protocols. Inherent in these protocols is patient education, counseling and referrals to healthcare specialists such as nutritionist, and exercise physiologists. Many providers have developed modules or curriculums that address lifestyle modification as a major component stressing, nutrition, exercise and weigh management and stress reduction. Findings from this study could be incorporated in developing a culturally congruent curriculum to target the Mexican American population at the free clinic.

Findings from this study can also enhance nursing curriculum in the area of transcultural nursing. Faculty could incorporate the model in teaching concepts of diversity and culture care as an example of an ethnonursing study that explicates the world view of a Mexican American cultural group from an emic perspective. Nursing students can gain additional knowledge on the value of examining the effects of culture and generic care on nursing care and culture care. Contrasting professional worldviews with those of specific cultural groups can increase critical thinking and a global perspective promoting the provision of culturally competent care. The recent focus on

best practices in nursing curriculums emphasize teaching quantitative methods, numerical evidence and a received scientific approach in undergraduate programs. Evidence based care incorporates using evidence in context incorporating the person's values, beliefs and practices. *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model* can provide an additional example on how qualitative methods and studies can also add to nursing science and improve nurse practice and patient health outcomes.

Nursing Implications for Research and Policy

The increasing prevalence of DM in Mexican Americans and the growing threat of DM as a worldwide health problem made this a very relevant area of research for nurses. Increasing adherence to the medical plan of care through improved provision of transcultural care can have great implications in improving patient outcomes, nurse practice and reducing healthcare costs. Future researchers interested in increasing understanding of Mexican Americans regarding DM can increase understanding of the worldview of Mexican Americans by conducting additional ethnonursing studies with different participants and settings. These studies would help support or negate elements of *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model* and its transferability outside this study and theory development.

Additional research is needed to further explicate the concept of *Defensive Forces* and all of the elements that are seen as defensive as well as what all constitutes the optimum environment for growth and development. Additional research may also confirm or have additional insights into the components of threatening forces, balancing

forces and supportive forces. An interesting finding that requires further explication is the role of strong emotions as a threatening forces especially susto. Future research could also focus on identifying strategies that persons use to moderate emotions and prevent strong emotions and how this is communicated to future generations. The impact of emotions on health was an interesting finding of this study and can have implications for future research.

The links between natural living, moderation, tranquility, avoidance of strong emotions and stress management are constructs that need further explication. Further study is needed to increase understanding of how participants see modifiable and non-modifiable environmental factors and specific strategies used to mitigate those factors seen as modifiable.

An area for further study is to further explicate how participants use supportive forces to promote wholeness, coping and health. Nurses would need more specific examples as to how these forces can be enhanced through nursing intervention.

One other area that is of interest is perhaps the expansion of the value of *fatalismo* to be seen as more abstract than the common traditional values of destiny or fate having all control over the person and or illness as punishment from God for sin or wrongdoing or failure to follow God's commandments. The construct that all harbor DM and that its manifestation is dependent on the person's ability to effectively struggle for balance does imply some degree of inevitability, which is inherent in the abstract construct of *fatalism;* that is to say that the control of a person's health is not entirely all in his/her hands but impacted by outside forces. Perhaps phrasing the interview questions in a different manner might elicit additional insight on how these participants view this predestination

of this struggle as natural and inevitable even though the person does have some control over its outcome. Viewed in this way *fatalismo* may be pertinent to these participants but in an expansion or different interpretation of the construct.

The components of culture care also need refining. Additional research is needed with male participants to see if a difference exists in worldview between genders. There was not enough evidence in this study to support major gender differences in worldview and this would be an area for further study. The effects of *Machismo,* a prevalent cultural value documented for Mexican Americans, on the perceptions of participants were not able to be gauged for this study and would need further explication. It would also be of interest to note if any demographic factors influence worldview such as education or acculturation.

Researchers using quantitative methods could explore if there are differences in healthcare outcomes when culture care is provided versus traditional professional care. The effects of a curriculum and management plan based on *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model,* quantitative outcomes such as HgA1C, dyslipidemia, weight and blood pressure would add to best practices for the management of DM. Other qualitative methods could also be used to further explicate this phenomena and DOI such as ethnography, participant research, phenomenology and hermeneutics.

