LATINA PATIENTS' SOCIAL SUPPORT AND SELF-EFFICACY MANAGING TYPE 2 DIABETES MELLITUS

by

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ABSTRACT

Health disparities exist for Latinas who have a higher incidence of complications from Type 2 Diabetes Mellitus (T2DM). Treatment of T2DM requires daily self-management. If not managed correctly, T2DM can lead to comorbidities including coronary heart disease. Barriers to self-management are complex and may be exacerbated by psychosocial factors. There is little research on psychosocial factors, including social support and self-efficacy, in relation to self-management of T2DM by Latinas. The Latina perspective on psychosocial factors is explored in this dissertation through an examination of family, health care, community, and cultural sources of social support and self-efficacy as they influence self-management of T2DM. Further, the influence of age, acculturation, and level of education is also explored.

This study asks: What is the role of social support and self-efficacy in self-management of T2DM by Latinas? A qualitative data analysis of in-depth, semi-structured interviews is used to answer this question. The study population consisted of 33 self-reported Latinas between the ages of 42 and 70 who had just completed and were recruited from an intensive behavior change intervention, ¡Viva Bien!.

Themes among the study’s three concepts of self-management, self-efficacy, and social support emerged. Depression and denial were found to influence a pathway between self-efficacy and self-management. The study also found that knowledge and collective-efficacy influenced a pathway between social support and self-efficacy. Furthermore, collective-efficacy, awareness of disease, and continuity of social support
were found to influence a pathway between social support and self-management. Family and cultural social support were found to be the most important sources of social support for the study population. Findings also suggest that younger Latinas view health behaviors and prevention differently than older Latinas in the U.S.

The study's findings support the need for additional research that explores psychosocial factors as they influence self-management behaviors for Latinas. Given that Latinas are at higher risk of developing T2DM, culturally tailored programs aimed at increasing social support and self-efficacy to prevent and manage the disease at a younger age for Latinas need to be developed. Research should explore collective-efficacy as a potential contributor to increasing and maintaining self-management behaviors in Latinas.

The form and content of this abstract are approved. I recommend its publication.

Approved: James W. Dearing
DEDICATION

I dedicate this thesis to the important people in my life: especially my parents, Betty and Bob, who helped me learn to be compassionate to others; my grandparents, Margie and Bob, who helped me believe in myself; my husband, John, who continues to encourage me to grow and love more than I ever knew possible; my smart, funny, and beautiful children, Klara and Jack, for whom I am over the moon for and who are the light of my life, and my sister, Michele, who is my constant rock.

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CHAPTER I
INTRODUCTION TO THE HEALTH PROBLEM

Diabetes is a devastating and debilitating chronic disease for Latinas in the United States (U.S.). Although they represent a large collective of young women in the U.S., Latinas are underrepresented in research literature. Compared to non-Hispanic White women, Latinas have greater incidence of complications related to type 2 diabetes mellitus (T2DM), including premature death from cardiovascular events, due to delayed diagnosis and treatment (Cusi and Ocampo, 2011; Caballero, 2001). Family history, age, and obesity are three main risk factors in the development of T2DM in Latinas (American Diabetes Association, 2013; Copeland, Becker, Gottschalk, and Hale, 2005). In addition, insulin resistance is a frequent comorbidity associated with obesity, and generally precedes T2DM (Copeland, Becker, Gottschalk, and Hale, 2005). Further, incidence of overweight and obese Latina children and adolescents are increasing in the U.S., placing them at higher risk of developing gestational diabetes, a glucose intolerance that begins in pregnancy and elevates risk of T2DM (Black, 2002). Research that explores the broader socio-ecological context of diabetes in Latinas of all ages is needed to better understand their health disparities.

There are two causes of T2DM; the first is when the body doesn’t produce enough insulin, and the second is when the body produces insulin, but the body does not recognize it. Insulin resistance results because the body does not properly use the insulin. Insulin is a hormone needed to effectively metabolize glucose, or sugars, which fuels the body. Inadequate levels of insulin can lead to unstable blood sugar levels. A commonly used marker to test for appropriate blood sugar levels and diabetes is hemoglobin A1c. Hemoglobin A1c levels need to be stable and in a normal range.
As it is often called “adult-onset” diabetes, T2DM generally develops in adulthood. Age is a risk factor for T2DM as the disease usually develops after the age of 45 (American Diabetes Association, 2013). However, T2DM is increasingly found in younger adults and children as obesity rates are increasing in youth (Harron, Feltbower, McKinney, Bodansky, Campbell, and Parslow, 2011). Furthermore, T2DM is more prevalent among Latinas than non-Latino women (Copeland, Becker, Gottschalk, and Hale, 2005; Rosenbloom, Joe, Young, Winter, 1999). Estimates are that Latino men and women have lifetime prevalence rates of 45.4% and 52.5%, respectively, compared to 26.7% and 31.2% in non-Latino White men and women due to earlier onset (Narayan, Boyle, Thompson, Sorensen, Williamson, 2003).

Left untreated, T2DM can be life threatening. Uncontrolled diabetes can put individuals at risk for developing other comorbid conditions, including coronary heart disease, hypertension, retinopathy, nephropathy, neuropathy, and dyslipidemia (Fortmann, Gallo, and Philis-Tsimikas, 2011). Common symptoms of T2DM include increased thirst, urination, blurred vision, and hunger, which are due to high sugar levels in the bloodstream caused by insufficient insulin (American Diabetes Association, 2013). Conversely, when blood sugars are too low due to improper and poorly regulated diets, symptomology includes fatigue and lethargy. Other frequent symptoms of diabetes include the inability of sores to heal and recurrent infections. Regular blood sugar monitoring to maintain glycemic control, a healthy diet, daily exercise, and sometimes medications, including insulin therapy and other medications that help control blood sugars, are needed to effectively treat T2DM.
The etiology of type 2 diabetes mellitus and treatment regimens to manage it are generally agreed upon by medical practitioners; however, delayed diagnosis in younger women, postponed treatment, and mismanagement by the patient increases poor health outcomes for Latinas (Cusi and Ocampo, 2011). Successful management of T2DM require active participation by the patient in maintaining health, and research increasingly addresses the importance of psychosocial sources of influence as they improve or inhibit self-management of disease. Research further states that different cultural groups have varying perspectives on the role of two key psychosocial sources of influence in particular, social support and self-efficacy, for T2DM management (Wen, Shepherd, Parchman, 2004).

Self-efficacy is an individual’s confidence or belief that she can do a specific behavior or task (Bandura, 1986). Application of self-efficacy is important when monitoring and maintaining blood glucose (A1c) levels for persons with diabetes (Gherman, Schnur, Montgomery, Sassu, Veresiu, and David, 2011; Concha, Kravitz, Chin, Kelley, Chavez, and Johnson, 2009; Krichbaum, Aarestad, and Buethe, 2003). Higher self-efficacy specific to medication adherence, blood glucose (A1c) monitoring, diet, physical activity, and other self-management tasks may help individuals with T2DM in making the necessary behavior changes and maintaining them, whereas those with lower self-efficacy may be less likely to adhere to good self-management regimens. It is not surprising that high self-efficacy is related positively to good self-management of diabetes (Gherman, Schnur, Montgomery, Sassu, Veresiu, and David, 2011; Krichbaum, Aarestad, and Buethe, 2003; van de Laar and van der Bijl, 2001; Hurley and Shea, 1992; Padgett, 1991). However, what influences self-efficacy in self-management for Latinas is not understood, and will be a purpose of this dissertation.
Social support is defined as assistance received from others that has the potential to help the receiving individual. An understanding of social support can help health providers and caregivers tailor care to the specific needs of patients as well as assist patients with increasing their own self-efficacy so that they can better manage their disease (Morrow, Haidet, Skinner, and Naik, 2008). The present dissertation’s emphasis is on different sources of social support and whom among Latinas those sources affect.

Different sources of social support may affect self-efficacy to self-manage T2DM by Latinas; however, little research exists on the Latina perspective on these issues. There is some evidence exists that there may be a relationship between social support and self-management of disease across U.S. populations (Albright, Parchman, and Burge, 2001; Fisher, Chesla, Skaff, 2000; Boehm, Schlenk, Funnell, Powers, and Ronis, 1997; Glasgow and Toobert, 1988; Antonucci, 1985). However, sources of social support may influence self-efficacy differently for Latinas than non-Latinas. Understanding the influence social support has on self-efficacy and self-management of T2DM could improve interventions and programs aimed at managing the disease for the Latina population.

An important consideration in Latino culture is the role and norms of family: namely, familism or the strong values related to the family and interpersonal relationships with extended family. The traditional role of Latinas is as primary care giver in the family, with the expectation that they will care for all other family members. The paucity of literature on Latina self-management of disease suggests that research is needed to improve the health of these women who traditionally care for others before they care for themselves. The research questions driving the present dissertation are aimed at understanding the role of two psychosocial factors, social support and self-
efficacy, in relation to self-management of T2DM by Latinas while looking through the lens of familism. To date, the influence of social support on self-efficacy to manage T2DM in Latinas has not been much examined in the literature, and research suggests that there may be a direct effect of social support on self-management of disease (Fisher, Chesla, Skaff, 2000; Boehm, Schlenk, Funnel, Powers, and Ronis, 1997; Glasgow and Toobert, 1988; Antonucci, 1985). Further, self-efficacy literature shows a direct influence on self-management of disease (Sarkar, Fisher, and Schillinger, 2006; Aljasem, Peyrot, Wissow, and Rubin, 2001; McCaul, Glasgow, and Schafer, 1987). However, it is unclear how different sources of support may effect self-efficacy, and in-turn, self-management. Given the importance of familism in Latina culture, and the significance of the care giver role in Latina culture, it is important to understand how Latinas perceive social support. Understanding how different sources of social support in the lives of Latinas influence their self-efficacy and T2DM self-management, and the potential to use that knowledge to influence positive health outcomes for other Latinas with similar conditions, are the primary goals of this research.

**Latino and Latina Health Status**

Hispanic Americans, or Latinos, will triple in number by 2050 in the U.S. They are the fastest growing ethnic population in the country (Kirk, Passmore, Bell, Narayan, D’Agostino, Arcury, Quandt, 2008; U.S. Census Bureau 2006). The proportion of Latinos will grow from 3.6% in 1960 to a projected 29% in 2050 (U.S. Census, 2010). The National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK, 2008) reported that Hispanics have a greater risk of developing T2DM than non-Hispanic Whites. In addition, Hispanics are the fastest growing segment of the elderly population and will have increased prevalence of T2DM as they continue to age (Rodriquez, Joynt,
Lopez, Saldana, and Jha, 2011). It is important to understand the prevalence and risk factors associated with T2DM in this growing U.S. population.

**Percentage of Latinos U.S. 1960 - 2050**

**U.S. Census 2010 Projections**

Figure 1.1: U.S. Census Data 2010: Percent Latinos 1960-2050

**Health Care**

Latinos are less likely than non-Latinos to have regular medical benefits (Maldonado and Farmer, 2006; Del Pinal and Singer, 1997). Disproportionately large percentages of Latinos have low-wage jobs, less job stability, and more hazardous working conditions than non-Hispanics, factors that negatively influence the likelihood of having consistent medical benefits and health care options (Maldonado and Farmer, 2006). According to the Office of Minority Health (2011), approximately 30 percent of Latinos under the age of 65 did not have health insurance in 2010, as compared to 11.7% of non-Hispanic Whites in the U.S. (OMH, 2011; Reschovsky, Hadley, and Nichols, 2007; Aguirre-Molina, Molina, and Zambrana, 2001). Fortunately, the full implementation of the Affordable Care Act (ACA) of 2010 is expected to reduce medical
insurance coverage disparities by 32 million by 2019, including 9 million Latinos (Clemans-Cope, Kenney, Buettgens, Carroll, and Blavin, 2012). The extent to which the law will actually impact insurance coverage for Latinos is likely to depend on effective state policies and strategies that address barriers to enrollment, such as language, for Latinos (Clemans-Cope, Kenney, Buettgens, Carroll, and Blavin, 2012).

For Latinos with insurance, quality and satisfaction of the health care received, regardless of fee-for-service (FFS) or managed care plans (MCO), was rated as “fair” or “poor” by one in four Latinos in a study conducted by the Kaiser Family Foundation and the Commonwealth Foundation (Neuman, Schoen, and Rowland, 1999). In addition, the study also found that monolingual, Spanish-speakers were almost twice as likely as English-speaking patients to lack a regular health care provider. Further, even when insurance and medical benefits are available, costs to the health care system are increasing due to higher complication rates and poorer overall health outcomes in Hispanics with T2DM (Rosal, White, Restrepo, Olendzki, Scavron, Sinagra, Ockene, Thompson, Lemon, Candib, and Reed, 2009; Boyle, Honeycutt, Narayan, Hoerger, Geiss, Chen, and Thompson, 2001).

These findings underscore the need for culturally appropriate T2DM prevention and treatment programs for Latinas that consider the broader socio-cultural, economic, and environmental context of their lives. Even when access-related factors are accounted for, the quality of health care in the U.S. is considerably lower for racial and ethnic minorities than for non-minorities (IOM, 2002). This gap is widened by not having adequate culturally sensitive interventions and programs in the U.S. that address health care issues and disparities of Latinos and Latinas.
Health Disparities

Studies that control for socioeconomic status (SES) in Latinos document reduced disparities for some health outcomes, but not for T2DM; this research suggests that the perceived “protection” offered to some within-SES-groups is not consistent within all ethnic groups (Whitfield, Clark, and Anderson, 2002). Even when SES is controlled for, it is not clear why T2DM Hispanics are more than twice as likely to have T2DM than their non-Hispanic counterparts (CDC, 2011). The disease is the fifth leading cause of death for Latinos, and the fourth leading cause of death in Latinas (Center of Health Statistics, 2001). The prevalence of T2DM among Latinas is almost twice that of non-Hispanic White women (Kirk, Passmore, Bell, Narayan, D’Agostino, Arcury, Quandt, 2008). In addition, the age-adjusted prevalence of T2DM increased by 21% in Latinas from 1995-2007 (CDC, 2011). However, the underlying factors that contribute to health disparities and the higher prevalence of T2DM in Latinas are not understood.

While aggregate measures of Latino health that look at global health status of Latinos are important, they do not help to understand the complexity of cultural and contextual factors that impact health status and influence health disparities of Latina subgroups (Amaro and de la Torre, 2002). For example, certain subgroups have higher mortality and morbidity rates than others, and perceptions of health also vary among Latino subgroups (Amaro and de la Torre, 2002). Further confounding health disparities in Latinos, Latinas have a higher incidence of complications from diabetes relative to Latino men and an increase in hypertension and high triglycerides (Flegal, Carroll, Ogden, and Johnson, 2002; Maskarinec, Grandinetti, Matsurra, Sharma, Mau, Henderson, and Kolonel, 2009). This higher incidence of complications from diabetes is found in women compared to men worldwide, as T2DM undermines the protective effects that women have against coronary heart disease (Black, 2002). With coronary
heart disease as the leading cause of death among women in the U.S., T2DM appears to be a greater risk factor for U.S.-born Latinas who have a higher mortality from coronary heart disease (Pandey, Labarthe, Goff, Chan, and Nichaman, 2001; Hunt, Williams, Resende, Hazuda, Hagberg, and Stern et al., 2002; Slater, Selzer, Dorbala, Tormey, Vlachos, Wilensky, et al., 2003). Coronary heart disease (CHD) is a frequent comorbidity that may result from diabetes, and controlling the risk factors of CHD through self-management, including total cholesterol and blood pressure, are imperative for Latinos to decrease cardiovascular disease (Ford, 2011). However, understanding the risk factors for disease does not explain the cultural and contextual factors that influence health disparities and may improve health outcomes for Latinos and Latinas.

The 2005 National Health Care Disparities Report found that Hispanics or Latinos are the one major minority group in the U.S. for which health disparities are increasing, not decreasing (AHRQ, 2005). There were more age-adjusted years of potential life lost (or disability-adjusted life year, “DALY”, which is one year of healthy life lost due to disease or health condition) before 75 years of age per 100,000 population for Latinos compared to non-Hispanic Whites in 2001 (CDC, 2004). Specifically, years of potential life lost by health condition for Latinos compared to non-Hispanic Whites in 2001 were higher for the following health conditions or diseases: T2DM (41% higher), human immunodeficiency virus (168% higher), chronic liver disease and cirrhosis (62% higher), stroke (18% higher), and homicide (128% higher); in 2000, there were higher age-adjusted incidence for cervical (152%) and stomach cancers among Latinos (63% more for males, and 150% more for females)(CDC, 2004). Higher rates of overweight and obesity were also reported by Mexican Americans from 1999-2000 with obesity 32% higher in Mexican Americans as compared to non-Hispanic Whites (CDC, 2004). Obesity, which is a risk factor for diabetes, may lead to other co-morbidities including
diabetes-related complications such as coronary heart disease (CHD), hypertension, high triglycerides, and abdominal body fat distribution (Vega, Rodriguez, and Gruskin, 2009; Kuczmarski, Flegal, Campbell, and Johnston, 1994). Further, the prevalence of risk factors for CHD is higher among Latinas compared to non-Hispanic White women and men, as well as Latino men (Cusi and Ocampo, 2001; CDC, 2004). Given the abundant findings on increasing health disparities in the Latina population, research that focuses on explaining these inequalities by examining cultural and contextual factors is necessary and prudent to improve the health of Latinas in the U.S.

Socioeconomic factors (e.g., poverty, lack of education and employment, little or no access to medical or preventive care that lead to delayed diagnosis and treatment), and the social environment (e.g., racial/ethnic discrimination, environmental conditions in neighborhoods and at work, limited social networks) can increase risks of chronic disease and injury (Greenlund, Zheng, Keenan, et. al., 2004; Wen, Shepard, and Parchman, 2004; Williams, Neighbors, and Jackson, 2003; Morales, Lara, Kington, Valdez, and Escarce, 2002; Hoffman, Trevino, and Ray, 1990). For example, Hispanics with access to health care show different patterns of care utilization than non-Hispanic Whites, generally waiting longer for evaluation and thereby presenting with more advanced disease and leading to poorer health outcomes (Gaskin, Arbelaez, Brown, Petras, Wagner, and Cooper, 2007; Hargraves, Cunningham, and Hughes, 2001). Further, research suggests that even with insurance there are organizational, institutional, and structural barriers to health care access for Latinos leading to unequal care and health disparities (Beach, Gary, Price, Robinson, Gozu, Palacio, et al., 2006; Smedley, Stith, and Nelson, 2003). At the organizational level, lack of ethnic diversity among health care professionals can also interfere with the delivery of quality care to diverse patient populations that may require more or different types of health care
provider support. Patient reported satisfaction with the provider visit and quality of care is rated higher among minority populations when racial concordance exists between the provider and the patient (Escarce and Kapur, 2006; Saha, Komaromy, Koepsell, and Bindman, 1999). This finding suggests the importance of cultural competence in the patient-provider relationship. Furthermore, lack of interpreter services and inappropriate health education materials (both linguistically and culturally) can challenge the success and utilization of health services. Other institutional and structural factors that foster health disparities also include inconvenient hours of operation and locations, including distance to providers (Escarce and Kapur, 2006). In addition, difficult intake processes, including long wait times for appointments can be barriers to care (DHHS, National Hispanic/Latino Health Initiative, 1993). Having the opportunity to build relationships with providers, especially Latino physicians, also helps individuals feel more comfortable seeking out health care, which may reduce uncertainty around processes and systems involved in accessing care; further encouraging patients to manage their care (Escarce and Kapur, 2006). Understanding the socioeconomic factors and social environment as they influence health disparities of Latinos and Latinos can help providers and researchers to develop improved strategies to help reduce disease and improve health outcomes.