Organizations, agencies and healthcare providers can use the findings of this study to reflect on policies, processes and strategies used to care for Mexican Americans with DM. This study supports the current healthcare trend towards celebrating diversity and providing culturally congruent care. Medical interpreters and translators should be

provided by healthcare providers to assure that communication with persons with limited English proficiency is accurate and appropriate. The common Hispanic cultural values of *simpatia, personalismo, confianza, respeto* and *familismo* should be part of the management plan for DM.

Study findings could be of particular interest to the Charlotte Community Health Clinic (CCHS), the setting for this ethnonursing study. The free clinic's mission is: *To provide acute, episodic and chronic disease medical care to uninsured, low-income residents of Mecklenburg County who lack access to care. This service is provided through a culturally diverse, volunteer-based organization with emphasis on education, training and community outreach* (http://charlottecommunityhealthclinic.org/aboutus/ retrieved 6/26/13). Presenting study finding and the pictorial explanatory model to clinic administrators, staff and volunteer may impact in the provision of culturally congruent care as it increases understanding of Mexican American participants that are clients of the clinic. Reflection on study findings and the model may have an impact on clinic policies and processes when providing care to Mexican American persons with DM and improve healthcare outcomes for the clinic and its clients. The study also supports the clinic's use of medical interpreters and translators; these should be provided by healthcare providers to assure that communication with persons with limited English proficiency is accurate and appropriate. The common Hispanic cultural values of *simpatia, personalismo, confianza, respeto* and *familismo* have been validated by this study and should be incorporated by providers in the health management plan for DM.

Research Recommendations

This study could be replicated with different participants in different settings to compare the findings to this study. Replication of research is one way to validate the transferability of study findings and the pictorial model as its applicability and value in the nursing culture care of Mexican Americans outside of study participants and setting. Use of other qualitative research methodology would also give a different perspective of the perceived view of Mexican Americans about DM. It would also be of interest and value to replicate the study with Mexican American participants to see if there is a difference in worldview of if elements of the model would differ or be supported. Other research questions could be developed as a result of gaps of knowledge from this study. Research questions needing further explication include: What are the specific components of self-care, generic care and professional care and what strategies are perceived as beneficial under each area?; What are emic or folk practices that are seen as essential for the generic care of DM such as the use of herbs and foods; and Are there differences in the worldview of Mexican Americans based on demographic factors such as gender, age and acculturation?

Study Limitations

These were several limitations inherent in this study. One limitation involved the inability to conduct repeated interviews with participants to increase the confirmation of data. The transient nature of persons coming to the clinic, lack of resources for a permanent address, telephone and transportation, and the climate of fear surrounding undocumented persons prevented impacted the ability to conduct repeated interviews. Many of the participants were at the clinic for health visits for other problems other than

DM or as support for their families and the processed of the clinic and appointments sometimes interfered with the person's ability to devote a long time to the interviews. The researcher was sometimes frustrated when participants were called away for their appointments or had to leave with family members as the depth of the interview was in progress resulting in truncation of the interview.

Recruiting participants that met the study criteria was a limitation as so many Mexican Americans at the clinic had DM because of its prevalence of this health problem for this population. Persons with DM were excluded in order to arrive at emic believes since professional care for DM could have altered these believes over time as persons managed their disease. The sample of participants was not diverse and included only two men. Research with more diverse samples of participants may reveal differences due to demographic variables such as gender, age and acculturation.

Analysis of the data using the Sunrise Model revealed that there were some areas in which more data would have increased understanding of the DOI. Future researchers using the semi-structured questionnaire should assure that all culture and social structure dimensions spokes of the model are sufficiently explored and add additional questions in regards to education. Nurses must use caution when applying study findings and the explanatory model to different or like participants. Transferability of findings and use of the model may have relevance with similar participants and settings as those of the study.

Conclusion

This study aimed to increase understanding of the worldview of Mexican American participants about DM and contrast with current finding in the research literature. Leininger's theory of Culture Care Diversity and Universality or Culture Care

to facilitate a researcher's aim to discover and explicate meaning, expressions, and patterns of culture care from different cultures was used as the orientational framework for the study and as a guide for the semi-structured interview tool.