To help encourage Latinos and Latinas to better manage their care and reduce health disparities, several improvements can be made in the areas of informed medical treatment, improved educational materials that are aimed at prevention and tailored to health literacy levels, awareness of barriers and cultural context regarding health and health care access, and a better understanding of and response to the social determinants of health care for Latinas (CDC, 2011). One strategy to improve access and quality of health care is to adapt successful, evidence-based interventions and
programs from one cultural group to another. Although research suggests that cultural characteristics of the target group need to be incorporated into new interventions and programs, often cultural factors are not prioritized (Elder, Ayala, Arredondo, Talavera, McKenzie, Hoffman, Cuestas, Molina, and Patrick, 2013; Osuna, Barrera, Strycker, Toobert, Glasgow, Geno, Almeida, Perdomo, King, and Doty, 2011; Zambrana, Dunkel-Schetter, Scrimshaw, 1991). Programs grounded in data, theory, and methods that were developed and evaluated with one cultural group and then implemented “as is” for other cultural groups may save time and money but not retain their effectiveness. To retain effectiveness program adopters should factor in culturally mediated behaviors, norms, social support systems, and values through thoughtful intervention adaptation (Dearing, Smith, Larson, and Estabrooks, 2013; Dearing, 2009; Brach, Fraser, and Paez, 2005; Betancourt, Green, Carillo, and Park, 2005). By understanding the social determinants of health care in the U.S., culturally competent interventions and programs aimed at increasing disease self-management can be developed to reduce health disparities for Latinos and Latinas.

Self-Management of T2DM

Improving culturally competent care and self-management interventions to help Latinas manage diabetes is sorely needed. The role of self-management in controlling T2DM cannot be understated. Self-management of T2DM is grounded in patient understanding of their health condition and what is necessary to manage their care (Harvey, Petkov, Misan, Warren, Fuller, Battersby, et al., 2008; Carbone, Rosal, Torres, Goins, and Bremudez, 2007). The American Association of Diabetes Educators (AADE) has identified seven self-care behaviors needed to effectively change behavior: eating a healthy diet, being active, monitoring blood glucose levels, taking medication, problem solving, reducing risks of complications (e.g., checking feet, regular eye check-ups,
preventive care), and using healthy coping skills (AADE, 2013). When used together, these self-management behaviors significantly improve A1c levels, lower blood pressure and cholesterol, and improve quality of life (Funnell, Brown, Childs, Haas, Hosey, Jensen, Maryniuk, Peyrot, Pette, Reader, Siminerio, Weinger, and Weiss, 2008). In addition, self-management and glycemic control decreases complications and comorbidities from T2DM (Vincent, Clark, Zimmer, and Sanchez, 2006). Some research suggests that Latinas have more difficulty with controlling glycemic or blood sugar levels and do not have the same physiological response as non-Latinas (Brown, Garcia, Kouzankanani, and Hanis, 2002). Family and cultural influences on self-management of T2DM for Latinas are not understood. However, there is some research that suggests family and cultural beliefs about self-management behaviors, including diet and physical activity, may influence treatment regimens and contribute to poor glycemic control (Vincent, Clark, Zimmer, and Sanchez, 2006; Brown, Garcia, Kouzankanani, and Hanis, 2002; Whittemore, 2000). Understanding the contextual and cultural barriers to health care and disease management that Latinas face is important for influencing Latinas’ ability to make and sustain the numerous behavior changes necessary for managing T2DM.

**Overview of the Dissertation**

This dissertation focuses on the role of social support and self-efficacy in self-management of T2DM by Latinas living in Denver, Colorado. My *a priori* assumption, based on prior research, is that these psychosocial factors directly affect Latinas’ ability to manage T2DM effectively. This study poses the following main research question aimed at exploring the issues and concerns about family, health care, community, and culture as they may affect my primary concepts of interest:
What is the role of social support and self-efficacy in self-management of T2DM for Latinas?

Sub-questions include:

- What is the comparative importance of sources of social support for Latinas?
- How does social support influence self-efficacy and self-management for Latinas?
- What is the importance of self-efficacy in self-management for Latinas?

In Chapter II, I review social science theory and prior research studies that provide the conceptual basis for the dissertation. I use a socio-ecologic framework to contextualize how self-management of disease, self-efficacy, and social support are related and how they function in everyday lives. Behaviors of self-management of T2DM and types and sources of social support are described. In Chapter III, I describe the qualitative methods used in the study. A description of the study population, research setting, study instruments, data collection techniques, and data-analysis are presented.

Chapter IV presents the results of thematic analysis. The analysis explores participant perspectives on the psychosocial factors of self-efficacy and social support and their relationship to disease self-management. Descriptive results, themes, and relationships among themes are presented with the aid of verbatim text passages taken from the interviews with participants. Indicators of implied pathways between social support, self-efficacy, and self-management are analyzed, and the comparative importance of sources of social support is explored as they relate to the study’s research questions. In Chapter V, analysis and explanatory interpretation is used to further examine the potential pathways between the concepts of self-management, self-efficacy, and social support as they are influenced by categories of age, acculturation, and level
of education. Age was selected given it is a risk factor of T2DM for Latinas and may influence social support, self-efficacy, and self-management of T2DM. Acculturation and level of education were also explored as they may play an important role in understanding the influence psychosocial factors have on self-management of T2DM.

In conclusion, Chapter VI summarizes the study’s key findings with an interpretive emphasis on the concepts of social support, self-efficacy, and self-management, and what the study results suggest for behavior change theory. Limitations to this research are considered, as is the practical value of the present study results to future intervention design for Latinas with T2DM.
CHAPTER II

SELF-MANAGEMENT OF DISEASE, SELF-EFFICACY AND SOCIAL SUPPORT

Theories of health behavior have traditionally focused on behavior change at the individual level, and health behavior change interventions are often grounded in these theories. Research over the past several years has emphasized the importance of translating theoretical concepts into effective and practical interventions that are tailored to diverse cultures. However, the extent to which cultural and contextual factors inform development of interventions and medical care aimed at improving the health outcomes of different populations varies. Furthermore, the context of an individual’s psychosocial environment as it influences self-management of disease varies within cultures, and has not been targeted for some populations as a potential mechanism for affecting behavior change. This is a limitation of some health behavior theory (Gallant, 2003).

Self-Management of Disease

Research on self-management of disease is generally framed by health theories focused on the individual’s knowledge, beliefs, and self-efficacy to manage disease. Behavior change interventions and programs aimed at disease self-management are grounded in theory to support how shared knowledge of disease management with the patient will result in improved self-efficacy and self-management. Self-management of disease is daily care aimed to control one’s own disease, reduce or minimize impact to personal health and functioning, and help oneself cope with the mental and psychosocial sequelae of the disease (Gallant, 2003; Clark, Becker, Janz, Lorig, Rakowski, and Anderson, 1991). Many individuals provide most of their own care, making them both the primary care giver and recipient (Anderson, Funnell, Butler, Arnold, Fitzgerald, and
Lacking in the literature are the psychosocial factors from the Latina patient’s point of view that influence disease outcomes. For example, social and cultural influences on self-management behaviors in Latinas are not understood and the applied health theories may be culturally inadequate.

Daily self-management is mandatory for diseases such as diabetes. In addition to a healthy diet and exercise, daily self-management of diabetes may include home blood glucose testing, oral medications, and insulin injections. Daily self-care regimens have been shown to improve quality of life, reduce mortality and morbidity, and reduce health care costs (Gallagher, Viscoli, and Horwitz, 1993; Horwitz and Horwitz, 1993; Horwitz, Viscoli, Berkman, Donaldson, Horwitz, Murray, et al., 1990). The importance of self-management of T2DM cannot be overstated; research that explores how to improve health outcomes of T2DM must factor into account barriers and facilitators of successful self-management.

Latinas face a number of institutional, social, and structural barriers to T2DM self-management (U.S. DHHS, 2000) as well as general socio-economic factors that can make their lives challenging (Vega, Rodriguez, and Gruskin, 2009; Morales, Lara, Kington, Valdez, and Escarce, 2002; Estrada, Trevino, and Ray, 1990). Reasons for poor health are multifaceted and include culture (Caballero, 2001; Estrada, Trevino, and Ray, 1990), biology (Burke, Williams, Gaskill, Hazuda, Haffner, and Stern, 1999), lack of access to health care and high quality health care systems (Wen, Shepard, and Parchman, 2004), lack of or limited English proficiency (Cusi and Ocampo, 2011; Pitkin Derose and Baker, 2000), and little insurance coverage (Hoffman and Pohl, 2000; Burke, Williams, Gaskill, Hazuda, Haffner, and Stern, 1999; Estrada, Trevino, and Ray, 1990; Solis, Marks, Garcia, and Shelton, 1990). The numbers of barriers to self-management of T2DM for Latinas in the U.S. are abundant and negatively impact health
outcomes in this growing population; a further examination of these cultural and contextual barriers is necessary.

Figure 2.1: Socio-Ecologic Sources-Of-Influence Model

**Socio-Ecologic Model**

A *socio-ecological environment* is a nested system of influences that can affect individual perception and behavior. Self-management of T2DM is affected by three important social-ecologic factors: (1) the health care system and its practitioners; (2) community environments along with their social/civic institutions, and (3) family (Wen, Shepherd, and Parchman, 2004). For the purpose of this dissertation, the socio-ecological environment includes the individual’s family, health care, community, and culture. While other socio-ecological components such as the larger policy environment, media, work, or educational institutions may also influence self-management behavior, the focus here is on those elements that the literature has highlighted as most proximal and salient to Latinas’ self-management of their T2DM. An illustrative model, which I have based on several socio-ecological health models, was developed to explore the relationships between social support, self-efficacy, and self-management factors (Figure
2.1) and will be used to operationalize respondents’ socio-ecological environments (Sallis, Owen and Fisher, 2008; Bronfenbrenner, 1999).

The present study explores family, health care, community, and cultural sources of social support and their influence on self-efficacy to understand the extent to which they are related to and affect self-management of disease. Literature suggests that identifying and setting realistic goals around self-management of disease, including problem solving and coping skills, may be influenced by the exercise of self-efficacy (Senecal, Nouwen, and White, 2000; Strecher, Seijts, Kok, Latham, Glasgow, DeVilllis, Meertens, and Bulger, 1995). However, research suggests that family social support influences on self-efficacy can both enable and hinder self-management behaviors (van Dam, van der Horst, Knoops, Ryckman, Crebolder, and van den Borne, 2005; Hayes, 2001). Furthermore, health care and community level influences on self-efficacy may positively and negatively affect adherence to self-management and treatment regimens through the use of education and support networks aimed at self-care and disease prevention (Coffman, 2008; Krichbaum, Aarestad, and Buethe, 2003). In addition, at the cultural level, self-efficacy may be influenced by cultural norms and beliefs (Concha, Kravitz, Chin, Kelley, Chavez, and Johnson, 2009). Exploration of these multi-level influences of social support sources will lead to a greater understanding of self-efficacy beliefs and how they impact self-management of disease. Having a clearer understanding of the social support influences on self-efficacy will help to strengthen interventions aimed at increased self-efficacy to achieve specific behavioral goals for self-management.

Researchers from an array of disciplines have proposed that psychosocial and physical environments have multiple direct impacts on health. Intrapersonal (biological, psychological), interpersonal (social, norms), and environmental factors inform one’s
health, well-being, and quality of life. Although multiple models and labels are used under the general rubric of social-ecology models, they all address the multiple sources of support and pathways that influence behavior. Socio-ecologic models are multifaceted and include individual self-efficacy and how it is influenced by sources of social support of multiple types. The socio-ecologic sources-of-influence model (presented above in Figure 2.1) will be used for analysis in this dissertation to explore the multiple pathways of psychosocial factors as they influence self-management of T2DM.

Sallis and colleagues (2008) propose four key principles of comprehensive socio-ecologic models, which aim to understand the dynamic between individual behaviors and the many biologic, social, and environmental factors that help determine these behaviors. According to Sallis and colleagues, the first core principle in a comprehensive socio-ecologic model examines intra- and interpersonal, community, organizational (including health care), and policy levels and their influence on health behaviors. The second core principle is the acknowledgement that there is a multidirectional interaction across the various levels of influence. The third core principle is the understanding that socio-ecologic models should be specific in their behavioral focus to identify the influences. Finally, the fourth core principle is that to effectively change health behavior, multi-level interventions need to be developed (Sallis, Owen and Fisher, 2008).

Furthermore, transdisciplinary research models frequently used in literature are grounded in evidence-based research and practice across several disciplines (i.e., medicine, psychology, public health and social work) and aim to help explain the mosaic of factors that impact health outcomes. The recent move to more transdisciplinary models in health behavior research highlights the complexity of health behaviors and health determinants and supports the use of socio-ecologic models. Theorists and interventionists are in agreement about the importance of a socio-ecologic approach for
understanding and predicting how contextual factors affect sustainability of intervention components and their effects (Scheirer and Dearing, 2011).

Drawing from both public health and psychology, socio-ecological models are grounded in work of several scientists, including Uri Bronfenbrenner’s (1979) examination of multi-level influences on behavior via synergistic systems and Albert Bandura’s (1986) social cognitive theory, which looks at how behavior is influenced by the environment (Bandura, 1997). In the late 1970’s, Bronfenbrenner described this relationship of the environment to individual behavior through a multi-level model:

- **Microsystems**, the immediate social environment (e.g., family, home, neighborhood)
- **Mesosystems**, that create the link from the individual’s immediate social environment to other key settings (e.g., work, school)
- **Exosystems**, that impact the individual indirectly (e.g., community groups)
- **Macrosystems**, the culture of the larger social environment in which the individual lives (e.g., media, societal norms, government).

Bronfenbrenner’s work was preceded by the Lalonde Report of 1974, *A New Perspective on the Health of Canadians*, which proposed four key factors that affect health: human biology, lifestyle, environment, and health care organizations (Lalonde, 1974). This evolution from human to social ecology schools of thought led the shift to a broader understanding of the reciprocal relationship between a person and her environment (Stokols, 1996). Furthermore, there was an expansion of the concept of health; for the first time health was viewed holistically and had a comprehensive focus on an individual’s health, including physical, emotional, social, and spiritual well-being (Surgeon General’s Report on Health Promotion and Disease Prevention, 1979). Although focused primarily on an individual’s responsibility toward their own health
behaviors, the 1979 Surgeon General's Report on Health Promotion and Disease Prevention began to capture a holistic view of health and literature began to explore multi-level influences on health with more frequency. In 1986, the Surgeon General's Report was further supported at the first international conference on health promotion, the Ottawa Charter for Health Promotion, which advocated an even greater influence on health coming from socio-cultural and physical environmental factors (World Health Organization, 1986). This new definition of health began commonly to include disease prevention, health protection, and health promotion, with a focus on the roles of individuals as well as groups and organizations to participate as active agents toward healthy behaviors and creation of health policy. In addition, community health promotion began to emphasize the collaborative efforts of both public and private institutions within a community for enhancing the well-being of a population and, socio-ecologic models began to explore multiple factors that influence health promotion and disease prevention at the individual and group level.

The value of using a socio-ecologic approach to understand the many factors that influence health is apparent; a socio-ecologic approach not only integrates behavior change and environmental models of health promotion, but extends its focus to comprehensively capture characteristics of the immediate and extended environment - the individual, her self-efficacy, and her surroundings - each of which must be in view in order to fully understand reasons for an individual's health (Stokols, 1996).

**Self-Efficacy**

Stemming from Albert Bandura’s (1986) Social Cognitive Theory, self-efficacy is an individual's belief or confidence that she is capable of beginning and completing a behavior or task (Bandura, 1986). Self-efficacy is well-established as an important mechanism for behavior change (Bandura, 1997). Social Cognitive Theory follows a
“human agency perspective” in which the individual chooses to act a certain way, and may adjust or control her actions based on personal, social, and environmental feedback (Bandura, 1986). This feedback affects beliefs or perceptions around capabilities, rather than actual capabilities, and thereby helps predict actions (Bandura, 1997).

Self-efficacy is specific to task, must be built up over time, and may change throughout the life span (Bandura, 1997). One’s beliefs in self-efficacy are determined by four primary sources: (1) mastery experience or life experiences, and accomplishments, (2) vicarious experience, or seeing similar individuals succeed in a task; i.e., social modeling, (3) social persuasion or verbal persuasion from others, and (4) affective state, or feelings, and self-appraisal of personal strengths and weaknesses, both emotional and physiological (Bandura, 1997). The combination of these four primary sources is effective at increasing perceived self-efficacy in an individual (Bandura, 1977). In addition, Bandura suggests that a collective-efficacy captures the capability, shared skill set and knowledge that a group uses to achieve a desired outcome. Related to, but different from self-efficacy, collective-efficacy builds upon the personal agency for which an individual is autonomous in her actions to expand interdependent efforts to achieve outcomes when accomplishing them at the individual level is not possible or likely (Bandura, 2000). Collective-efficacy is a group’s shared belief in their confidence and ability to complete a behavior or task, and research suggests that the inability to make successful changes in health behaviors may signal a low self-efficacy at the individual or group level (Bandura, 2000).

Self-efficacy has been shown to be an important factor in self-management of disease (Krichbaum, Aarestad, and Buethe, 2003; Glasgow, Toobert, and Gillette, 2001; Johnson, 1996). Since self-efficacy helps to predict individual level behavior, improved self-efficacy can be expected to improve self-management of disease and, if self-efficacy
can be built up at a younger age, heightened self-efficacy may help prevent or delay onset of diseases (Bandura 1997). Research suggests that high self-efficacy increases self-management of disease, whereas lower self-efficacy decreases self-management of disease (Krichbaum, Aarestad, and Buethe, 2003). Successful self-management and adherence to medical treatment regimens or self-treatment plans can be explored through analysis of self-efficacy, both at the individual level and collectively for Latinas. At the individual level, beliefs about social cohesiveness and maintenance of social norms impact the level of social cohesion and, ultimately, social engagement, that the individual feels. Collectively, reflection of high self-efficacy may be seen within cultural norms, including health knowledge, attitudes, and beliefs. The importance of familism in Latina culture underscores the need to examine self- and collective-efficacy as both a facilitator of and a barrier to effective disease self-management in Latinas.

Specifically, self-efficacy has been shown to be positively associated with specific self-management behaviors aimed at controlling T2DM, including metabolic control, self-care adherence, dietary self-care, and satisfaction with treatment in Latinos and non-Latinos alike (King, Glasgow, Toobert, Strycker, Estabrooks, Osuna, and Faber, 2010; Trief, Eimicke, Shea, and Weinstock, 2009; Sarkar, Fisher, and Schillinger, 2006; Krichbaum, Aarestad, and Buethe, 2003; Aljasem, Peyrot, Wissow, and Rubin, 2001; Xu, Toobert, Savage, Pan and Whitmer, 2008; Skelly, Marshall, Haughey, Davis, and Dunford, 1995; Kavanagh, Gooley, and Wilson, 1993). Stronger self-efficacy beliefs concerning a specific behavior that is required for the continual self-management of disease will result in maintenance of management behavior (Krichbaum, Aarestad, and Buethe, 2003). Furthermore, self-efficacy influences the relationship between social support and self-management (Bandura, 1997) and is a key driver predicting the extent of control that an individual has in relation to her environment. However, individuals both
act upon their environment and are constrained by that environment and, it is not understood how self- and collective-efficacy in self-management of T2DM in Latinas is influenced or varies by sources of social support.

**Social Support**

Understanding the role of social support as it impacts self-efficacy and disease self-management is important (Dale, Williams, and Bowyer, 2012; Funnell, 2010; Sarkar, Fisher, and Schillinger, 2006). Research suggests that individuals with chronic disease have improved quality of life and functional health status when they have positive social support in their life (Gonzales, Haan, and Hinton, 2001). Furthermore, people with diabetes perceive that they have better health when they have social support, or assistance, received from others (Morrow, Haidet, Skinner, and Naik, 2008; Goodall and Halford, 1991). However, the influence of types and sources of social support on self-efficacy as it relates to self-management of disease is not understood as it varies by culture.

Social support may come in multiple functional types, including emotional, informational, appraisal, and tangible support as well as positive social interaction (Sherbourne and Stewart, 1991). Emotional support includes nurturing, love, trust, and caring, whereas informational support includes giving of advice (Langford, Bowsher, Maloney, and Lillis, 1997). Appraisal support includes helping the individual understand information and assisting the individual with coping strategies and resources (Langford, Bowsher, Maloney, and Lillis, 1997). Tangible support is the provision of actual goods and services, or actual helping behaviors. Research suggests that tangible or informational types of social support can be detrimental when the support is viewed as nagging about behaviors (van Dam, van der Horst, Knoops, Ryckman, Crebolder, and van den Borne, 2005; Hayes, 2001; Boehm, Schlenk, Funnell, Powers, and Ronis, 1997;
Bogat, Sullivan, and Grober, 1993; Griffith, Field, and Lustmam, 1990; Kaplan, and Hartwell, 1987; Kaplan, Chadwick, and Schimmel, 1985). However, it is not clear if certain types of social support are viewed more positively or negatively in different cultures. Understanding the significance of types of social support in different cultures may help researchers and clinicians tailor care specific to patient needs.

Another important consideration includes the importance of sources - and not just types - of social support as they impact self-efficacy and self-management of T2DM for Latinas. Social support may come from multiple sources, including the family, health care, community and culture. Self-efficacy may be stronger when social support is available from multiple sources of family, health care, community and culture; together, these sources support the individual through emotional, informational, appraisal, and tangible means. On the other hand, strong self-efficacy may be protective of self-management behaviors when social support is lacking. Understanding the importance of sources of social support in the lives of Latinas can help researchers and clinicians develop programs and interventions aimed at increasing self-efficacy and self-management of T2DM.

My a priori assumption is that the relationship between social support and self-management may be mediated by the individual’s perceived self-efficacy to manage disease. However, it is not clear how social support influences self-efficacy of disease management in Latinas. The sources of social support that are most important in the lives of Latinas may directly impact self-management behaviors. Cultural norms for Latinas place a great emphasis on interpersonal relationships and on the role of women in the family unit, and yet the significance and complexity of these relationships is not understood (Barrera, Strycker, MacKinnon, and Toobert, 2008). The contextual and cultural factors that influence the relationship between social support and self-
management may be highlighted by understanding the Latina woman’s role in the family unit as it relates to self-management of disease.

Social support and self-efficacy are both key psychosocial factors affecting self-management of disease (Nouwen, Balan, Ruggiero, Ford, Twisk, and White, 2011; King, Glasgow, Toobert, Strycker, Estabrooks, Osuna, and Faber, 2010; Ingram, Torres, Redondo, Bradford, and O’Toole, 2007; van Dam, van der Horst, Knoops, Ryckman, Crebolder, and van den Borne, 2005; Krichbaum, Aarestad, and Buethe, 2003; Glasgow, Toobert, and Gillette, 2001). However, the mechanism by which that relationship occurs is not clearly understood. For example, the self-care activity of monitoring blood sugar may be influenced by education provided by a physician; whereas diet restrictions may be influenced more profoundly by family and friends who encourage or help facilitate healthy dietary behaviors. Further, social support sources of influence may vary according to the self-management regimen specific to the individual and her health condition(s). The four sources of social support, including family, health care, community, and culture will be further explored in this chapter.

Family

Positive support from family and friends can beneficially affect patient health behaviors and outcomes (Rosland, Heisler, Choi, Silveira, and Piette, 2010; Zhang, Norris, Gregg, and Beckles, 2007; Luttik, Jaarsma, Moser, Sanderman, and van Veldhuisen, 2005; Gallant, 2003). Family is important in the lives of Latinas. One norm in Latino families is that Latinas are caregivers to the entire family; placing family health and care before their own health (Wen, Shepherd, and Parchman, 2004; Hunt, Pugh, and Valenzuela, 1998). Health care and medical decisions are often made only after consulting the family and extended family that are considered a primary support group for Latinas (Carteret, 2011; Wen, Shepherd, and Parchman, 2004; Hunt, Pugh, and
Valenzuela, 1998). Furthermore, if support from family and extended family is not considered positive or adequate the Latina patient may not feel she has the self-efficacy to make a health decision or behavior change.

Family social support is more important to Latinas than Latinos (Rosland, Heisler, Choi, Silveira, and Piette, 2010; Jackson, 2006; Gallant and Dorn, 2001), however it is not known if Latinas believe that they receive or need more family support than Latinos. There is some evidence to suggest that high levels of social support offered by the family are most closely related to self-management and increased self-efficacy (Coffman, 2008; DiMatteo, 2004; DiMatteo and Robin, 2004; Glasgow, Toobert, and Gillette, 2001). Conversely, low levels of social support from the family are related to low levels of self-management (Tillotson, and Smith, 1996). Family involvement in self-management of disease can also be experienced as negative, and increase barriers to self-management (Rosland, Heisler, Choi, Silveira, and Piette, 2010; Jones, Utz, Williams, et al, 2008; Carter-Edwards, Skelly, Cagles, and Appel, 2004). If an individual feels that she is being nagged or excessively reminded about doing a self-management behavior, such as taking her medicine or monitoring her blood sugar levels regularly, she may feel guilty or criticized for not taking better care of herself. Family support that infers insufficient self-management can hinder self-efficacy (Rosland, Heisler, Choi, Silveira, and Piette, 2010). Latinas may feel frustrated and confused or thwarted in their efforts to make healthful food choices by family involvement in determining the preparation or ingredients used in meals (Rosland, Heisler, Choi, Silveira, and Piette, 2010; Cagle, Appel, Skelly, and Carter-Edwards, 2002). Other family barriers that may influence self-management include family members placing dietary constraints, such as demanding that certain foods, like tortillas and beans, be made a traditional way that does not support good self-management behaviors. Though research suggests that Latinas
value family social support more than Latinos, the importance of family social support barriers as they impact self-efficacy and self-management of T2DM is not understood.

**Health Care**

At the organizational level, health care stands out in the literature as an important source for supporting Latina health. Latino, Spanish-speaking patients report more satisfaction with Spanish-speaking providers (Cooper-Patrick, Gallo, Gonzales, Thi Vu, Powe, Nelson, and Ford, 1999). Given the dearth of Latino physicians in the U.S., communication barriers – both linguistically and culturally – affect the delivery of care, as well as patient satisfaction with care. Literature has also shown the importance of factoring health literacy into the development of health education materials in a culturally competent manner (Shaw, Huebner, Armen, Orzech, and Vivian, 2008). There have been initiatives in medical schools over the past two decades to teach cultural competency to all physicians, residents and students (Carrillo, Green, and Betancourt, 1999; Culhane-Pera, Like, Lebensohn-Chialvo, and Loewe, 2000; Culhane-Pera, Reif, Egli, Baker, and Kassekert, 1997). These educational efforts emphasize the patient-clinician relationship and cultural discordance that may exist; potential bias in clinician perceptions around lifestyle behaviors and disease risks in Latinos; the importance of understanding the cultural orientation and health literacy of patients; and how to take action to improve clinical conditions for people of different cultures.

Latinas often include family members and friends during medical visits with providers (Coffman, 2008). There is the expectation of respect, or *respeto*, in Latin American culture, which extends to health care encounters. In the health care setting, *respeto* is the reciprocal nature of both patient’s and provider’s understandings of the appropriate position of authority given to individuals. Physicians are generally viewed as authority figures (Carteret, 2011). Latina patients may listen carefully and nod their head
when the provider is speaking, however this behavior may show respect to the provider more than agreement about what the provider is suggesting for treatment. In Latin American culture, positions of authority are hierarchical, and vary depending on the level of importance placed on age, gender, title, social position, and economic status (Flores and Vega, 1998). Similar to the level of respect the patient gives to the provider, the patient also expects respect to be given to her and her family during health care visits. This may include using titles of respect, such as Señora and Señorita (Carteret, 2011). Family involvement in decision making around disease management and treatment is greater for Hispanics than non-Hispanics (Coffman, 2008). When families are not welcomed, disrespected, or excluded from the patient encounter with the physician and care providers, the patient and his or her family may not feel supported and may not be as receptive to the medical information given. The level of support offered to the patient and her family during provider encounters could negatively impact health outcomes if the patient feels lack of respect to her and her family.

Community

The community in which people live can have a significant impact on the social support networks to which individuals are exposed. Possible community sources that foster social engagement and social support, and affect health behaviors, include social organizations and institutions (e.g., churches, community centers, recreation centers and parks, libraries, educational facilities), businesses (e.g., grocery stores, banks, post offices), and transportation services (e.g., bus, taxi, light rail, subway, shuttle) (Stahl, Rutten, Nutbeam, Bauman, Kannas, Abel, Luschen, Rodriguez, Vinck, and van der Zee, 2001). Community factors that have been shown to be protective of health for Latinos include living in ethnically homogenous neighborhoods that include physical characteristics of a “built” environment, such as sidewalks, porches, homes with
windows facing communal space, and other variables associated with promoting social cohesion (i.e., that facilitate a sense of safety, trust and reciprocity among neighbors) (Sampson, 2003); that promote outdoor activity (such as walking or gardening) and foster social support (Aranda, Ray, Snih, Ottenbacher, and Markides, 2011; Gerstm Nurabdam Eschbach, Sheffield, Peek, and Markides, 2011; Verbrugge and Jette, 1994). Strong social support networks in the community have been associated with physical activity and social cohesion (Stahl, Rutten, Nutbeam, Bauman, Kannas, Abel, Luschen, Rodriguez, Vinck, and van der Zee, 2001; Giles-Corti, and Donovan, 2002).

Environmental factors that may benefit communities include farmers markets and other neighborhood activities that target Latino culture; promoting healthy food options as well as opportunities for gathering and social engagement, which may increase social support options for community members. Latinas represent the social hubs of the family and the community they live in through the many roles they play as mothers, daughters, wives, care takers and contributors to family income. Some research suggests that in Latino communities there is a protective health factor associated with social cohesion, and intergenerational support networks that include mothers and grandmothers, built upon cultural traditions to protect health in the Latino community (Kawachi, Kennedy, and Glass, 1999). However, it is not clear whether the importance of cultural traditions and health behaviors varies according to generation, age.

**Culture**

Acculturation and cultural orientation influence how Latinas view diabetes (Rosal, White, Restrepo, Olendzki, Scavron, Sinagra, Ockene, Thompson, Lemon, Candib, and Reed, 2009; Kieffer, Willis, Arellano, and Guzman, 2003). Management and treatment of disease can be informed by culture and one’s cultural orientation, their norms and beliefs, including how important it is to treat and manage T2DM. The influence of culture
as it supports and influences disease management may vary depending on how long one has lived in the United States.

The concept of *familism* is prevalent in Latino culture. *Familism*, also sometimes called *familismo*, is the norms and values inherently important to the Latino family (Carteret, 2011; Wen, Shepherd, and Parchman, 2004; Hunt, Pugh, and Valenzuela, 1998). The concept of familism is important in the lives of Latinas who value the input and opinions (i.e., informational, appraisal support) of their extended families, which may include friends who are not biologically related, and may influence disease management.

In addition to the cultural norms and sense of familism inherent in Latino culture, Spanish language variations, cultural traditions, including food preferences and exercise habits, vary depending on culture of origin and one’s acculturation (Rosal, White, Restrepo, Olendski, Scavron, Sinagra, Ockene, Thompson, Lemon, Candib, and Reed, 2009). Literature shows that acculturation may play a large role in understanding self-management of chronic disease in Latinos (Perez-Escamilla and Putnik, 2007; Balcazar, Castro, and Krull, 1995).

*Acculturation* is defined as the individual’s adoption process of customs, beliefs, values, behavior and attitudes of a culture. *Cultural orientation* is the extent to which an individual is influenced by and engages in cultural norms, customs, and traditions (Tsai and Chentsova-Dutton, 2002). Measures of acculturation frequently use English language proficiency or language spoken within the home as proxies for determining level of acculturation.

Acculturation was originally viewed as a process by which “immigrants changed their behavior and attitudes toward those of the host society” (Rogler, Cortes and Malgady, 1991) and was grounded in a preconceived understanding of what constitutes mainstream “White American culture” (Castillo, Conoley, and Brossart, 2004; Zane and
Mak, 2003). Sociologists viewed acculturation as loss of the original culture (Park, 1938). The cultural factors at play when one migrates to another country are likely mediated by the social and structural context that surrounds the individual, and includes community and structural variables such as where they live and available community resources. And other cultural variables, such as living near others who have similar cultural backgrounds and norms. There is a need for acculturation models that include contextual and structural factors that influence acculturation. As more multidimensional acculturation models come to fruition, increased awareness of underlying cultural bias may surface and acculturation measures may be able to better assess the dynamic that occurs as immigrants adopt behaviors and traits from another culture, or not (Chun, Organista, and Marin, 2003). Further exploration of cultural social support and acculturation as they influence behaviors and expectations around self-management is necessary to better understand self-management of T2DM; this finding by Chun and his colleagues suggests the need for further development of theories that help explain the influence of cultural orientation and acculturation as it impacts health and disease outcomes (Chun, Organista, and Marin, 2003).
CHAPTER III
RESEARCH METHODS AND DESIGN

This research project uses qualitative data collection and analysis to investigate and understand the interrelationships between social support, self-efficacy, and self-management of T2DM. In addition, age, acculturation, and level of education were also explored to examine similarities and differences within these categories. A description of the study population, research setting, study instrument, sample recruitment, data collection techniques, and data analyses are presented here.

My study used the conceptual socio-ecologic sources-of-influence model, previously explained in chapter II (Figure 2.1), and led to questions (Table 3.4) that were posed to study participants to answer my research questions. I used a one phase exploratory study design. My study methods consisted of qualitative, in-depth, semi-structured interviews and data analysis to explore sources of social support (family, health care, community, and culture), self-efficacy, and self-management. A methodological framework (Figure 3.1) facilitated the identification of themes in the collected data, subsequent grouping of themes, and the present analysis, interpretation, and recommendations as represented in the following chapters.
The following research methods were used to guide the project:

Conduct a qualitative secondary data analysis of in-depth, semi-structured interviews to explore sources of social support influence, including family, health care, community, and culture, and self-efficacy, in relation to self-management of T2DM in Latinas.

Identify themes of psychosocial factors.

Explore the relationships and pathways between social support and self-efficacy as they contribute to self-management of disease, including an investigation of age, acculturation, and level of education.

Develop recommendations based on findings and results.

Figure 3.1: Research Methods

**Study Population**

The study population consisted of 33 self-reported Latinas (10 from Salud Family Health Center, 23 from Kaiser Permanente between the ages of 42 and 70) who had enrolled and had just participated for two years in a behavior change intervention, ¡Viva Bien!. The ¡Viva Bien! intervention was based on a successful, comprehensive theory-based program conducted in Oregon by the Oregon Research Institute called the Mediterranean Lifestyle Program. That program had been shown to be effective in improving biological, behavioral, psychological, and quality of life outcomes in Anglo women with T2DM (Toobert, Glasgow, Strycker, Barrera, et al., 2003).

The aim of ¡Viva Bien! (VB) was to reduce the risk of coronary heart disease (CHD) for Latina women with T2DM by participating in a lifestyle behavior change program that incorporated a healthy diet, physical activity, stress management, social support, and smoking cessation. The VB study had a total of 280 Latinas enrolled between early 2008 and late 2010 and was supported by a grant from the National
Heart, Lung, and Blood Institute (R01 HL0771120). Participants in the VB study received care from 14 Kaiser Permanente Colorado medical clinics as well as a subset of non-KPCO members who were recruited from the Salud Family Health Center in Commerce City, Colorado.

The VB intervention began with a weekend retreat to introduce the lifestyle behavior change program. The study intervention consisted of six months of weekly four-hour meetings that were composed of one hour each of physical activity, stress management, dinner and potluck (visited occasionally by the study’s dietician or physician to discuss diabetes self-management), and social support. After six months, meetings became less frequent, averaging a meeting every other week, for another six months, followed by monthly meetings for months 13-18, and every other month for the last six months of the two-year intervention period. Because of the large time commitment for the participants, reminder calls were placed weekly and family members were invited to attend several meetings throughout the intervention period.