The researcher obtained approval and followed guidelines for protection of human subjects. Thirty key informant participants were interviewed at a free clinic in a large Southern city in the US and the data was coded, organized and analyzed using the Atlas TI 6.2 data management software and Leininger's ethnonursing method. The four phases of data analysis yielded thirteen categories, five patterns and three themes. Reflection and integration of the literature, findings and themes led the author to develop *The Struggle for Balance: Culture Care Worldview of Mexican Americans about Diabetes Mellitus Pictorial Model.* The synopsis of model using the metaparadigms of nursing is that the *person* seeks *nursing* culture care to assist in the management of *environmental* forces: threatening, defensive, balancing and supportive forces to maintain balance and *health* to eliminate or reduce risk for DM and manage DM once it develops.

The author discussed appropriate *Nursing Culture Care* using Leininger's three nursing modes and proposed implications for nursing practice, research and policy. Additional research is needed to confirm and support research findings and analyze the transferability of the model to other participants and settings. The author is a proponent of using other qualitative and quantitative methods to further explicate the DOI. The author advocates reflecting on the model when providing Nursing Culture Care to Mexican Americans with DM in order to provide culturally congruent and appropriate care and improve health outcomes for this vulnerable population at risk for developing Diabetes Mellitus and the devastating complications of this epidemic health problem.

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Appendix A

DUQUESNE UNIVERSITY
600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

TITLE: Mexican-American Cultural and Care Beliefs About Diabetes Mellitus: An Ethnonursing Study

INVESTIGATOR: Jesus A. Hernandez APRN, BC
2224 Springdale Ave.
Charlotte, NC 28203-5655
Home (704) 358-3996
Work (704) 688-2882

ADVISOR: Rick Zoucha, PhD, APRN, BC, CTN
Associate Professor
School of Nursing
412-396-4565

SUPPORT: None

You are being asked to participate in a research study. The study seeks to investigate Mexican-American cultural and care beliefs about diabetes mellitus. You will be asked to meet with me to answer questions by completing a questionnaire and be interviewed. Meetings will be at your convenience in a location of your choice. You may answer only questions that you are comfortable answering. The interviews will be taped and transcribed. You may be asked to be interviewed 1-3 times. Each interview may last between 1-3 hours. These are the only requests that I will make of you.

BENEFITS: There are no risks to you expected for participating in this study. Benefits to you include providing the opportunity for you to state your cultural and care beliefs about diabetes. Stating these beliefs may lead to your greater personal understanding. Your participation will increase scientific understanding of Mexican-American beliefs about diabetes.

COMPENSATION: You will not be paid for participating in this study. However, participation in the project will not cost you anything.

CONFINTIALITY: Your name will never appear on any questionnaire or in the data analysis. All written materials and consent forms will be stored in a locked file in the researcher's home. Your responses to questions may appear as quotes after any identification that refers to you or anyone else you refer to has been removed. Actual word for word descriptions of beliefs may be identified with a created name and not the participant's name. These responses will be included in the findings section should I present the study results at professional conferences or publish the study in professional publications. All materials will be destroyed at the end of the study.

TO WITHDRAW: You don't have to participate in this study. You are free to stop your participation and withdraw your consent to participate at any time.

SUMMARY OF RESULTS: If you ask, a summary of the results of this study will be supplied to you at no cost.

CONSENT: I have read the above statements and understand what is being asked of me. I also understand that my participation is voluntary. I am also free to withdraw my consent at any time, for any reason. On these terms, I certify that I am willing to participate in this research study.

I understand that should I have any further questions about my participation in this study, I may call Dr. Paul Richer, Chair of the Duquesne University Institutional Review Board at 412-396-6326 or Dr. Rick Zoucha at 412-396-6545 or Jesus Hernandez at 704-688-2882. I will be given an opportunity to discuss, in confidence, any questions with any member of the Institutional Review Board.