For the exit interviews, 40 women (10 women from each of four VB intervention waves) were invited to participate; 33 interviews were completed with 7 participants excluded due to incomplete interviews (failed to show for the interview or incoherent recording). The 33 women who participated in the interviews used for this study represented a combination of KPCO and Salud Family Health Center patients, with 8-9 participants from each of four ¡Viva Bien! study waves. Demographics and characteristics from the participants are in Table 3.1 and include level of acculturation, level of education, employment status, income, living arrangement, primary language spoken at home, marital or partner status, and health care system. Level of acculturation was measured using a modified ARSMA II (Appendix B) measure to assess ethnic identity, and participants were asked a series of questions that assessed whether they
viewed themselves as mostly Latino, somewhat Latino, mixed Latino and Anglo, somewhat Anglo, or mostly Anglo. The ARSMA II is based on its predecessor, the ARSMA, which is the most widely used acculturation measure for Latinos as an assessment of national heritage, generational status, language use, social relationships, cultural practices and other aspects of acculturation. The modified ARSMA included questions regarding activities done in English or Spanish, including thinking in either language. The reliability and validity of the ARSMA II have been established (Cuellar, Arnold, Maldonado, 1995). Data from the acculturation survey measure were converted to a five point scale based on how the ARSMA II scale categorizes levels of acculturation, with Level 1 = most Latino, Level 2 = somewhat Latino, Level 3 = mixed Latino and Anglo, Level 4 = somewhat Anglo, and Level 5 = most Anglo (Cuellar, Arnold, Maldonado, 1995). Participants were given the ARSMA II assessment individually at one of the four centrally located KP medical clinics or the Salud health clinic. Data were keypunched and verified for accuracy.
Table 3.1: Participant Demographics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total Sample (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number/(%)</td>
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<tr>
<td><strong>Age range</strong></td>
<td></td>
</tr>
<tr>
<td>42-51</td>
<td>33 (100)</td>
</tr>
<tr>
<td>52-61</td>
<td>9 (27.2)</td>
</tr>
<tr>
<td>62-70</td>
<td>12 (36.4)</td>
</tr>
<tr>
<td><strong>Level of acculturation (ARSMA II)</strong></td>
<td></td>
</tr>
<tr>
<td>Most Latino</td>
<td>8 (24.2)</td>
</tr>
<tr>
<td>Somewhat Latino</td>
<td>1 (3)</td>
</tr>
<tr>
<td>Mix Latino / Anglo</td>
<td>6 (18.2)</td>
</tr>
<tr>
<td>Somewhat Anglo</td>
<td>8 (24.2)</td>
</tr>
<tr>
<td>Anglo</td>
<td>10 (30.3)</td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
</tr>
<tr>
<td>Grades 0-8</td>
<td>4 (12.1)</td>
</tr>
<tr>
<td>Grades 9-11</td>
<td>4 (12.1)</td>
</tr>
<tr>
<td>High School</td>
<td>10 (30.3)</td>
</tr>
<tr>
<td>Some College</td>
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<tr>
<td>College Graduate</td>
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<td>Post College Work</td>
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<tr>
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<td>Employed for wages</td>
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<tr>
<td>Unemployed for less than 1 year</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Unemployed for more than 1 year</td>
<td>1 (3)</td>
</tr>
<tr>
<td>Homemaker</td>
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</tr>
<tr>
<td>Retired</td>
<td>12 (36.3)</td>
</tr>
<tr>
<td>Missing</td>
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</tr>
<tr>
<td><strong>Income</strong></td>
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</tr>
<tr>
<td>$0-14,999</td>
<td>5 (15.2)</td>
</tr>
<tr>
<td>$15,000-29,999</td>
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<tr>
<td>$30,000-49,999</td>
<td>6 (18.2)</td>
</tr>
<tr>
<td>$50,000-69,999</td>
<td>4 (12.1)</td>
</tr>
<tr>
<td>$70,000-89,999</td>
<td>3 (9.1)</td>
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<td>$90,000 or more</td>
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<tr>
<td>Live with spouse or partner</td>
<td>13 (39.4)</td>
</tr>
<tr>
<td>Live with spouse/partner and children</td>
<td>11 (33.4)</td>
</tr>
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<td>Live with children only</td>
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<td>Live with parents or other relatives</td>
<td>4 (12.1)</td>
</tr>
<tr>
<td>Live with unrelated roommates</td>
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</tr>
<tr>
<td>Live alone</td>
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<tr>
<td>Missing</td>
<td>1 (3)</td>
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<td><strong>Primary language spoken in home</strong></td>
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<td>Spanish</td>
<td>7 (21.2)</td>
</tr>
<tr>
<td>English</td>
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</tr>
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<td><strong>Healthcare system</strong></td>
<td></td>
</tr>
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<td>23 (69.7)</td>
</tr>
<tr>
<td>Salud Family Health Center</td>
<td>10 (30.3)</td>
</tr>
</tbody>
</table>
An overview of participant characteristics was further broken down by age, acculturation, and level of education and is presented in Table 3.2. For the purpose of thematic analysis throughout the results chapter, age range is coded into three categories: (1) ages 42-51, (2) 52-61, and (3) 62-70. The age categories are used to balance respondents arbitrarily into three groups according to younger to older participants so that there was approximately the same number of participants in each age group and are based on the age range of the study participants. Acculturation will also be discussed using three categories including: (1) most/somewhat (M/S) Latino, (2) mixed Latino/Anglo, and (3) most/somewhat (M/S) Anglo. For subgroup analysis purposes respondents were categorized using the scores on the ARSMA II measure (collapsing categories 1 and 2, and 4 and 5). Education level is also coded into three categories, including: (1) less (<) than high school (N/A, grades 0-8, and grades 9-11), (2) high school (high school graduate), and (3) more than (>l high school (some college, college graduate, or post-graduate).
<table>
<thead>
<tr>
<th>Age Range</th>
<th>Number (%)</th>
<th>Acculturation</th>
<th>Number (%)</th>
<th>Education Category</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>42-51</td>
<td>9 (27.2)</td>
<td>M/S Latino</td>
<td>4 (44.4)</td>
<td>&lt;High School</td>
<td>4 (44.4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Latino/Anglo</td>
<td>2 (22.2)</td>
<td>High School</td>
<td>1 (11.1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M/S Anglo</td>
<td>3 (33.3)</td>
<td>&gt;High School</td>
<td>4 (44.4)</td>
</tr>
<tr>
<td>52-61</td>
<td>12 (36.4)</td>
<td>M/S Latino</td>
<td>2 (16.7)</td>
<td>&lt;High School</td>
<td>2 (16.6)</td>
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<td>5 (41.7)</td>
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<tr>
<td></td>
<td></td>
<td>M/S Anglo</td>
<td>7 (58.3)</td>
<td>&gt;High School</td>
<td>5 (41.7)</td>
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<tr>
<td>62-70</td>
<td>12 (36.4)</td>
<td>M/S Latino</td>
<td>3 (25.0)</td>
<td>&lt;High School</td>
<td>3 (25.0)</td>
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<tr>
<td></td>
<td></td>
<td>Latino/Anglo</td>
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<td>High School</td>
<td>4 (33.3)</td>
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<tr>
<td></td>
<td></td>
<td>M/S Anglo</td>
<td>8 (66.7)</td>
<td>&gt;High School</td>
<td>5 (41.7)</td>
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<tr>
<td>Acculturation</td>
<td>Number (%)</td>
<td>Education Category</td>
<td>Number (%)</td>
<td>Age Range</td>
<td>Number (%)</td>
</tr>
<tr>
<td>M/S Latino</td>
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<td>&lt;High School</td>
<td>7 (77.8)</td>
<td>42-51</td>
<td>4 (44.4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High School</td>
<td>2 (22.2)</td>
<td>52-61</td>
<td>2 (22.2)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>0 (0)</td>
<td>62-70</td>
<td>3 (33.3)</td>
</tr>
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<td>6 (18.2)</td>
<td>&lt;High School</td>
<td>0 (0)</td>
<td>42-51</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High School</td>
<td>1 (16.7)</td>
<td>52-61</td>
<td>3 (50.0)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>5 (83.3)</td>
<td>62-70</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td>M/S Anglo</td>
<td>18 (54.5)</td>
<td>&lt;High School</td>
<td>2 (11.1)</td>
<td>42-51</td>
<td>3 (16.7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High School</td>
<td>7 (38.9)</td>
<td>52-61</td>
<td>7 (38.9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;High School</td>
<td>9 (50.0)</td>
<td>62-70</td>
<td>8 (44.4)</td>
</tr>
<tr>
<td>Education Category</td>
<td>Number (%)</td>
<td>Age Range</td>
<td>Number (%)</td>
<td>Acculturation</td>
<td>Number (%)</td>
</tr>
<tr>
<td>&lt; High School</td>
<td>9 (27.3)</td>
<td>42-51</td>
<td>4 (44.4)</td>
<td>M/S Latino</td>
<td>7 (77.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52-61</td>
<td>2 (22.2)</td>
<td>Latino/Anglo</td>
<td>0 (0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>62-70</td>
<td>3 (33.3)</td>
<td>M/S Anglo</td>
<td>2 (22.2)</td>
</tr>
<tr>
<td>High School</td>
<td>10 (30.3)</td>
<td>42-51</td>
<td>1 (10.0)</td>
<td>M/S Latino</td>
<td>2 (20.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52-61</td>
<td>5 (50.0)</td>
<td>Latino/Anglo</td>
<td>1 (10.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>62-70</td>
<td>4 (40.0)</td>
<td>M/S Anglo</td>
<td>7 (70.0)</td>
</tr>
<tr>
<td>&gt;High School</td>
<td>14 (42.4)</td>
<td>42-51</td>
<td>3 (21.4)</td>
<td>M/S Latino</td>
<td>0 (0)</td>
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<tr>
<td></td>
<td></td>
<td>52-61</td>
<td>6 (42.9)</td>
<td>Latino/Anglo</td>
<td>5 (35.7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>62-70</td>
<td>5 (35.7)</td>
<td>M/S Anglo</td>
<td>9 (64.3)</td>
</tr>
</tbody>
</table>
Research Setting

The exit interviews that comprise the dataset for this study were conducted at four Kaiser Permanente Colorado (KPCO) health clinics, the Salud Family Health Center (Commerce City), or at the participant’s home. The ¡Viva Bien! program (VB), interviews, and reanalysis of the VB data to address this dissertation’s research questions were approved by Kaiser Permanente Colorado’s (KPCO) Institutional Review Board (IRB). The University of Colorado’s IRB (COMIRB) subsequently ceded to KPCO’s IRB for approval of this study. KPCO provides integrated health care services to approximately 17% of the population in the Denver-Boulder metropolitan area. The Racial/Ethnic Composition of the Denver Metropolitan Population and Kaiser Permanente Colorado membership of the 550,000 KPCO members are representative of the characteristics of the Denver Metropolitan population as presented in Table 3.3.


<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Denver Metro (ACS 2006-2008 data)</th>
<th>KPCO Membership (Qtr 4 2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>68%</td>
<td>74%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>African American</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Asian American</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Native American</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other or multi-racial</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

The Salud Family Health Center was established in 1970 as a migrant farmer health center, and today provides integrated primary health care services to the uninsured, regardless of age, sex, or disease status. Currently, there are nine
community health clinics and a mobile unit throughout north central and northeastern Colorado. The Salud Family Health Centers, which are Federally Qualified Health Centers (FQHC) are designed as “safety net” clinics to help reduce health disparities and barriers to health care including ability to pay, language, and transportation.

The rationale for conducting this study with participants from two different health care organizations, KPCO and Salud Family Health Center, was to obtain a more diverse study sample by reaching women in VB without health insurance (all KPCO members have health insurance), as well as to capture a wider range of experiences with health and health care resources among participants.

**Sample Recruitment**

Convenience sampling was used to recruit the women. The women in this study sample had volunteered to participate in ¡Viva Bien! (VB) and then again volunteered, and consented for a 60-90 minute interview that was conducted after the 24-month VB intervention period. Interested individuals were called 2-4 weeks after completion of the VB program and invited to participate in this study. The original purpose of the interviews was to conduct exit interviews with the women to understand what they liked and didn’t like about the original VB program, and to better understand how they feel about social support, health, and self-management of their disease. Participants were chosen based on their willingness to talk openly about their health and their desire to participate in an exit interview after the intervention. It is important to clarify that participants were prompted to comment about ¡Viva Bien!, and these results are reported because I have used the findings to assess the extent that ¡Viva Bien! influenced their answers to the research questions; however, the dissertation is not an analysis of the ¡Viva Bien! program. This study is a reanalysis of ¡Viva Bien! data to address this study’s research questions.
Data Collection

Interviews took place at four health clinics or at the participant’s home if preferred by the interviewee. Participants were compensated for their time with a $25 gift certificate. Two interviewers were present for each interview, including this investigator and a research specialist. A research assistant, when available, also participated and took notes. Interviews were conducted in the participants’ preferred language (8 Spanish, 25 English). In most cases, two recorders (digital and analogue) were used. I facilitated the interviews whenever possible except for the Spanish interviews, at which point the bilingual research specialist facilitated the interviews in Spanish. Both the investigator and research specialist had Masters’ degrees, and the research assistant had a Bachelor’s degree. All of the participating research staff were trained in facilitating interviews, and practice interviews were carried out with study staff to identify problems with the interview protocol and to refine it.

The collected data consisted of responses to the semi-structured, in-depth interviews. The use of in-depth, semi-structured interviews with open-ended questions enables the participant to explore her health experiences across social support sources of influence, and draws on themes and personal stories that may be relevant to self-management of disease. In-depth interviews have been used successfully to explore health beliefs and practices in Latinas (Julliard, Viva, Delgado, Cruz, Kabak, and Sabers, 2008; Thornton, Kieffer, Salabarria-Pena, Odoms-Young, Willis, Kim, and Salinas, 2006). Other researchers have successfully used in-depth interviews for understanding self-management behaviors in patients who have diabetes, cardiovascular disease and other chronic health conditions (Coventry, Hays, Dickens, Bundy, Garrett, Cherrington, and Chew-Graham, 2011; Collins, Bradley, O’Sullivan, and Perry, 2009).
The main research question, “What is the role of social support and self-efficacy in self-management of T2DM for Latinas?” helped shape the additional sub-questions. The interviewer began the interview with “grand tour” questions also grounded on Kleinman's explanatory model (1978), aimed at having open ended questions guide the interviewee through a discussion regarding disease management. Kleinman's model emphasizes how patients bring their own ideas and perceptions of illness to the clinical encounter; beliefs around severity, trajectory, and treatment can help inform how patient’s experience illness (Kleinman, Eisenberg, and Good, 1978). Clarification probes (Patton, 2002) were used to understand what interviewees meant by social support since that concept can mean different things to different individuals and to encourage interviewees to contribute more to the topic being discussed (Kleinman, 1998). Interviews were guided and facilitated as an open-ended communication and a dialogue was co-created by the interviewer and the interviewee (Crabtree and Miller, 1999). Open-ended questions permitted an environment for the investigator to understand the other person’s perspective (Patton, 2002).

Memoing, which is a form of note taking, was also used as a method to capture and record ideas, potential relationships, and thoughts as they occurred throughout the interview (Glaser, 1992). In this case, the memoing technique includes notes and conjecture or theorizing jotted down on paper during the interviews. For the purpose of my study, memoing was used to draw attention to patient perceptions of important factors – individual, family, health care, community, and culture - that may impede or support exercising self-efficacy of self-management of disease. An example of memoing follows:

“Family traditions as “activity”, sharing aspect of these activities is a positive mental and spiritual influence.”

-Participant 8, pg. 12
“Believed she could have prevented her diabetes had she known how to eat differently, prevented it through diet.”

-Participant 5, pg. 5

In addition, non-verbal communication was observed during the interviews and notes on these observations were taken by the research specialist, which were later reviewed by the investigator.

Once collected, interviews were transcribed. Each interview transcript was verbatim, with the exception of involuntary phrases (e.g. filler words like uh, um, you know); or words that were repeated several times (e.g. I think, I did) unless it was felt it would take away meaning or context from what was being said. After the initial transcription, which constituted between 20 and 30 pages single spaced, the interview was listened to again and compared to the transcription for accuracy. If the interview was conducted in Spanish, the interview was then translated into English by the bilingual research specialist and then back-translated by a different bilingual ¡Viva Bien! staff member for accuracy. Text was then entered into ATLAS.ti qualitative software (ATLAS.ti, version 6) for coding and data analysis.

Thematic analysis of interviewee comments was conducted by this investigator using ATLAS.ti and emerging pathways and relationships were further supported by the use of coding. Thematic analysis is a method used to help code, organize, and describe the principal patterns and ideas in the data (Boyatzis, 1998). For the purpose of my study, structural coding was used to label text according to topic or domain of interest. A code can be a word, phrase, or a mnemonic, that is assigned to text in order to organize and interpret meaning. For example, the topic of cultural traditions was coded to represent this domain, and sub-domains, of interest. One sub-domain for culture was type of cultural influence with the specific code “CT-TI” created to label the text accordingly throughout the interviews. A similar structural code was created for each
domain and sub-domains of analysis. Topics and domains of interest were coded by sentence or paragraph that conveyed contextual information that captured key ideas.

*A priori* coding categories were used to develop a classification system for identifying and categorizing patterns in the data that were plausibly related to the research questions (Patton, 1990), and were further expanded upon to capture new emerging themes during the coding process. I first coded for themes in the concept of self-management of T2DM. Second, I reread the transcripts and coded for themes in the concept of self-efficacy, and third, upon another reread of the transcripts, I coded for themes in the concept of social support, including: family, health care, community, and culture.

The exit interview guide and some examples of probing, open-ended questions, which were relevant to this project, are included in the following table (Table 3.4). A complete list of questions, probes and *a priori* codes can be found in Appendix A. In addition, a descriptive characterization of the results, including the numbers of coded interviews and specific thematic coding information, is provided in Appendix C. The number of coded themes for each of the concepts is listed in Appendix C followed by the significant, reoccurring thematic findings per concept, which represented positive and negative attributes, and allowed me to answer the research questions.
<table>
<thead>
<tr>
<th>Family Dynamics (e.g. immediate, extended, living arrangement)</th>
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<tbody>
<tr>
<td><strong>Question:</strong> Tell me about your family and extended family.</td>
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<tr>
<td><strong>Probing questions:</strong></td>
</tr>
<tr>
<td>• What relationships do you have in your life that influence your health and health behaviors?</td>
</tr>
<tr>
<td>• How do you feel your spouse, partner and/or children feel about your health and their own health?</td>
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<tr>
<td>• Do you feel you can successfully manage your health?</td>
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<thead>
<tr>
<th>Health Care (e.g. types, quality, cost, access)</th>
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<tr>
<td><strong>Question:</strong> Tell me about your health care and health care systems.</td>
</tr>
<tr>
<td><strong>Probing questions:</strong></td>
</tr>
<tr>
<td>• What forms of health care (mental, physical, complementary) do you have access to?</td>
</tr>
<tr>
<td>• What are all of the ways you are taking care of yourself?</td>
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<tr>
<td>• How much do you have to pay to access these forms of health care?</td>
</tr>
<tr>
<td>• How good is the quality of the care you receive?</td>
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<tr>
<td>• Are there other types of health care that you use (e.g. complementary and alternative medicine, home remedies)?</td>
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<tr>
<th>Community (e.g. access, characteristics, resources)</th>
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<tr>
<td><strong>Question:</strong> Tell me about your community support network(s).</td>
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<tr>
<td><strong>Probing questions:</strong></td>
</tr>
<tr>
<td>• Do you have things (people, places) in your community where you feel support or lack of support around your health and health habits? Family? Friends? Church?</td>
</tr>
<tr>
<td>• What types of support (social, physical, mental) do you receive from your family, friends, co-workers and community members?</td>
</tr>
<tr>
<td>• What support do you feel you have within your community (neighbors, peers, business, organization)? Does this support influence your health?</td>
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<table>
<thead>
<tr>
<th>Culture (e.g. traditions, societal and familial norms)</th>
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<tbody>
<tr>
<td><strong>Question:</strong> Tell me about your culture and cultural traditions.</td>
</tr>
<tr>
<td><strong>Probing questions:</strong></td>
</tr>
<tr>
<td>• What cultural traditions do you have in your life that influences your health (e.g. foods, celebrations, activities, family customs, and daily rituals)?</td>
</tr>
<tr>
<td>• How do these cultural traditions influence your health (think of the activities you do, the foods you eat, and how you take care of yourself)?</td>
</tr>
<tr>
<td>• What does a healthy person look like to you?</td>
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**Analytic Plan**

Initial analysis included review of transcripts and memos that accompanied each participant interview. A priori categories of themes and topics were assigned to the raw data to help substantiate the coding process. Data analysis used analytical induction to
identify emerging themes, interpretations of study relationships, and categories about
participants’ lived experiences with self-management of T2DM (Berg, 2004; Patton,

Once I had completed coding the interviews according to the three concepts of
self-management, self-efficacy, and social support, emerging codes had formed and I
began to sort the codes into pathways between the three concepts of self-management,
self-efficacy, and social support. The text was coded by the investigator for reoccurring
themes of psychosocial factors, including positive and negative attributes, and their
relationship to self-management of T2DM. The emerging and reoccurring themes were
used in the development of a thematic framework to organize findings. Comparisons
among the study participants were made based on importance of social support sources
of influence over self-management. Families of themes emerged, and thematic
categories were adjusted accordingly. Thematic results from the interview data analysis
include quotes pulled from the data that were most interesting, reflective, and indicative
of the theme in question or were most typical of the participants’ viewpoints.

As pathways begun to form between the concepts, I wanted to explore further if
there were any relationships between the concepts dependent on age, acculturation,
and level of education. I then grouped the transcripts into three sets of data depending
on age range, acculturation level, or education level. Each set of transcripts was then
reread to pull out common themes depending on the category of interest; namely, each
concept (self-management, self-efficacy, and social support) was coded according to
age category, acculturation level, and level of education.

Thematic results were drawn from the data to inform the relationships among the
primary concepts of self-management, self-efficacy, and social support. Primary social
support themes in the areas of family, health care, community, and culture were
examined to determine which area of social support is most important to the study participants. Themes representing influences on self-efficacy were identified. Self-management themes were identified in relationship to positive and negative attributes. Thematic results were analyzed and synthesized to inform conceptual theoretical and practical implications for the Latina patient population. In addition, age, acculturation, and level of education were explored in relation to the three concepts of self-management, self-efficacy, and social support to look for similarities and differences within each category, as they inform implications for the health of Latinas.

A deductive approach was taken to look at the broad concepts of self-management, self-efficacy and social support as they interrelate and are informed by specific themes found throughout the interviews. Once interviews were entered and coded in ATLAS.ti, according to the constant comparative method (Berg, 2004; Patton, 2002), cross-case analysis of the 33 interviews was conducted to group themes of psychosocial factors across answers of similar questions. An inductive approach was taken to look for specific and broad patterns across the interviews and a priori codes to theorize about relationships between the concepts of self-management, self-efficacy and social support of T2DM (Patton, 2002). The constant comparison method is a process that uses inductive category coding to concurrent comparison of relationships as they appear throughout the analysis (Lincoln and Guba, 1985; Goetz and LeCompte, 1981). Themes of psychosocial factors were explored for their relationships to self-management of T2DM and variations were refined to move from individual concepts to theorizing (Tashakkori and Teddlie, 2003; Patton, 2002).

Determining the validity of a study’s qualitative data is defined as the extent to which the phenomenon of interest is credible according to the perspective of the interviewee, and adequately captured and reflected in the data about them that has been
recorded (Trochim, 2001; Patton, 2002). Methodological triangulation was used to verify captured themes and codes by using memoing, observations, notes, and clarification probes to support the interpretation of the in-depth interview data. Methodological triangulation is a common technique used in qualitative research to help validate results through the use of multiple methods to collect and understand data (Denzin, 2006). In addition, respondent validation was another technique used during the interviews to check for credibility and accuracy in interpretation (Yanow and Schwartz-Shea, 2006). Information was frequently restated or summarized as I understood the participant for clarification and accuracy of data collection. Analytical triangulation of data continued until saturation occurred; namely, no new themes emerged.
CHAPTER IV
RESULTS AND INTERPRETATION OF SELF-MANAGEMENT, SELF-EFFICACY, AND SOCIAL SUPPORT

Results are organized by the three main concepts of self-management, self-efficacy, and social support. In this chapter, results are grouped as themes under each concept. Themes are used in several ways to enable my analysis of the three concepts. First, themes may have a positive or negative valence embedded that relates positively or negatively to a concept. For example, denial (a theme) can negatively affect one's sense of self-efficacy. Second, taken together themes can represent concepts. For example, perceptions of family, health care, community, and culture culminate to a generalized but individual sense of social support. Third, my analysis of themes enables a theoretical assessment of relationships among concepts. For example, it is through thematic analysis that I am able to draw interpretations about the nature of self-efficacy in relation to self-management behavior.

The themes noted throughout this chapter are most revealing of the participants' ideas throughout all of the interviews. Sub-sections in this chapter will present thematic results related to the concepts of self-management, self-efficacy, and social support as they inform the main research question: What is the role of social support and self-efficacy in self-management of T2DM by Latinas? To answer this question, first I will summarize how the participants talked about self-management, including negative and positive themes that emerged in relation to self-management of T2DM. Second, I will summarize how the participants spoke about self-efficacy, including themes that positively and negatively affected participants' self-efficacy. Third, I will summarize thematic findings of how the participants talked about sources of social support in the areas of family, health care, community, and culture. I will also explore what sources of
social support seemed to matter most to the participants, in an effort to answer the first research sub-question: What is the comparative importance of sources of social support for Latinas?

The last section in this chapter will examine the potential pathways between the three concepts of self-management, self-efficacy, and social support. The interpretation of these pathways will address the dissertation’s second research sub-question: How does social support influence self-efficacy and self-management for Latinas? In addition, social support thematic results will be reviewed as they relate to self-efficacy themes, including an explanation of the implied pathways between social support and self-efficacy. Next, the themes that constitute social support will be examined as they affect self-management of disease. Lastly, I will answer the final research sub-question: What is the importance of self-efficacy in self-management for Latinas? The themes that constitute self-efficacy will be explored as they inform pathways to self-management.

**The Concept of Self-Management**

Throughout the interviews, participants were asked to clarify their comments and statements around specific T2DM self-management behaviors, including what behaviors were easier and/or harder for them to complete in the primary areas of medication adherence and blood sugar monitoring, eating a healthy diet, and engaging in regular physical activity. Four themes were identified from the interviews as negative in relation to self-management: medication, stress, healthy eating habits, and money. Throughout the interviews, two themes overlapped as both negative and positive in relation to self-management of T2DM: physical activity and social support. Finally, three themes emerged as positive in relation to self-management of T2DM: knowledge and education, collective-efficacy, and continuity and routines. Thematic results for self-management are presented in Figure 4.1.
Figure 4.1: Thematic Findings For Self-Management

**Medication**

Nine of the participants (n=9) in this study reported concern over taking medication, though not necessarily medication associated with their diabetes control. In addition, four of the nine participants commented that they consider taking any medication bad for their health and believe that taking medicine can be more damaging to treatment of their T2DM than not taking prescription medication. Further, several of these participants made comments suggesting that taking too many medications may lead to other health ailments, which was also of concern. Thematic findings suggest a general distrust of medications, including diabetes medication as well as other medications, for selves and others.

“I really want to get off of these pills. I find they’re damaging me more….Cause there are a lot of people out there sick because of medications; so many medications. Some are taking 13 to 19 a day. And I feel they’re number one killers.”

-Participant 13, pg. 21
Many other participants echoed this feeling. In addition, several participants suggested that if an individual is able to wean off medications they will be healthier, and feel healthier overall.

“(Healthy) means, first of all, that I can maintain my staying away from taking medicines. Stay away from, if possible, taking medication. Cause it has side effects. To me it causes other problems too sometimes.”

-Participant 2, pg. 19

Several of the participants voiced concerns over family and friends taking medication, noting worries that taking medicine contributes to poorer health outcomes for their families and loved ones. In addition, four of the participants specifically commented that monitoring their A1c levels, as part of their medication adherence regimen was very difficult for them to do consistently, and was a struggle given their negative views on medication.

**Stress**

Stress was consistently brought up as a negative theme in relation to self-management of T2DM (n=9). Several of the participants noted that feelings of stress negatively contribute to their T2DM disease management as it overshadows their ability to be successful in daily management behaviors. Frequent stressors noted throughout the interviews included worrying about their diabetes and other comorbidities or health ailments such as being obese or overweight.

“But it’s the hidden things that happen to you like the liver and kidneys. Things like that. If you let them get to a certain point, they’re not going to get any better, and they’re going to kill you.”

-Participant 13, pg. 37

Eight of the nine participants commented that they experience stress over the effects that T2DM has on their body’s organs, with two participants suggesting that stress contributes to a sense of fatalism or lack of control of their T2DM, which thereby contributes to poorer management of disease.
“Diabetes eats everything, our entire system. Everything, everything, the heart goes, the kidneys go.”

-Participant 26, pg. 13

Further, having more than one health issue contributes to the participants feeling stressed and, thereby, “out of balance” when disease is not effectively managed. The concept of balance and having a balanced life was considered important to five of the participants when they were asked to think about what it means to be healthy. In addition, the notion of “rushing around” in American culture was also voiced by a few participants (n=4) as a similar concern as it contributes symbolically to an individual being out of balance in life, and therefore being in less than optimal health.

“Healthy means having a balanced life.”

-Participant 30, pg. 32

A few participants (n=4) tied stress to being a Latina in the U.S., including how they feel they are viewed as culturally different, including cultural expectations.

“I guess in some ways part of my experience as a Latino is that I feel like I experience a kind of stress that is similar across all of us…… my stress isn’t just mine. So, for instance, if my nephew’s having trouble with his children, that affects me. I worry about that. It’s not like, “Oh well, that’s my nephew, it’s his family, he’ll figure it out.” It doesn’t work like that for us.

-Participant 30, pgs. 25 & 29

Furthermore, four of the participants commented that they had no or little experience with incorporating stress management activities into their life (e.g., yoga, meditation). Two participants noted that they were unsure of how the practice of stress management would benefit their health or whether it is viewed as appropriate in their culture to engage in stress management activities, including yoga, given their religious faith and that they didn’t want the practice of yoga or other stress management techniques to be viewed culturally as being sacrilegious. Another theme that a few participants mentioned (n=4) around stress and stress management was that men, in general, do not stress as much as women do.
A few participants (n=4) commented that they worried high stress levels leads to negative thinking, which poorly impacts their physiologic markers (e.g., A1c, blood pressure), and, subsequently, contributes negatively to self-management of T2DM.

“The only barrier, the only thing that’s detrimental is my negative thinking. You know, there is nothing else stopping me.”

-Participant 29, pg. 18

The theme of stress was pervasive throughout the interviews, and participants spoke in detail about the importance of it with regard to how it negatively influenced their ability to self-manage diabetes.

Healthy Eating Habits

Eating a healthy diet was reported as a negative theme in relation to self-management of T2DM, with nine of the participants stating that they feel eating the right diet is the most important and the most difficult factor when working to manage their T2DM. Further, six of the participants feel eating a healthy diet is the most difficult self-management behavior.

“A lot of people are very ignorant about what you eat that isn’t sugar that’s going to turn into sugar. I was one of those. I never ate sugar, I never drank pop, I never, I didn’t eat that kind of stuff. But, I was eating a lot of breads and pastas that do turn to sugar. And a lot of people were very ignorant about that because of the culture. They eat the way their parents eat, and they cook that way, and they just keep passing it down. To when they were diabetic they didn’t know how to get off that merry-go-round. And from what I could see a lot of these gals really did learn a lot. And I know I did.”

-Participant 13, pg. 26

Several of the participants commented that food preparation made good dietary behaviors difficult for them due to the need to think differently about how they prepare foods in more healthy ways, which may be very different from how they were taught as children (e.g., using olive or canola oil in place of the traditional lard when preparing beans, and cooking fish or chicken over traditional red meat). Several participants commented that as children their food was prepared at home by their mother or
grandmother, and there were expectations to eat the available foods. Further, vegetables and fruit were not always readily available.

“All the food that my mom made, she made it at home. And no, I remember that we didn’t eat a lot of vegetables, almost always what we ate was the normal-rice, potatoes, beans.”

-Participant 16, pg. 11

“As a child, we hardly ate fruit, vegetables. That’s the way the diet was, beans, soup, beans, potatoes, tortillas, bread, a lot of bread with milk, a lot of bread.”

-Participant 15, pg. 3

Two participants (n=2) noted that classes frequently offered to new diabetics through health care providers and organizations are quickly presented and are not tailored to Latinas. Further, several participants commented that the information regarding how to eat and/or cook as needed to manage their diabetes did not take into account their methods of cooking or include common foods they and their families eat. Two of the participants commented that the timing of diabetes-specific dietary information was often premature. They did not understand or accept what they were being asked to do around dietary changes, as they were still trying to come to terms with having the disease in the first place.

“I was like, “What the hell is she talking about?” She’s got all these boxes and the cans of soup and I’m looking at it and going “I don’t cook like that.” Cause I cook like my mom, from scratch. We don’t use that kind of stuff. So I’m looking at her and I’m going, “Well, where’s the tortillas, where’s the beans, where’s the…? You ain’t got anything in there that I eat.” I’m sorry. I don’t eat that stuff.”

-Participant 31, pg. 24

The theme of eating healthfully was also frequently discussed when the participants spoke about the ¡Viva Bien! program and, the program’s expectations around how the participants ate during the meetings at the potluck, which was a component of the program. For example, one of the initial exercises that the participants did during the ¡Viva Bien! program was to meet with the Latina dietician to discuss how to clean out their cupboards at home and throw away foods that were unhealthy for them.
to eat. The program dietician did an exercise with the participants where she had a table of frequently consumed Latin foods (e.g., lard, tortillas, beans, chicharrones). During this exercise, the dietician asked the women what they thought they should throw out, and the women proceeded to throw items into the trash can provided. Five participants discussed this exercise during the exit interviews when they were reflecting on how it is hard for them to eat healthy. Specifically, participants expressed disgust when the bacon was thrown away into the trash. These participants conveyed their concern over throwing away perfectly good food that they and their family liked; throwing away food is a waste of food and money. This example illustrates how the participants really enjoy and feel a sense of expectation eating certain foods using traditional methods of preparation.

**Money**

Financial issues affect self-management. Many of the study participants (n=10) reported that money has always been a significant consideration when managing disease in terms of being able to afford medications, healthy foods (vegetables and fruits), physical activity resources (e.g., inability to pay for recreation center memberships consistently, and unsafe walking environments), and other resources (e.g., insurance, living environments) to be successful in their daily management regime.

“It’s hard to stay focused on my eating healthy because I can’t afford a lot of the vegetables and produce out there.”

-Participant 2, pg. 11

Four (n=4) of the participants also discussed concerns over money and access to food when they were children, which influences how they manage their health as adults.

“So they (parents) didn’t think of eating healthy. They just thought, eat, provide a meal for your family - whatever you can provide.”

-Participant 28, pg. 14
Some of the participants (n=7) commented that they live on a monthly fixed income, noting that there are months when they are unable to afford their medications (and have to use available funds to pay rent, buy food, and pay bills first). Other participants noted that they cannot regularly afford fresh fruits and vegetables, and/or cannot take classes at recreation centers or participate in educational programs offered in the community simply because they cannot afford it on a regular basis.

In addition, money was mentioned by a few participants (n = 3) who have higher incomes in terms of how they often give money to family or friends who are in need and that they see this as an important means of support to offer when they can afford it.

**Physical Activity**

Physical activity was viewed as both positive and negative in relation to self-management of disease. Several of the participants (n=6) reported that physical activity was generally easier than other self-management behaviors for them to complete toward managing their diabetes. Swimming at recreation centers (n=7) and walking (n=12) were most frequently discussed as favorite exercises among the participants.

Several participants (n=5) also noted that once a physical activity or exercise became a daily or consistent routine they usually found it easier to maintain the routine, commenting that the health effects were immediate and positive in most cases.

“I probably have more energy (after VB). I can do more things. Because it used to be that “Oh yeah, I’m gonna paint the kitchen.” And then I start thinking, “Oh, maybe I can’t do this.” Where now, we had our garage insulated, so I thought “I’m going to paint this garage.” And by golly, I did, even though I was on a ten foot ladder you know doing the ceiling and stuff. I got it done, and it looks good. Or maybe before I went to this class (VB), I couldn’t because you know the mind was thinking I could do it, but the body wouldn’t let me. But now that I am exercising and stuff, I have more strength and more, you know, I can do more than what I did before.”

-Participant 23, pg. 26
However, getting into the initial routine of doing physical activity and exercise was often hard. Many participants also reported physical limitations frequently kept them from doing activities they would prefer to do.

“Well, I used to go dancing a lot, before, but now with my legs I can’t do that. I just think, I’m grateful that I can just do my housework and go for walks, and do my chores...like with yoga, I can’t really get down on my knees, and bend a lot. I wish I could. But with these knees, it’s hard for me to get down. Even doing housework is a chore.”

-Participant 27, pg. 24

When asked about physical activity behaviors, three of the participants also commented that they were raised as young ladies not to “put their legs into the air”, and that physical activity was not necessarily encouraged by their parents or family when they were growing up.