_____ _____

Signature Date

_____ _____

Signature Date

Appendix B

DUQUESNE UNIVERSITY
AVENIDA DE FORBES 600 PITTSBURGH, PA 15282

CONSENTIMIENTO A PARTICIPAR EN UN ESTUDIO DE LA INVESTIGACIÓN

TÍTULO: Creencias culturales y del cuidado mexicano-americano sobre la Diabetes Mellitus: Un estudio de Ethnoenfermeria

INVESTIGADOR: Jesús A. Hernandez APRN, A.C.
Avenida de 2224 Springdale
Charlotte, NC 28203-5655
(704) 358-3996 casero
Trabajo (704) 688-2882

CONSEJERO: Rick Zoucha PhD, APRN, A.C., CTN
Profesor de asociado
Escuela del oficio de enfermería
412-396-4565

AYUDA: Nada

Le están pidiendo participar en un estudio de la investigación. El estudio intenta investigar las creencias culturales y del cuidado mexicana-americano sobre la diabetes mellitus. Se le pedirá reunirse con migo para contestar preguntas de un cuestionario y ser entrevistado. Las reuniones estarán en su conveniencia en una localización de su opción. Usted puede contestar solamente a las preguntas que usted está cómodo de contestar. Las entrevistas serán grabadas y transcritas. Se le pedirá entrevistarse de 1 a 3 veces. Cada entrevista puede durar entre 1-3 horas.

Éstas son las únicas peticiones que haré de usted.

VENTAJAS: No esperó que hay riesgos a usted para participar en este estudio. Las ventajas a usted incluyen el abastecimiento de la oportunidad para usted de indicar su creencias culturales y del cuidado sobre la diabetes. La indicación de estas creencias puede conducir a su mayor comprensión personal. Su participación aumentará la comprensión científica de las creencias mexicanas-americanas sobre la diabetes.

REMUNERACIÓN: Usted no será pagado para participar en este estudio. Sin embargo, la participación en el proyecto no le costará nada.

Su nombre nunca aparecerá en cualquier cuestionario o en el análisis de datos. Todos los materiales y formas escritas del consentimiento serán almacenados en un archivo bloqueado en el hogar del investigador. Sus respuestas aparecerán solamente en cuotas después que alguna identificación que se refiere a usted o cualquier otra persona que usted se refiere será removido. La palabras actuales de las descripciones de las creencias serán identificadas con un nombre creado y no el nombre del participante. La respuestas serán incluidas en la sección de resultados y si presento los resultados en conferencias profesionales o publico el estudio en revistas profesionales. Todos los materiales serán destruidos en la terminación del estudio de la investigación.

RETIRARSE: Usted no tiene que participar en este estudio. Usted está libre de parar su participación y retirar su consentimiento para participar en cualquier momento.

RESULTADOS: Si usted pide, un resumen de los resultados de este estudio le será proveído sin ningún costo.

CONSENTIMIENTO VOLUNTARIO: He leído las declaraciones antedichas y entiendo qué se está pidiendo de mí. También entiendo que mi participación es voluntaria. Estoy también libre de retirar mi consentimiento en cualquier momento, por cualquier razón. En estos términos, certifico que estoy dispuesto a participar en este estudio de la investigación.

Si tengo cualquier otras preguntas más sobre mi participación en este estudio, yo puedo llamar al Dr. Paul Richer, silla del comité examinador institucional de la Universidad de Duquesne (412-396-6326) o al Dr. Rick Zoucha (421-396-6545) o a Jesus Hernandez (704-688-2882). Me darán la oportunidad de discutir, en confianza, cualquier pregunta que tenga con cualquier miembro del comité de examen institucional.

Participante _____ Fecha_____

Investigador_____ Fecha_____

Appendix C

Semi-Structured Questionnaire: Generic and Professional Care of Mexican-Americans in the US

Open Inquiry Guide for Key and General Informants

ETHNODEMOGRAPHICS – Part I

Codename:		Religious affiliation:	
Interview date/location:		Years of education:	
Age:	Sex:	Occupation:	
Marital status:	Children:	Race:	Ethnicity:
Primary language:		Languages spoken:	
Place of birth:		Years in U.S.:	
City of Residence:		Residency status:	

OPEN-ENDED QUESTIONS

ENVIRONMENT

1.	Tell me about the place where you were born?
2.	Have you always lived in the United States? In North Carolina?
3.	What is your life like here? Are there any differences with where you lived before?
4.	Who lives with you in your household?
5.	Tell me about your neighborhood?
6.	Are you satisfied with the place where you live?