“As a Latina woman you didn’t really exercise. Oh no. You know, my age group. I’m 52. We really didn’t. You didn’t go to aerobics or anything like that. Say as a 20 year old. We really didn’t. Should have, but we didn’t. I think we were more embarrassed of throwing our legs up in the air and doing whatever.....we didn’t do that.”

-Participant 23, pg. 33

The example of “not putting legs into the air” was an interesting finding that speaks to the cultural norm that many of the women expressed regarding exercise habits and expectations that were placed on them as young Latinas. Participants who expressed this theme were aware that exercise was good for their health and for managing diabetes. However, these participants spoke about how exercise was not something that they were encouraged to do as younger girls. This finding supports exploring the cultural shift in younger Latinas with regard to preferred exercise habits and norms around physical activity as it contributes to prevention and self-management of disease.
Social Support

Social support also emerged as both positive and negative in relation to self-management of T2DM. The theme of social support primarily touched on three types of social support, including emotional (caring for and being cared for), informational (advice), and tangible (help offered) support. Participants did not specifically distinguish between sources of social support. Seven participants commented that social support was the most important contributor to self-management of T2DM. Twelve participants (n=12) suggested that social support could be both positive and negative as it impacts self-management of T2DM. Further, social support, given to others in relation to caring for others and being respectful, was frequently discussed as being both positive and negative as it contributed to self-management of disease. The participants frequently discussed taking care of others and how this made them feel good about themselves. However, many of the participants (n=8) recognized that they often failed to take good care of themselves because they prioritize taking care of others.

“As a Hispanic woman I know I am the heart of my whole family. And my mom was the heart of our family, and my grandma was the heart of her family. And, we play a very important role in our families. Being a Hispanic woman there’s a lot of respect. And you have to live up to that respect that people give you. And that has to do with everything.”

-Participant 20, pg. 19

“I don’t think my family is concerned whatsoever (about my health) because I never talk about it. They are always looking to me because I am a care giver. I think they look to me to do things all of the time, and I’m not a complainer. I just don’t go around saying “I have diabetes, I have this or that. And I don’t even think that half of the time they think that I have it, you know, and then they’re encouraged when I tell them I’ve made so much progress in my health care and my results that I even don’t think they’re right. It’s just a way of living, and you learn to live with it, and you do the best you can.”

-Participant 4, pg. 16

“I think that most of the women in my mom’s, in my family, are the care givers. To the point that they put their own health needs on the back burner. I know that was definitely the case in my mom’s life. I kind of do some of that now. I always watch out for everyone else and kind of say I’m okay.”

-Participant 6, pg. 9
The concept of loneliness also emerged out of the discussions around social support as it influences self-management of T2DM. Four participants commented that loneliness is an issue that stems from a lack of social support and negatively contributes to successfully managing disease. Other participants discussed the recognition of not feeling lonely in their disease after they had met people with similar concerns who also shared a sense of commonality through social support.

“But to know that when you talk to somebody else they feel the same way you do, they have the same concerns, they’re worried about their health, and how they eat and everything. So it’s like ok, you’re not alone. I think that is great. Because sometimes you do feel, you might feel, “Oh gosh, I’m the only one like this or I’m the only one that feels like this.” And then you find out “You know what, they all have the same concerns too.”

-Participant 17, pg. 56

Laziness was another concept in the area of social support that four participants spoke of negatively; namely, how little or no social support made it easier for them to be “lazy” regarding self-management behaviors.

When asked what has helped one participant manage her T2DM, she simply replied, “That I see you one thousand times” (Participant 32, pg. 32). Throughout her interview, this participant spoke to the increase in social support both from the ¡Viva Bien! meeting leaders and the participants in the program; this support was influential on how she now views the importance of her self-management behaviors. Nine of the participants reported that participating in a social support group around self-management of disease became the easiest way for them to improve their self-care behaviors.

“...the friendships that I make with these people that I work out with. That has helped me in the working out part too. Because I look forward to seeing them. So you want to go, even if you don’t feel really excited about doing weights today. It’s still kind of nice.”

-Participant 28, pg. 36
Participants expressed the importance of feeling a part of a collective group and several spoke about the enjoyment they found when participating in social group settings.

**Knowledge, Awareness, and Education**

Knowledge, awareness or *sabiduría*, and education were three of the most commonly reported positive themes in relation to self-management of T2DM for the participants, with 14 of the participants reporting that knowledge learned in the ¡Viva Bien! program gave them increased awareness of how to manage their disease and they felt as though they “woke up”. Education consistently came out of the interviews as being a key factor to improved self-management of T2DM, with a couple of the study participants stating that the education they gained in ¡Viva Bien! "saved" them.

“It was like, it was like a life raft for me. I was drowning and everything. And ¡Viva Bien! came along and I felt like I was being saved.”
-Participant 5, pg. 11

Many participants (n=17) reported increased education and understanding of their disease helped them feel their diabetes was more manageable than before the education; namely, increased education improved perceived self-efficacy. Several participants (n=8) also commented that having family members (usually the mother) who have or had diabetes, and seeing what they go or went through when they fail to take care of themselves, made a significant impact on how they manage their disease.

“And then my brother got it (diabetes) when he was eighteen. Died at thirty. So, it’s a different change. And then with me getting educated about it makes me feel good because the other ones ain’t, you know? We’ve all got it, but one of us.”
-Participant 7, pg. 11

Twelve of the study participants also commented that when they learned additional information regarding self-management behaviors around T2DM this information also benefited their family and other friends, directly.

Four of the study participants noted that they used the internet and other media (magazines, newspaper) to find information around self-management of T2DM. In
addition, a few of the participants commented that they watched television programs that focused on health information, commenting that they shared the information they learned through these programs with family and loved ones.

The importance of knowledge and education as it increased awareness was a persistent theme throughout the interviews; there was a sense of pride and empowerment from the participants who expressed that they felt proud to be able to share their knowledge with loved ones and family.

**Collective-Efficacy**

When participants were asked about their ability to self-manage their disease, the theme of collective-efficacy was pervasive as many participants (n=12) discussed the positive aspect of working and learning with others to take better care of their health.

“We had a lot of the ladies there are from Mexico, you had people from Puerto Rico, Brazil. That was all Latino people, the women, and we all got to focus and knowing our ways and stuff. You get to learn their cultures, our cultures, the way we are, but we’re all Latinas. And that’s what was good about it.”

-Participant 6, pg. 15

Participants expressed the importance of eating a healthy diet and participating in regular physical activity; sharing self-management responsibilities with others who had similar disease management regimes seemed to resonate with the participants and increased adherence for many of the participants who commented that they felt more capable of doing certain behaviors when there was a collective effort.

“I think we need to learn how to drink more water, eat healthier and work with each other. Everyone needs to work with each other on all of this stuff, cause its hard. It’s hard to by yourself. You can’t do it by yourself.”

-Participant 2, pg. 3

The importance of family in Latina culture highlights this finding; namely, familism is reinforced through the collective-efficacy of a group and nurtures empowerment to manage disease more proactively. In addition, there seemed to be a reciprocal relationship between the participants who participated in the ¡Viva Bien! program.
“One learns from everybody else and everybody learns from one.”
-Participant 9, pg. 26

Namely, the collective effort at the community level fostered a sense of accountability to others and enablement to improve self-management behaviors.

**Continuity and Routines**

The theme of continuity and routine of self-management behaviors emerged as a positive theme of facilitating self-management of disease (n=7). As one participant succinctly noted, behavior change takes time “so I can finally get it in to my head” (Participant 8, pg.60).

“I liked when we were meeting once a week (for ¡Viva Bien!). I think that could have been extended. Because you know what when you first start out, you’re asking people to commit to something and a lot of people didn’t get into a rhythm. And then as soon as we got into the rhythm at the end, it changed by decreasing the times that we would get together. I found the last three months of this program to be kind of a waste. They were, cuz they were once a month and people weren’t coming and a lot of people lost interest. And I myself was one of them. It seemed like people had moved on. They weren’t really interested in finishing the study. So that to me was kind of a downer.”
-Participant 6, pg. 16

The routine of the ¡Viva Bien! program was discussed during the interviews, as thirteen participants (n=13) commented it helped them feel more accountable to each other, as they learned what the program leaders and participants expected of them during the two year intervention. A couple of participants commented that they felt looked up to during the program, and wanted to be seen as role models for other participants. Further, seven participants (n=7) suggested that the continuity in the meetings and the program’s overall expectations in the areas of physical activity, diet, stress management and social support helped facilitate good self-management behaviors even when they were not at the actual VB meetings.

“….difficult in the beginning. But they become easy as you practice and go on. Just a continuation. It becomes a habit, instead of a bad habit it’s replaced with a good habit.”
-Participant 29, pg. 26
Conversely, when the program ended several of the participants (n=6) reported that it was harder to keep up self-management behaviors, with one participant stating that she was “devastated” when the program ended. Three of the participants reported being considerably depressed when the program was over.

“Oh, I was devastated. I thought, “I'm not going to see these people anymore.” And I thought “Oh, I could call them.” But I never did call them. So that doesn't work. It doesn't work unless you work.”

-Participant 20, pg. 30

“I didn't have any connections with anybody (after the program ended). I kind of went to the wayside you know? But then I had to get myself together and say, “No, no. This is not who you are. This is not what ¡Viva Bien! wants for you. They taught you to do all the good that you need to do. And you need to continue doing it.” And so then that attitude changed. I started doing things on my own, and trying to help myself get healthy.”

-Participant 20, pg. 20

The theme of consistency and routine was present when the participants expressed the importance of self-management behaviors. For example, physical activity routines and consistency around having access to healthy foods, health care, and social support groups were widespread themes throughout the interviews.

The Concept of Self-Efficacy

Self-efficacy was measured by the participants’ responses to interview questions that inquired about her confidence and perceived ability to manage diabetes through the primary behaviors of medication adherence and A1c monitoring, diet, and physical activity. In addition, each participant was asked what they feel a healthy individual looks like, and whether or not she, herself, feels that she is healthy. The intention behind this question was to better understand the context of health as the participants viewed it. The participants’ answers to this question also helped inform perceptions of self-efficacy, and are therefore discussed in this section as they negatively or positively contributed to the concept of perceived self-efficacy. Two themes emerged as negatively influencing self-
efficacy for T2DM self-management: denial and depression. The themes of increased self-management behaviors that came from learning new skills and increasing one’s knowledge and the sense of collective-efficacy emerged as positively influencing self-efficacy for T2DM disease management. Thematic results for self-efficacy are presented in Figure 4.2.

![Thematic Findings For Self-Efficacy](image)

**Figure 4.2: Thematic Findings For Self-Efficacy**

**Definition of Healthy**

The majority of the participants (n=23) commented that if an individual is “healthy”, then she is confident that she can carry out good self-management behaviors toward managing T2DM. This definition of healthy, as either positive or negative was indicative of the individual’s perceived self-efficacy; whereas being healthy means being confident you can do healthy things, and when you do them it reinforces your confidence.
“But when I get up I feel good, my back’s not hurting, I can move. To know that I can do things and do them without fear that I’m not able to. To know that I can still go and try it. That it doesn’t limit me in some of the things that I can try. I did my trip a couple of weeks ago I went to Hawaii and I hadn’t been in so long……and nobody wanted to go to Diamond Head, And I said, you know what, there’s no reason I can’t go. So I got up and I felt good. When I got back I felt good. I walked all the way up there and I thought, “You know what, I’m so proud of myself…..Being healthy means, it’s all part of everything now…I feel like I’ve got to this point and I’ve got to keep going. I don’t want to go back where I was. I feel better. My attitude. My daughter said too, “You know mom, it seems like you’re happier, and you’ve got a purpose in life. You’re taking care of you.” And I said “well, that’s it.” I’ve got to take care of me.”

-Participant 17, pgs. 39, 41

Many of the participants (n=9) reported that they feel healthy individuals are generally happy and have a positive attitude in life, and suggested that they feel attitude “causes” health or sickness.

“ And you see them, they’re happy, they’re wanted to help people, then you know that they’re healthy. But if somebody is laying around and just not wanting to do anything, well then you know that something’s wrong. Or they’re depressed. Some people when they’re not healthy they always depressed. They’re not happy people.

-Participant 27, pg. 20

“People who complain a lot and don’t like themselves, or don’t feel good about themselves, they usually aren’t healthy.”

-Participant 12, pg. 13

There were several other common indicators of health and how healthy individuals are perceived, which participants spoke of. A few of the participants (n=4) commented that healthy women have “good skin”, and several (n=5) participants also said that being skinny is not considered healthy in Latin culture. Another common response for a healthy person is an individual who is educated (n=5), and a few participants (n=4) alluded that they felt if one was taking care of herself (and managing her diabetes), even when they have a chronic disease or comorbid conditions, then they are healthy. Another indicator of being healthy, as discussed later in this section as it relates to increased self-management, includes taking the time to “get ready” or “fix up”; wearing nice clothes, going to the salon, and getting out of the house.
“...because you have to get up and get ready. And once you get up and get ready, you’re out of the house. And once you are out of the house, you are moving all the time. Walking.”

-Participant 19, pg. 18

“I think that if they’re truly healthy you would see that they would have like a glow. I mean their face, their complexion would be good.”

-Participant 31, pg. 27

“He (son) has his disease under control, but when you have your disease under control you are also healthy.”

-Participant 22, pg. 40

Denial

Nine of the participants (n=9) commented that they or others they know who have T2DM are in, or were previously in, denial of their condition; believing that they are not truly sick or - when they found out they were sick - they did not want to change behaviors to help manage the disease. This sense of denial, therefore, was seen as negative in the relation to self-efficacy for many of the participants.

“You have to be brutally honest about what could happen to you. And a lot of people don’t hear that and they don’t see it because they’re feeling good. And a lot of people have not been around people that have diabetes. Like I wouldn’t have been as in tune to it had my mother not suffered the way she did.”

-Participant 13, pg. 38

“He’s (my husband) a diabetic, and he’s mostly in denial about his diabetes. And because of that, it’s very difficult for me to try and stay on any kind of plan, or way of life. My husband’s an engineer so he’s very logical. Most things he can fix..... when he can’t fix something, it very much stresses him out. And he can’t fix his diabetes, and he can’t fix mine. Because of that he tries to just ignore that he has it. And doesn’t want to fix it. And not being able to do it together, supporting each other, has been a real problem.”

-Participant 5, pgs. 4-5

There is literature to support an expectation of altruism is common in Latinas who are viewed as the matriarchs of the family (Mouldon M, Melkus GD, Cagganello, 2006; Oomen JS, Owen LJ, Suggs; 1999; Lipton RB, Losey LM, Giachello A, Mendez J, Girotti, 1998). Denial seemed to be a predecessor to depression for some of the women who, after accepting that they had T2DM, became depressed when they did not feel they
could manage it effectively. Ten of the participants (n=10) spoke about the confidence they had in managing their disease when they finally accepted their disease and began to learn about it through education and increased knowledge. The interaction between knowledge and acceptance led to a change in behavior, which contributed to a sense of increased self-efficacy for several participants. Prior to accepting that they had T2DM, several participants suggested that they didn’t believe they needed to make changes, regardless of whether or not they could make changes to improve their health.

“I, just watching other people, learning from them, and seeing, and that’s why I say I need to get up and try to figure out something, and do something”.  
-Participant 2, pg. 16

As they began to accept their disease, they watched and learned through others who were in similar health states and who had similar lives; learning and changing their own behaviors through vicarious experiences that influenced their own self-efficacy.

**Depression**

Feelings of depression reduced self-efficacy for a large number of participants (n=11). Several participants shared how they had struggled throughout life with bouts of depression, and many considered their mental health providers a primary care giver (n=5). Several participants suggested that their ongoing depression contributed initially to how they viewed their diagnosis and management of T2DM.

“Instead of going to the little classes that didn’t even make sense to me, to really, they wanted you to learn everything in two hours. First of all, it’s Greek to you to begin with. And then you’re expected to learn how to cook in two hours? I don’t think so. That’s maybe what they talk about, is your food, and your food charts, and what you should be eating, and how many of this and how many of that. I’m like, “Oh sheesh. I have to be calculating all this stuff?” And they delude you, because first of all your heart’s not in it. You’re depressed at being diabetic. So yea, that what I would say that would be the best time to get people on the right track. Is right then and there. ‘You’re diabetic now, this is what it’s all about.”  
-Participant 28, pg. 46
Depression was expressed by several participants as influencing their beliefs about diabetes and the confidence they had to manage their disease. Several participants suggested depression masked their disease, thereby hindering what was needed to manage it. Several participants commented that participation in ¡Viva Bien! helped bring them out of a depressive state, and gave them new skills to help manage diabetes and depression. Further, participants suggested that involvement in ¡Viva Bien! encouraged them to make behavior changes and to participate consistently throughout the program because they didn’t want to disappoint the other participants or meeting leaders.

**Increased Knowledge and Self-Management Behaviors**

Eight participants (n=8) suggested an increase in knowledge of self-management behaviors increased perceptions of self-efficacy to manage their T2DM and take better care of their health. Several of the participants commented that they learned new skills from watching other participants in the ¡Viva Bien! program, suggesting that it was important to observe other Latinas doing behaviors successfully, which helped increase their own self-efficacy to believe that behavior change was possible for themselves.

“And I go “I never had nothing like this (VB), never experienced anything.” She (the VB social support leader) goes “Well, how do you feel now?” I go, “I feel ok, I feel ok. I feel even better. Like what I’m doing is gonna be the best thing for myself.” It was all right there in our hands.”

-Participant 2, pg. 31

Taking care of one’s appearance also emerged as a theme in relation to self-efficacy for self-management behaviors with several of the participants (n=5) observing that when they take better care of themselves, including wearing make-up, dressing nicely, and having their hair done, they feel more capable of managing their disease and feel more empowered to take care of their health.
“Later (after participating in VB) I even liked fixing myself up more, I liked changing my clothes more, and it was affecting me. Also I didn’t know what to do because I saw that with time I was limiting myself, I didn’t want that.”

-Participant 22, pg. 18

Participants (n=7) who reported they did not have to ask for permission from their husbands or partners to participate in self-management behaviors (e.g., attending the ¡Viva Bien! program, attending community physical activity and recreation classes, cooking healthy meals for the entire family), had more feelings of empowerment to successfully carry out self-management behaviors. Several of these same participants also suggested that they felt more confident to do additional self-management behaviors, including trying new classes, seeking out more health resources, and sharing their knowledge with others who have diabetes.

“I didn’t ask permission from my husband….any maybe it was an advantage for me, that I deserved, I asked permission for everything from him. I knew he wouldn’t give me permission; he wouldn’t have even taken me, or even let me come. …In conjunction with my illness, my lifestyle, I feel better, because the way I felt with the support I felt that what I did (participating in VB) wasn’t wrong, especially for me –for the rest, who knows – but for me it wasn’t bad because one learns things, one learns how to live. For me when I talk to people like you two, I learn things. I learn that I need to be me. It’s bad what I have lost, no? That is why, I think, I tell him.”

-Participant 22, pg. 16-17

Participants (n=7) who felt they have more self-efficacy to carry out self-management behaviors were more apt to see diabetes and other health conditions (including depression) in terms of problem solving ways to treat their health conditions, with less focus on causes of the medical condition or ailment.

“I’d spent a lot of time thinking about what causes some of my depression and working with that. What I’d never done was work through the problem and come up with solutions for dealing with it. And that helped a lot.”

-Participant 5, pg. 17

“Now I am taking the problem seriously, and I know the problem that I have. Because I never thought that diabetes was an illness, I for me, I would say, “No, I’m not sick.” I didn’t assimilate it; I hadn’t assimilated how much of a problem it was, eh.”

-Participant 8, pg. 27
Participants suggested that the increase in self-management behaviors was related to learning new skills and increased knowledge that helped increase self-efficacy in this Latina population. Findings suggest that the increase in knowledge could be more essential for increasing self-efficacy in Latinas who may not be aware of the importance of self-management behaviors because of cultural biases.

**Collective-Efficacy**

When the participants were asked about their confidence and ability to manage their disease, most of the participants spoke about a sense of collective-efficacy with regard to how confident they felt about being able to make changes toward managing their disease when they felt a part of a similar group. Participants expressed a sense of collective-efficacy that they felt when they participated in community and cultural activities, although many of them commented that they had not previously thought about the significance of being part of a group until they had participated in ¡Viva Bien!.

“(In relation to participating in a social support group) We were all united because we wanted to improve our health, that helped me a lot to be more open, to have more self-confidence. Because before no.”

-Participant 8, pg. 36

“I need the support of somebody that I know being there with me. I think that’s what made ¡Viva Bien! good because it’s more of a personalized thing where people get to know each other.”

-Participant 3, pg. 6

Four participants out of the total (n=33) specifically commented that they feel their ability to manage their disease is more individualistic, and dependent on their behaviors, even when they also spoke to the importance of family and community.

“I just have to work on this myself, it’s me that’s got to make this happen.”

-Participant 2, pg. 9

“I’ve got to take care of myself, I think. Overall, it’s up to you, nobody else.”

-Participant 21, pg. 27
The concept of collective-efficacy was pervasive throughout the interviews, as the participants spoke to their sense of being part of their family, community, and culture as a Latina. One participant also spoke about the sense of collective-efficacy over individualism for Latinos in general, and voiced concern over feeling that Latinos are viewed differently than non-Latinos.

“I really think the world is divided into two kinds of people. People who believe in an individual perspective, and people who have a collectivist perspective. In the United States the predominant culture is individualism. But in Latinos it’s really predominantly collectivism. So there’s a way that we care for each other that feels different. So, I think that’s part of it. I think it’s also the experience, whether it’s recognized by people or not. It’s not part of the culture, but part of the domination that’s happened to Latinos in the United States that we all (Latinos) experience. Like being followed in a museum. Like the whole way that we get treated by the police or our bosses. See that’s not part of our culture, but that’s part of the reaction to our culture.”

-Participant 20, pg. 25

This sense of collective-efficacy throughout the interviews speaks to the concept of ‘combined accountability’ that many of the participants spoke of with regard to their participation in the ¡Viva Bien! program. The expectations in the ¡Viva Bien! program were given great consideration by the participants as many viewed this role as a continuation of care giving to the other program participants, and as part of their role of care giver in the community, just as it had been for their parents.

“Everybody knows everybody, and everybody’s like, you know, family. You don’t have to ask if you could go in the fridge. Everybody feeds you. And of course back in those days adults disciplined everybody, all the kids. I mean you didn’t just get in trouble with your mom and dad, you got in trouble with the whole neighborhood if you did something bad. It’s just more communal.”

-Participant 31, pg. 18

Participants frequently spoke about how they would try and help other program participants during the program, regardless of whether or not these problems were related to self-management of T2DM.
The Concept of Social Support

The social support sources of influence examined in this study included family, health care, community, and culture. Participants were asked to clarify their statements regarding social support sources of influence that are important to them when they think about family, health care, community, and culture. Clarification probes proved useful to elicit the specific aspects of each source of social support and what was of importance to them in those areas. An important finding was that knowledge and awareness was found in each domain of social support, as discussed in greater detail below. Additional thematic results for each social support level of influence are discussed in this section. Social support themes are presented in Figure 4.3.

Figure 4.3: Thematic Findings For Social Support
Family Themes

Family was discussed in terms of the participants’ views on family influence over health as it relates to both current and historic health behaviors and disease management. Participants were asked “what relationships do you have in your life that influence your health and health behaviors?” A large number of the participants spoke of their primary focus on others as the primary care giver in the home (n=11), noting that this is considered both a good and bad thing. The role of care giver is one who instills knowledge and awareness, or sabiduría, which instills wisdom to the family. The theme of being a primary care giver was the most repeated theme in the area of family social support. Participants expressed having an expectation of trust in the family with regard to health matters, including having the support needed to manage their health effectively; namely, family is protective of health. Further, the notion of reciprocation was brought up by several participants as being a good thing that further encourages healthy behaviors by both giving social support and receiving social support; notably, both are to be expected in Latina culture. However, interview findings suggest that participants felt that it was often easier to give support than to receive support from others. Sharing of wisdom, or sabiduría, with family and friends was often spoke to with regard to the awareness that came from participants’ accepting disease and the desire that came from wanting to care for others by helping them gain awareness, too, about their own disease. Many of the participants spoke about how their family members and friends also suffered from diabetes, and how they as care givers felt it was their responsibility to share knowledge and learned awareness to help others.

Three participants brought up “nagging” in relationship to self-management in a positive light, with one participant commenting that even though her granddaughter
"nags" her to take her medicine and eat a certain way, she still views this nagging as favorable:

“Sometimes it’s a pain in the butt, but I wouldn’t do it if they didn’t bug me.”
-Participant 21, pg. 9

“Well if they (the family) see that I’m run down or something, they’ll get on my back. They’ll make me stop eating, or slow down on my eating. They’ll tell me, you know, that I’ve got to watch my sugars.”
-Participant 28, pg. 44

Seven participants (n=7) commented that there are several unhealthy behaviors (e.g., poor diet, smoking, no physical activity) in their home environment, which negatively influence their self-management behaviors. Other participants (n=3) commented that even when family is supportive in one way, such as tangible support through helping do chores and reminders to take medication or blood sugar levels, they may also be unsupportive in other ways. For example, the foods family members may choose to bring in to the home can frequently be unhealthy, and what little physical activity family members offer to do (e.g., occasional walks after work, infrequent opportunities and willingness to exercise together on a regular basis) with the participant can be discouraging at times.

“He doesn’t have any of the issues that I have. So he doesn’t have to be concerned about his eating habits and so he’s not very supportive there.”
-Participant 28, pg. 32

One participant spoke to the extreme lack of support she has at home with her mother and siblings, commenting that when she makes healthy foods her mother encourages the other family members not to eat it because it won’t taste good, even though she, the mother, has not tried the food because it was food not made the using the traditional methods or ingredients.

“My mother says, “Don’t go eating that trash that was made by your- just look at it, how ugly it tastes.”
-Participant 8, pg. 19

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Two participants commented that they feel social support from the family is more important when you get older.

“I think it’s (social support) especially important when you’re home all the time, as a retiree I’m home so much of the time. So at that point I think the social becomes important. It’s not like when you’re working or when you’re raising kids. You’re always busy with kids or you’re always busy with the job. You’re so busy that you don’t miss the social. In other words, you’re giving it some help. But I think as we get older and that’s when the social becomes real important to people, including me.”

-Participant 28, pg. 37

Several participants (n=5) also discussed the support their husband or partners give them and how it could be both positive and negative at times.

“She’s (partner) super supportive in (exercise). She probably wishes I would eat different. She is actually the first one to say “Have you had enough to eat?” It’s very sweet because I don’t feel like she’s pushing it on. That’s different than “Have more to eat.”

-Participant 30, pg. 46

Three of the participants noted that their husbands do not support them eating healthier foods, and want them to prepare foods a certain way. Other participants (n=4) feel that they have no support from their husband or partner. The theme of denial may also factor into lack of support from family members. Several participants commented that loved ones were also in denial about their own disease; a finding that may have social support implications given family members who are in denial of their own disease may be unable to provide support, further undermining self-management and self-efficacy. Further, three participants reported that they have some, but not sufficient or “real” support at home.

Participants were also asked to discuss their source of family social support when they were growing up as it pertained to their health. About half of the participants reported a healthy childhood, and about half reported having an unhealthy childhood. Similarly, several participants reported fruits and vegetables being a part of their diet growing up, whereas several reported that fruits and vegetables were limited throughout
childhood primarily due to financial constraints, including not having enough money to buy them.

**Health Care Themes**

Participants were initially asked “How do you take care of yourself” to begin the exploration of social support in the area of health care. This question led the health care social support discussion for each of the 33 interviews, and the participants were probed to explain types of and access to health care as well as costs and resources for health care.

Participants were asked “do you like your doctor(s)?” The vast majority of individuals who had Kaiser Permanente insurance (n=23) commented that they did like their primary physician, however a large concern with their physician visits was that there was not enough time to talk with him or her as the allocated visit time was usually no more than 20 minutes per encounter. Poor communication with physicians was a concern of three Kaiser Permanente provider participants, who felt that their provider did not understand them and their needs.

“*You know, doctors are not very communicative, and they always have an allotted time for each patient. It’s not like, like if it would be more personalized. They, like they say, they give you the medicine, and if you want to take it, you take it.*”

-Participant 16, pg. 19

Eight of the participants commented they feel the most support from their physicians when they are patient, good listeners, and understand their needs. The theme of having a doctor who was a good listener and who shared relevant, understandable information was the most repeated theme in the area of health care social support. Further, participants spoke about the importance of having a physician that could be trusted to help instill knowledge and increase awareness about disease self-management.
“We (my doctor and I) have established a long term relationship. I trust her implicitly. She gives me really good directions and suggestions.”

-Participant 5, pg. 1

“I think that makes a good doctor – somebody who can see you as a person and not just a patient.”

-Participant 21, pg. 2

Several participants feel that the alternative care they have access to, including massage, chiropractors, and other physicians (generally located in Mexico) are supportive of their health.

“I trust him (doctor in Mexico) a lot. I explain myself in depth, since he speaks Spanish. I explain in depth about everything that I am feeling and how I feel. That’s the main thing.”

-Participant 25, pg. 3

Home remedies were mentioned by six of the participants as being supportive of overall health management as they informed their view of health care. One health remedy was brought up by four of the participants (n=4) as a method their mother or grandmother used to help fight fevers when they were young:

“When we have fevers, she would put potatoes, sliced potatoes, and dip them in vinegar and baking soda. And she would tie it around my head with a rag and she would put some of that on the top of my head and my feet and my hands. And it worked.”

-Participant 33, pg. 6

Five of the participants reported not having any health insurance growing up, and health treatments were done at home by the parents or family members.

“When we were kids we never went to the doctor. I mean we had to have a fever for like over a 100 for three days, or whatever, before our parents would take us. So, I learned a lot of medicines from my mother and a lot of techniques of how, you know, if you’re feeling constipated and you take a little castor oil. And I still believe in all those little old remedies.”

-Participant 16, pg. 41

Community Themes

Interview questions regarding community resources and social support were initially framed by asking the participants to “tell me about your community support
networks when it comes to your health.” Participants commonly reported community organizations, businesses, or institutions that they participated in, including: church (n=6), gyms or recreation centers (n=5), and peer groups (n=3) that they would meet with out in the community as being common activities that helped support their health and self-management of T2DM through shared knowledge and stories. Having a sense of collective-efficacy through participation in community activities was mentioned several times and participants spoke to an increased awareness and acceptance toward their disease that came from learning from other women who they could identify with.

Weather (n=4) and transportation (n=5) were frequent concerns when going out into the community to attend activities. One woman reported that she had recently gotten a treadmill for her to walk on when the weather was poor. Four participants commented that they felt a lack of knowledge around availability of community resources and the type of community resources (e.g., educational classes, exercise programs) that were available to them prior to participating in ¡Viva Bien!.

“There’s so much out there that you don’t take advantage of. It’s all available. You just do it, and you just have to make a practice of it.”
-Participant 17, pg. 51-52

However, there were a couple of participants who also voiced that even though they are aware of community organizations and activities in the community that are available to them (sometimes for free) they did not attend or try them out.

“My sons would invite me, but I never went. I had never been inside. My sons would take me and I would pick them up. Of course, it never occurred to me to go inside.”
-Participant 22, pg. 14

Several participants commented that once they participated in ¡Viva Bien! they felt more confident to seek out community services and resources. One participant commented that she does not feel a part of her community, primarily due to language
barriers and her neighborhood demographics. In addition, the notion of not feeling accepted came out during the interviews for a couple of the other participants.

“Well, my family always accepts me just the way I am. But other people don’t. They don’t have to accept you the way you are. They can say, “I don’t like her because she’s fat….and they are always rejecting. It’s just human nature to reject people.”

-Participant 20, pg. 28

In addition, a few participants (n=5) commented that they feel discrimination is still prevalent in their communities. Three participants brought up the concept of stigma, and having to “try harder” as a Latina.

“Because you are Hispanic, you had to try harder. And you really had to go to school. And you couldn’t let that be part of why you didn’t do well.”

-Participant 17, pg. 29

Nine of the participants commented that they identify with other diabetics when they meet them in the community at health programs or classes. The theme of meeting and identifying with other individuals in the community, who have similar health issues and lives, was the most repeated theme in the area of community social support.

“I think having interaction with people that feel the same way you do, or understand you. Again, all people that went to ¡Viva Bien!, they all had diabetes. So they understood, they understood a lot of things about you.”

-Participant 3, pg. 24

Cultural Themes

The participants were asked to “tell me about your cultural traditions and how they influence your health.” Five of the participants commented that as Latina women they are expected to stay at home, cook, and have babies; cultural expectations that were instilled as children, and informed their development and knowledge base growing up as Latinas.
“I think it’s just a cultural influence that they have. They believe that they should just stay home. And not go out and exercise. Staying in their house, the dietary aspect, and just the way they’re looked at by their husbands. They’re expected to do all this. They say, “My husband, he will kill me if I don’t have supper ready for him. And I must have his gorditas just the way he likes it.” And if she tries to change it even a little bit, she usually gets a lot of flack from her (man). But what they don’t realize is the husbands go out and work hard for their eight and ten hours a day, but she sits at home and cooks and does very little as far as activity. She wouldn’t have to do much, you tell them “let’s go walking, half an hour a day.” You would be amazed what you can do. So it just takes a little bit of outside influence to get them to do that. But, yet a lot of them will do it in secrecy without telling their husbands.”

-Participant 12, pg. 11

“Sometimes we’re homebodies, we don’t go out a lot.”

-Participant 18, pg. 20

Two of the participants commented that Latinas are not supposed to exercise, and referenced their culture as encouraging women not to put their legs up.

“We were joking that (the other study participant) has her legs up in the air (during yoga). She wouldn’t have done that as a younger girl. She wouldn’t have. We didn’t do that.”

-Participant 21, pg. 15

The primary issue around cultural support for nine of the participants is the concept of diet, and expectations around food, specifically around cooking from scratch and being expected to use certain recipes that are unhealthy. The theme of dietary expectations was the most repeated theme in the area of cultural social support.

“They hate to part with tradition. And I see that a lot, when I visit my husband’s family and all that too, you know. Everybody’s still in that mode, where we have to do things the way they were done before. Instead of thinking, “Well, let’s do it the healthy way.” We’re not thinking that way…we’re still carrying on the traditions, even if the traditions may not be healthy for us.”

-Participant 28, pg. 15

A few (n=4) of the participants also discussed that food is expected to be presented to family, friends, and guests in general, and the over emphasis of food in the culture can be viewed both as a positive and negative support to health; positive in that this cultural expectation encourages social engagement, but negative in that it encourages or supports eating of unhealthy foods.
“You know (Latinos are) more sedentary….watching TV more, being family oriented, not taking time to exercise, not monitoring your food, especially during cultural events, during family things, you know we do have a lot of family gatherings….”.

-Participant 24, pg. 9

In regard to the dietary component of the ¡Viva Bien! program, several of the participants commented that having a Latina dietician, who was part of the study team, was beneficial as she, the dietician, would bring Latin-inspired recipes and foods for the participants to try. For example, instead of using the traditional lard to make refried bean, the participants were taught to use healthier olive or canola oil, and instead of eating red meat the participants were encouraged to experiment with chicken and fish in place of the more traditional red meats commonly used in Latin American cooking. With the diet being a major concern for most of the participants, the influence of culture on meal preparation was a common theme that emerged. One woman commented that having a cultural flavor to food preparation made the diet component of the program more successful for her.

“I just think that because they did it the Latina way, the Spanish way, the Mexican way, where they were doing both languages. That was really an A+ for me. Cause if we would have done it the Anglo way and we would have just had rice and potatoes, green beans, a piece of meat, a piece of wheat bread. We would have still learned, but with us having our green chilies, our salsa, our chips the way we can eat them or nopales, which I would like to cook but I have forgotten about them. Stuff like that. Black beans, I mean, you know. We don’t do that kind of food all the time. But if I know that it’s healthy for us, and I have it there, I’ll cook it.”

-Participant 19, pg. 43

Another cultural support domain that a few participants discussed (n=3) was around the U.S. culture being too “hectic” and fast paced, with a negative reliance on “convenience”. A couple of participants spoke to convenient foods, for example, as being a potential factor toward laziness. Several of the participants (n=5) also discussed the positive aspect of their culture with regard to social activities and expectations.
“I, for example, am not accustomed to live, like here, right. That everything you buy is already made. No, everything I do is in my house. Only on Sundays, and that sometimes we go out to eat or we buy food. I do everything because no, so laziness doesn’t influence.”

-Participant 25, pg. 6

“Well we, I think our family, being a Hispanic, we are very family oriented. We have lots of celebrations, we’re always looking for a reason to celebrate. We love music. We love dancing. We do a lot of that, we do a lot of celebrating like for holidays, for birthdays, for anniversaries. It’s just a ….cause it’s positive, I think. Just being around people, laughter, and reminiscing on old time….and I think that is good for your health.”

-Participant 4, pgs. 13-14

Further, the cultural foundations of many home remedies was also spoken to as being a positive support to many of the participants (n=6).

A number of the participants (n=8) spoke about the changing culture with regard to health and health behaviors, and their role in this change.

“Well, it (VB) helped me in the manner that I am focusing more on my children, how they eat.”