CULTURAL & SOCIAL STRUCTURE DIMENSIONS– Part I

Codename:

KINSHIP/SOCIAL FACTORS

1.	Do you have family living in this area?
2.	What brings you together with your family and friends? How often do you visit all of your family?
3.	Who is the decision-maker in your family? What are your responsibilities within the family?
4.	How do you spend a typical day and night?
5.	Who helps you when you are sick or need care?

CULTURAL/RELIGIOUS FACTORS

1.	Which cultural group do you identify yourself with?
2.	*Tell me about your customs and beliefs? What are things you think that are important for you to teach your children?*
3.	Which religious holidays do you observe and how do you celebrate them?
4.	How do the values and beliefs of the place where you live compare to your values and beliefs?
5.	Tell me about the care you have received from nurses?
6.	What care practices used by nurses do you see as important to you?
7.	What does religion mean to you? Do you have any religious practices that you use in your daily life?

CULTURAL & SOCIAL STRUCTURE DIMENSIONS- Part II

Codename:

TECHNOLOGICAL FACTORS

1.	Tell me about things in your life that make your life easier?
2.	Tell me about things you use in your house that may help you with your health?
3.	What technology do you use?
4.	What are your beliefs about special equipment used in this country to treat the sick?

ECONOMICAL/POLITICAL FACTORS

1.	What type of health insurance do you have? How is your healthcare paid for?
2.	How do you receive healthcare?
3.	Who is in charge of the budgeting in your family?
4.	Does your economic situation affect your ability to receive healthcare? If so how?
5.	How does the current political situation affect how you live?
6.	Has your health been affected by recent events and political changes?
7.	How do/can political or professional leaders demonstrate care/caring to you as an individual and to all Mexican-Americans in general?

CULTURAL & SOCIAL STRUCTURE DIMENSIONS- Part III

Codename:

HEALTH, ILLNESS, AND WELL-BEING

1.	What does the word health mean to you? Tell me about your own health?
2.	Describe activities you do to maintain good health. Include any culture based practices you do to improve or maintain your health, such as foods, medicine, or home remedies/alternative curing systems that you believe keep you healthy or improve your health?
3.	What does the word "illness" mean to you? Death?
4.	How do you stay well?
5.	Do you have any beliefs about what makes people sick?

CARE

1.	What does the word "care" mean to you?
2.	*What are signs of a caring person? A caring nurse? A non-caring nurse?*
3.	In what ways does care/nursing care affect your health and well being?
4.	How is health care here different from health care in Mexico?
5.	Describe to me incidents during which you received care from a family member or

	friend when you were ill.
6.	Describe to me incidents during which you received care by a caring and/or non-caring RN in a Western health care facility.
7.	In your culture, how do men, women, children, family members show care to family and friends?
8.	What should nurses and other healthcare professionals know/do to provide you with culturally congruent care?

DIABETES CARE

1.	What are your beliefs about Diabetes Mellitus?
2.	Are there different types of diabetes or is diabetes the same for everyone?
3.	What causes diabetes?
4.	Are there any behaviors that can lead to diabetes?
5.	How long does diabetes last?
6.	Can diabetes be cured? How?
7.	What are the symptoms of having diabetes?
8.	What can make diabetes better?
9.	What can make diabetes worse?
10.	How do you treat diabetes?
11.	What are complications of diabetes?
12.	Are there any medications that can help diabetes?
13.	Are there any medications that can make diabetes worse?
14.	Are there any foods that can make diabetes better?
15.	Are there any foods that can make diabetes worse?
16.	Does exercise help diabetes or does it make it worse?

17.	How important is it to maintain a healthy weight when a person has diabetes?
18.	Are there any other health problems that are seen in people with diabetes?
19.	Are there any special herbs, plants or home remedies/alternative that can help diabetes?
20.	Are there any special herbs, plants or home remedies/alternatives that can make diabetes worse?
21.	What is insulin?
22.	Does insulin help a person with diabetes get better or does it make diabetes worse?
23.	What resources are needed for the person with diabetes?
24.	Who should a person see for the care of diabetes?
25.	How can a nurse help a person with diabetes?
26.	What behaviors can the nurse demonstrate that indicate caring for diabetes?
27.	What makes a nurse a good nurse? A bad nurse?
28.	Is it important that the nurse understand the beliefs of a person with diabetes?
29.	How important is it that nurses speak the same language as the person with diabetes?
30.	What can the nurse do that doesn't speak Spanish to help the person with diabetes?

Appendix D

Parte I del – de ETHNODEMOGRAPHICS

Nombre de Código:		Afiliación religiosa:	
Fecha/localización de la entrevista:		Años de la educación:	
Edad:	Sexo:	Ocupación:	
Estado civil:	Niños:	Ocupación del esposo:	Asociacion etnica:
Lengua principal:		Idiomas hablados:	
Lugar del nacimiento:		Años en el U.S.:	
Ciudad de la residencia:		Estado de la implantación/residencia:	

PREGUNTAS AMPLIABLES

AMBIENTE	
1.	¿Digame de el lugar donde usted nasio?
2.	¿Usted ha siepre vivido en los Estados Unidos? En Carolina de le Norte?
3.	¿Como es su vida aqui? Hay algunas differencias de donde uste vivia antes?
4.	¿Quién vive con usted en su casa?
5.	¿Digame de su vecindario?
6.	¿Esta usted satisfecho con el lugar donde usted vive?

DIMENSIONES De La ESTRUCTURA CULTURAL y SOCIAL Parte I

Nombre de Código:

FACTORES FAMILIARES/SOCIALES

1.	¿Usted tiene familia que vive en esta área?
2.	¿Que te trae junto o que te reunes con tu familia y amigos? ¿Cuantas veces usted visita con su familia?
3.	¿Quién es el responsable en su familia? ¿Cuál es su papel/estado en la familia?

4.	¿Cómo usted pasa un día y una noche típicos?
5.	¿Quién le ayuda cuando usted esta enfermo y necesita cuidado?

FACTORES CULTURALES/RELIGIOSOS

1.	¿Con qué grupo cultural usted identifica usted mismo?
2.	*¿Dígame sobre sus costumbres y estilos de vida culturales? ¿Cómo usted los instala en sus niños?*
3.	¿Qué días de fiesta religiosos usted observa y cómo usted los celebra?
4.	¿Como se comparan los valores y creencias y practices culturales de el lugar de donde usted vive con sus valores y creencias y practicas culturales?
5.	¿Digame de el cuidado que uste ha recivido de las enfermenras o enfermeros?
6.	¿Que practices de cuidado de enfermeras y enfermeros usted estima que son importantes pare usted.?
7.	¿Qué la religión significa a usted? ¿Cómo usted lo practica y cómo le ayuda?

Parte II de las DIMENSIONES de la ESTRUCTURA CULTURAL y SOCIAL

Nombre de Código:

FACTORES TECNOLÓGICOS

1.	¿Digame de cosas en su vida que hace su vida mas facil?
2.	¿Digame de cosas en su cas que puede ayudar con su salud?
3.	¿Qué tipos de tecnología usted usa?
4.	¿Cuales son sus creencias de equipos especiales que se usa en este pais para cuidar al los enfermos?

FACTORES DE ECONOMICAL/POLITICAL

1.	¿Qué tipo de seguro médico usted tiene? Como se paga su cuidado de salud?
2.	¿Como es que usted recive el cuidado de la salud?
3.	¿Quién está a cargo del presupuesto en su familia?
4.	¿Cómo su situación económica afecta su salud y bienestar? ¿Y si, como?
5.	¿Como affecta la presente situacion polita como usted vive?

6.	¿Cómo su salud ha sido afectada por acontecimientos recientes y cambios políticos?
7.	¿Cómo los líderes políticos o profesionales demuestran cuidado/cuidar usted como individuo y a todos los Mexicanos Americanos en general?

Parte III DIMENSIONES de la ESTRUCTURA CULTURAL y SOCIAL

Nombre de Código**:**

SALUD, ENFERMEDAD, Y BIENESTAR

1.	¿Qué significa la palabra la salud para a usted? ¿Dígame sobre su propia salud?
2.	¿Describa las actividades que usted hace para mantener buena salud. Incluya cualquier práctica basada cultura que usted haga para mejorar o para mantener su salud, tal como alimentos, medicina, o remedios caseros/alternativos que cura los sistemas que usted cree subsistencia usted sano o mejora su salud?
3.	¿Qué significa la palabra la enfermedad para a usted? ¿Muerte?
4.	¿Describa como usted se mantiene saludable?
5.	¿Tienes algunas creencias de que hace enfermar a las personas?

CUIDADO

1.	¿Qué significa la palabra del cuidado para a usted?
2.	*¿Cuáles son muestras de una persona que cuida? ¿Una enfermera que cuida? ¿Una enfermera no-que cuida?*
3.	¿De qué maneras el cuidado/el cuidado de oficio de enfermera afecta su salud y bienestar?
4.	¿Cómo es el cuidado médico aquí diferente de cuidado médico en Mexico?
5.	¿Describa a mí los incidentes durante los cuales usted recibió cuidado de un miembro de la familia o el amigo cuando usted estaba enfermo?
6.	¿Describa a mí los incidentes durante los cuales usted recibió cuidado por una enfermera registrada que cuidaba y/o no-que cuidaba en una facilidad occidental del cuidado médico?
7.	¿En su cultura, cómo los hombres, las mujeres, los niños, los miembros de la familia demuestran cuidado a la familia y a los amigos?

8.	¿Qué debe saber las enfermeras y otros profesionales del cuidado de salud para proveer a usted de cuidado cultural congruente?

CUIDADO DE LA DIABETES

1.	¿Cuáles son sus creencias sobre la Diabetes Mellitus?
2.	¿Hay diversos tipos de diabetes o es la diabetes igual para cada uno?
3.	¿Qué causa la diabetes?
4.	¿Hay comportamientos que puedan conducir a la diabetes?
5.	¿Cuanto tiempo la diabetes dura?
6.	¿Puede la diabetes ser curada? ¿Cómo?
7.	¿ Cómo son los síntomas de la diabetes?
8.	¿Qué puede hacer la diabetes mejorar?
9.	¿Qué puede hacer la diabetes enpeorar?
10.	¿Cómo usted trata la diabetes?
11.	¿Cuáles son complicaciones de la diabetes?
12.	¿Hay medicaciones que puedan ayudar a la diabetes?
13.	¿Hay medicaciones que puedan hacer la diabetes peor?
14.	¿Hay alimentos que puedan hacer la diabetes mejor?
15.	¿Hay alimentos que puedan hacer la diabetes peor?
16.	¿A la Diabetes se ayuda con el ejercicio o la hace enpeorar?
17.	¿Cómo importante es para mantener un sano cargue de peso cuando una persona tenga diabetes?
18.	¿Hay cualquier otro problemas de salud que se considere adentro gente con diabetes?
19.	¿Hay cualesquiera hierbas, plantas o remedios caceros/alternativos que pueda ayudar a la diabetes?

20.	¿Hay cualesquiera hierbas, plantas o remedios caceros/alternativos que pueda hacer la diabetes peor?
21.	¿Qué es la insulina?
22.	¿Hace ayuda la insulina a una persona con diabetes o hace la diabetes peor?
23.	¿Qué recursos son necesarios para la persona con diabetes?
24.	¿Quién debe una persona ver para el cuidado de la diabetes?
25.	¿Cómo puede una enfermera ayudar a una persona con diabetes?
26.	¿Qué comportamientos puede una enfermera demonstrar que indican el cuidar de la diabetes?
27.	¿Qué hace una buena enfermera? ¿Una mala enfermera?
28.	¿Es importante que la enfermera entienda las creencias de la persona con diabetes?
29.	¿ Qué importante es que las enfermeras hablan la misma lengua que la persona con diabetes?
30.	¿Qué puede hacer una enfermera que no habla español para ayudar a la persona con diabetes?

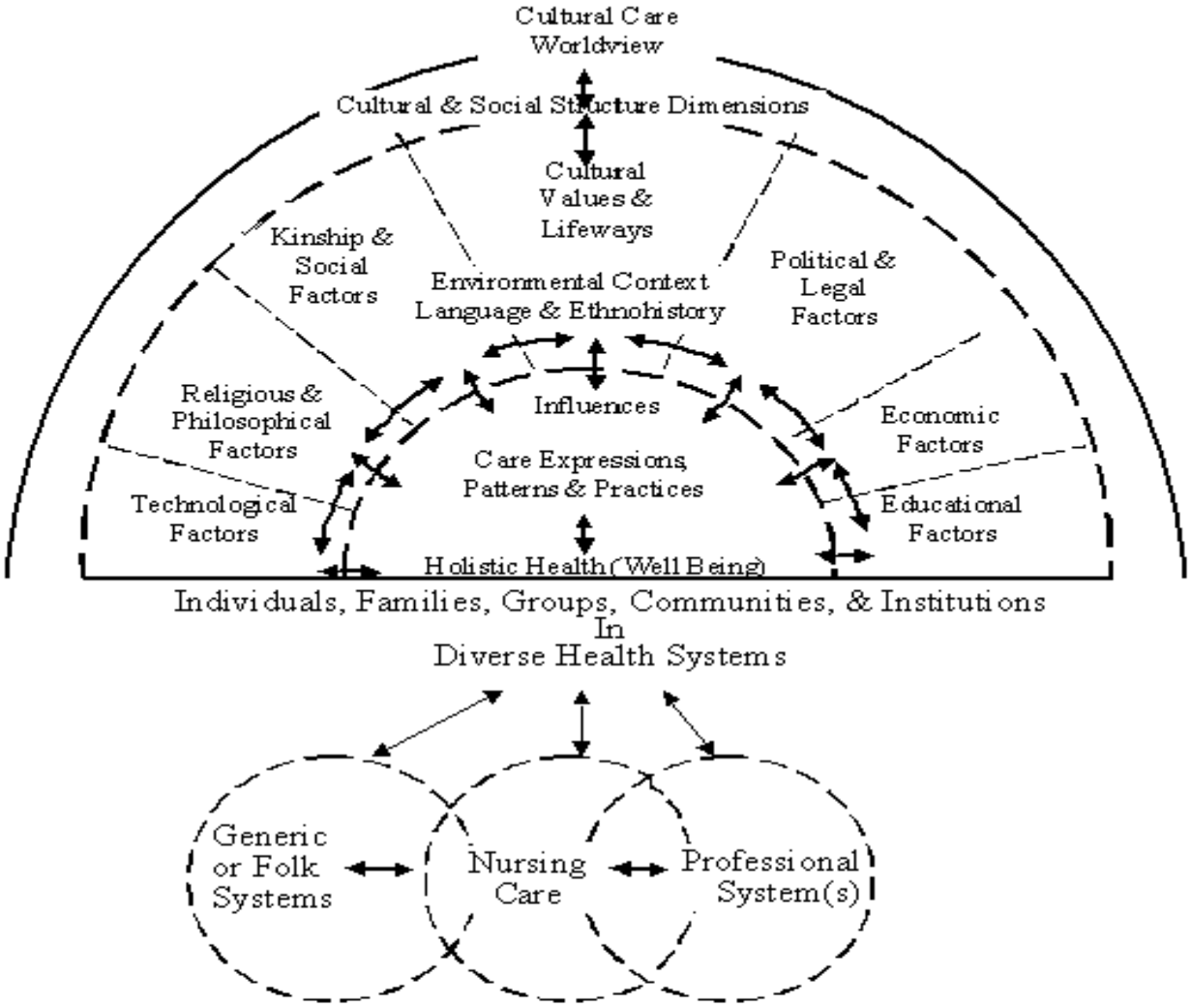
Cultural Care
Worldview
Cultural & Social Structure Dimensions
Cultural
Values &
Lifeways
Kinship &
Social
Factors
Environmental Context
Language & Ethnohistory
Political &
Legal
Factors
Religious &
Philosophical
Factors
Influences
Economic
Factors
Care Expressions,
Patterns & Practices
Technological
Factors
Educational
Factors
Holistic Health (Well Being)
Individuals, Families, Groups, Communities, & Institutions
In
Diverse Health Systems
Generic
or Folk
Systems
Nursing
Care
Professional
System(s)
Code Influences

Figure 1
Sunrise Model