-Participant 16, pg. 23

The older generation of Latinas is seeing a cultural shift in expectations around exercise, diet, communications (with physicians, health care providers, and family), and education.

“In some ways I think Hispanic women have come a long way. Cause like I said, I don’t remember my mom doing any kind of exercise.”

-Participant 6, pg.15

“And of course some of the food that we eat are probably loaded with fat. They didn’t think of it that way, they just thought of it as a good meal for the family. I think they lacked the education. I think that was the bottom line, they lacked education. To think, what’s good for our children? They thought having a meal was good for their children, it didn’t matter what the meal was.”

-Participant 28, pg. 14

“Oh we could have learned to eat the right foods before, before we got sick, before we actually had diabetes. And I know that’s hard. It’s hard to keep eating chicken, wheat bread, cause you get tired of it. I know with my culture we like to fry a lot of foods and it’s tastier. When you have to change to olive oil and the other oils and stuff…..”

-Participant 19, pg. 9
The shift in cultural expectations is important as it relates to the changing needs ofLatinas who have T2DM; namely, it may be important to distinguish generational preferences and expectations when developing behavior change interventions.

Two participants commented that their culture was different from many otherLatinas they met, and that there were differences between the various Hispanic cultures that were significant depending on where the other person was from (Central or South America compared to the U.S.) or whether they spoke Spanish or not; namely, not all “Latinas” are the same.

“I think there’s a cultural difference even between American Hispanics and Mexican Hispanics. And I think that’s going to be there for a while until we get used to each other and accepting of each other.”
-Participant 6, pg. 14

Of the study participants, only one woman commented that for her a language barrier was a significant reason that she did not do more activities in the community, suggesting that language negatively influenced social support, which thereby negatively influenced her self-management of T2DM directly.

“I am surrounded by two parks. I have a gym, about four, five streets from my house. And yet, I don’t go. I don’t go because, well, they only speak English. Who am I going to talk to? Who can I relate to?”
-Participant 25, pg. 14

However, upon participation in ¡Viva Bien! the same woman reported that she started to do more for herself, even though she viewed herself as having a language barrier.

“Well, like I’m saying, to me it (VB) was very helpful. Mainly to get out of my routine. And later, well, to learn how to eat, to learn how to cook, to learn to communicate with each other and others about diseases, right. Because many times complications come with diabetes and we ignore them. We think they are normal, or like that, right. And yet, talking with other people about what’s happening with them, what they are feeling and all that, well, already for one too, it already helps one like a compliment, right, for one’s disease.”
-Participant 25, pg. 16

Ten participants reported that faith in God was important in their cultural traditions, and many participants view their faith as having a significant, positive impact.
on their health as a support system. Participants expressed spirituality and faith as an intrinsic social support system, which many participants in ¡Viva Bien! shared with each other.

“...and I spoke to her (another participant) one day, you know, at length and I admitted to her that I was depressed. And she says, “Well, pray. I’ll pray for you and you start praying.” So I thought there was somebody in my corner, you know. And that started lifting.”

-Participant 14, pg. 47

Along these same lines, the concept of fatalism was also brought up three of the participants (n=3) who have felt their health is out of their control (i.e., in “God’s hands”) even when support systems, especially their faith, are in place.

“...one of the pieces is that way that we understand dualism, what do you call that when you’re like “oh well, it’s us to God”? (fatalism), and I totally...that is probably some of the things that have prohibited my health behaviors from getting better...if I ignore it, it doesn’t exist, It’s out of my hands.”

-Participant 30, pg. 30

Another common theme around cultural support was the importance of being around other Latinas who had similar health concerns and family life. This sense of familism was important to the participants. Six participants commented that identifying with other Latinas helped build trust, faster, and helped them feel more supported and open to learning new ways of accepting and managing their T2DM.

“I was very excited because I thought that the fact that I was going to be around other Hispanics was good for me, because I think it’s kind of a cultural thing.”

-Participant 4, pg. 17

Similarly, twelve participants also expressed the importance of feeling a part of a group who understood and supported each other and how the collective effort of the group helped them feel empowered to make changes for themselves as the learned from others and became more aware of how they could better manage their disease.

The importance of familism was also prevalent, as participants commented that their health does not just affect them, but also that of their families, extended families, and
friends. For example, the sense of accountability that many of the participants had to each other and their ¡Viva Bien! support groups illustrated the importance of collective-efficacy to the participants. The participants spoke about the importance of sharing skills and knowledge that helped them achieve behaviors at the individual and group level. The sense of collective-efficacy was pervasive throughout the interviews as participants expressed the importance of familism in their culture and working together to achieve desired outcomes.

**Potential Pathways Between Concepts**

Potential pathways between self-management, self-efficacy, and social support are explored next in this chapter, including interpretation of how identified themes are related to one another. Taken together, the identified, categorized themes represent the study’s concepts. My analysis of themes enabled a theoretical assessment of relationships among concepts as they were moderated by linking themes, which influenced the strength between the concepts, and allowed me to draw interpretations about sources of social support and self-efficacy in relation to self-management.

Potential pathways that may inform the relationship between the three concepts of social support, self-efficacy, and self-management are suggested by similar themes found in multiple concepts and where the more frequent themes were reported throughout the coding process. Themes identified as most important by participants within each concept suggests potential pathways that should be explored between the three concepts. Interpretation of study pathways informed my understanding of participants’ lived experiences with T2DM. Previously discussed social support thematic results will be reviewed as they relate to self-efficacy themes, including an explanation of the potential pathways between social support and self-efficacy. Next, the themes that constitute social support will be examined as they may affect self-management of
disease. Finally, the themes that constitute self-efficacy will be explored as they inform potential pathways to self-management.

**Potential Pathways: Social Support and Self-Efficacy**

The themes that were present in both social support and self-efficacy concepts were knowledge and collective-efficacy. Findings suggest that increased knowledge and collective-efficacy, which are informed by social support, fostered individual self-efficacy for the participants, which in turn encouraged additional social support through increased knowledge and collective-efficacy as shown in Figure 4.4. The reciprocity of the implied pathway between social support and self-efficacy suggests a complexity of the interrelatedness of the two concepts, and denotes a cyclical dynamic between social support and self-efficacy.

![Figure 4.4: Potential Pathways Between Social Support And Self-Efficacy](image)

The theme of knowledge was relevant to both social support and self-efficacy. Participants expressed the importance of being the primary care giver at home (responsible for modeling and instilling knowledge), learning from her physician and providers, identifying and sharing with other diabetics, and learning from other Latinas and other cultures; namely, knowledge having an increased awareness was present in all sources of social support as influencing participant self-efficacy. Increased knowledge led to an increase in self-efficacy for the participants who believed that behavior change could be made through the exercise of mastery experiences, vicarious experiences, social persuasion, and affective states. This effect is not surprising given Bandura’s model of self-efficacy. However, I identified a distinction between learned knowledge and applied knowledge. Learned knowledge denotes information the
participant became aware of, whereas applied knowledge was taking the learned information and applying it to a behavior or action. For example, the participants frequently spoke to how they learned self-management skills from their physician, peers, and educational materials, however these lessons were not always applied to actual behaviors until they saw others model the behaviors successfully and/or successfully practiced the behaviors themselves; namely, mastery and vicarious experiences helped increase self-efficacy.

The increase in applied knowledge influenced the participants to now know what to do. This increase in knowledge about how to engage in new behaviors, such as increasing physical activity, changing dietary methods of cooking, and finding alternative social support systems in the community, suggested that the participants felt newly efficacious to try new behaviors. The change in knowledge around diabetes and prevention of disease was also discussed by several participants as it impacts new generations of family members, and how they feel there is a cultural shift in Latin cultural expectations and health behaviors, specifically in the area of being more aware of disease prevention and health promotion. This shift in Latin cultural expectations resonated with the participants who spoke to how this change in new generations of Latinas motivated them to change their own health behaviors and helped to increase their own self-efficacy to make positive changes for themselves.

At the community level, the study's findings also support a heightened sense of collective-efficacy found through learning and identifying with others throughout the community (among Latinas, with other diabetics, and between other non-Hispanic cultures) who share similar concerns, and have similar medical conditions. Collective-efficacy encompassed cultural expectations, norms, familism, and influenced the
participants’ beliefs that they should, or should not, do certain behaviors such as eat certain foods, do certain exercises, or take medications.

Further, the study’s findings support the theory of self-efficacy as confidence to start and complete a behavior or task is built up over time through mastery and vicarious experiences, social persuasion, and affective states or feelings are often experienced at the community level through participation in activities with others (Bandura, 1997). This study suggests that a feeling of greater self-efficacy may be strongly influenced by a perception of greater collective-efficacy for Latinas; a normative effect. This notion of learning from others, and in different environments such as through community settings, organizational activities, and educational sessions, was repeated throughout the interviews, with most of the participants relating it to their cultural identity as a Latina and the importance of socializing. For example, the collective efficacy discovered in ¡Viva Bien! fostered expectations and encouraged success toward desired outcomes for the participants. Social support was positively influenced through increased collective-efficacy through ¡Viva Bien! as participants were influenced by the groups’ expected capabilities as a whole, and were thereby influenced as individuals. Findings suggest that for Latinas the influence of collective-efficacy may increase the level of self-efficacy and may be important to increase self-management of T2DM.

“I got to know many women from other cultures that talked to me about different things. That’s where everything got erased, that I had diabetes and that my life could be normal and everything.”
-Participant 10, pg. 12

“And when people have a common bond, like the diabetes, or whatever, it makes it really easier because there’s a lot of the things that you can talk about that a lot of women have shared those same symptoms with you, so you kind of feel like you might be able to partake of some of the things that have worked for them.”
-Participant 6, pg. 11
“I got to see how other people were coping with it. And actually they were worse off that I was. And I thought, you know here I am feeling sorry for myself, and sucking my thumb, and there’s so and so and she has such a greater problem. But then when I saw them, how they were overweight and they really could do something about it. Then I thought, “Well, hey start with yourself first before you…you know.” So I started caring a little bit more about it, and doing more things. More physical activities, swimming, in other words, I made it a part of my daily program, my regimen.”

-Participant 12, pg. 9

The nature of the relationship between themes of culture and family as they influence self-efficacy of the participants is explored below.

At the cultural level, participants expressed how traditional expectations are that they stay at home, cook, and take care of the children, and that exercise is not something that they were encouraged to do. In addition, there are expectations around availability of types of foods and meal preparations that are considered important in Latin culture. These aspects of cultural social support and non-support influence beliefs and perceptions that participants have regarding how capable they are of engaging in self-management. Further, cultural influences impact the knowledge, attitudes, and beliefs participants have around certain behaviors.

As many participants commented, the role of care giver was a common family theme. The participants often spoke to how they feel both obligated and/or pressured to take care of others, as well as find great satisfaction in taking care of others. This expectation of care giver roles in the family and in the community and culture may also influence the levels of perceived social support. This finding is similar to other research findings that show how role expectations for women, in general, can lead to strain and overload (del Mar Garcia-Calvente, Mateo-Rodriguez, and Maroto-Navarro, 2004; Burnette, 1999; Hurtado, 1995)

The expectation of care giver role may therefore negatively influence participant self-efficacy toward managing T2DM. For example, when participants spoke to the role
of care giver, regardless of viewing it positively or negatively, the notion of giving to others first was pervasive throughout the interviews. Several participants commented during their interviews that they often chose to do for others before doing for themselves, acknowledging that they are not taking care of themselves first.

Several participants said that once they realized they had some control over T2DM, and had learned how to better manage their disease, they realized that they were doing the best thing for their families by taking care of themselves first. This theme came out prominently in the interviews; namely, participants became comfortable in accepting support from others and focused more on themselves. Participants learned how to ask for and receive support. The perception of collective-efficacy also surfaced from participation in the ¡Viva Bien! study, as the women felt accountable to others to achieve individual and group outcomes. Participants in the ¡Viva Bien! study began to value taking care of themselves as they cared for others; namely, when participants had learned to build confidence and skills as a group, individual self-efficacy was promoted at home and influenced the way the participants acted as care givers. One woman commented that she “always took care of everyone else”, but then once she learned how to manage her disease, she started to change her beliefs around how much control she could have over her disease. This change in perspective suggested an increase in personal expectations of her behaviors, and thereby self-efficacy, which was similar for many of the participants; once they gained the knowledge and support from others they felt more empowered. Feeling empowered enabled participants to change.

In addition, there seemed to be a shift in how participants viewed taking care of themselves from when they started the ¡Viva Bien! program until when it ended two years later. For example, a few of the participants mentioned how at the beginning of the program it was difficult to attend the weekly meetings. Once they realized what the
program was about, and how it could benefit them, they really wanted, and eventually needed, to attend. Several participants also spoke to how learning information about diabetes through the social support they received helped them realize that they could make necessary changes to improve their health and manage their T2DM more effectively.

“I seek help now, like when they told me about that clinic I went to see if they could help me….to seek help, or in other words, to seek more.”
-Participant, 10, pg. 48

“But then once you start knowing what the programs about, and you’ve gotta be there, and you want to be there, you’ll try probably other ways to get there. No matter what. And I probably would have tried, I did finally later, cuz I told my husband “You gotta get home early so you can take me. Cuz, I gotta be there.”
-Participant 2, pg. 40

“My, how do you say, my self-confidence, my self-esteem went way up, a lot (after the ¡Viva Bien! program). In fact, it didn’t matter to me, if I combed my hair, if I changed, not only my clothes weren’t important to me. Now I am more concerned about that because that is what self-esteem does to a person. Because when they told me, “You have diabetes”, I sank very low; it was really ugly.”
-Participant 8, pg. 39

Having increased knowledge about T2DM self-management not only helped the study participants feel accepted, make healthy changes, and believe that they could make necessary changes, it encouraged them to feel that as care givers in society they had to give the same care to others that they were now giving to themselves, as a role model. The concept of care giver seemed to shift from primarily giving to others, to learning to take better care of themself, with participants speaking to how they brought their new knowledge and information back to their families and communities in a greater capacity. Increased education improved self-efficacy for many ¡Viva Bien! participants.

“Everybody at ¡Viva Bien! always accepted me just the way I was. I didn’t feel inferior. I didn’t feel – as a matter of fact, I kind of felt kind of looked up to. Cause people were like, when I would talk, they would listen. It made me feel good….It showed me that, that I had to be a role model. Not only for my family, but for other people with diabetes.”
-Participant 20, pgs. 28-29
Health care as a source of social support was not found to be as significant of a contributing factor to self-efficacy, with few comments from participants. However, the importance of having a physician who listens, is patient, and understands the patient’s needs and interests was found to be an important factor, which influenced the participants’ self-efficacy beliefs. Through the support offered by the physician and other health care providers, participants had more confidence to make changes when they felt empowered to help make those decisions. Although there does not seem to be a direct influence on self-efficacy of the patient at the health care level, thematic results suggests that successful communication is key regarding health care information that is relevant and understood by the patients.

**Summary of Social Support and Self-Efficacy**

Participants expressed the importance of two themes that influenced the potential pathway between social support and self-efficacy: knowledge and collective-efficacy. These two concepts emerged as important elements in establishing the relationship between social support and self-efficacy, and helped influence the exercise of self-efficacy. Participants reported an ‘awareness’ that came with increased knowledge found through the four social support sources, but primarily as gained through ¡Viva Bien!. Participants expressed an increased confidence and self-efficacy that came from knowledge, and a new awareness, to make needed behavior changes to take better care of their T2DM and health, in general.

Explanatory interpretation reveals that social persuasion and vicarious experiences in areas of social support, especially that of family and culture, are important considerations when exercising self-efficacy to self-manage T2DM, and may operate both at the individual and collective levels. Increased social support promoted both knowledge and collective-efficacy, which promoted self-efficacy that allowed
participants to better fulfill both their self-management of disease, and still be care giver for the family. Participants expressed how family and cultural expectations influenced their perceptions, attitudes, knowledge and beliefs around appropriate behaviors, both positively and negatively. For example, in addition to being the care giver to the family, participants expressed the extended familial role and expectations as they impact community and cultural social support; namely, the notion of giving to others first was pervasive. Only when the participant recognized having some control over her disease, did she change her focus from others first to putting herself first (or equal to) others; recognizing that if she took better care of herself, including allowing herself to be supported, she could then continue to take good care of others.

**Potential Pathways: Social Support and Self-Management**

The themes relevant to both social support and self-management were collective-efficacy, awareness, and continuity/routine. Initial interpretation suggests that the four sources of social support directly influenced self-management of T2DM. Themes that were coded as negatively or positively related to self-management were related to all four sources of social support: family, health care, community, and culture. Explanation of these relationships suggests that social support can help facilitate or hinder self-management of T2DM. Potential pathways exist between social support and self-management as shown in Figure 4.5.
Figure 4.5: Potential Pathways Between Social Support And Self-Management

The greatest associations between themes were with family social support and cultural social support as they influenced self-management of T2DM for the participants. This finding is not surprising given the significance of family and culture to Latinas. What was surprising, however, was the significance of cultural attributes that could be viewed both positively and negatively given varied expectations and norms of behaviors (e.g., diet and cooking methods, physical activity, and stress management practices). These findings are further described below.

**Family Social Support Source**

Family social support influenced participant both positively and negatively self-management in the areas of stress (stressful situations in the home, including family dynamics and pressure to be the care giver), healthy eating habits (family expectations to have certain foods prepared in a certain manner and to be offered to family and guests abundantly), financial concerns (family financial constraints due to poor wages,
living on a fixed income, or poor job prospects; sometimes due to health concerns and age), physical activity (inability to perform certain physical activities or behaviors due to poor health or lack of time due to family expectations), knowledge (information and education encouraged increased self-management to participants and their families) and continuity (family routines, including walking after dinner, and other family activities that were consistent).

The participants expressed a comprehensive view of care giving that expanded beyond the immediate family to the community. Literature shows that women in general are care givers to their families however there is some research that suggests that the care giver role is more prominent for Latinas than for non-Latina women (Phillips, Torres de Ardon, Komnenich, et al, 2000; Clark and Huttlinger, 1998; John, Resendiz, and De Vargas, 1997). The care giver role was seen as both a benefit and hindrance to self-management for many of the participants. For example, participants frequently spoke about how helping others made them feel good about themselves, something they valued, but also how giving to others placed their own needs second. The notion of the mother being the heart of the family, as care giver, and how this expectation informs family member expectations of the mother may also influence how the concept of denial is sustained for some of the participants; namely, when the participant feels the pressure to be the care giver, and the family has that expectation, the family may also be in denial to accept the mother’s poor health condition and its ramifications for the family. The denial of the participant to recognize her disease is then reinforced by her family’s denial of the illness. The importance of understanding the significance of the care giver role for Latinas may be more pronounced compared to non-Latina American women given these cultural expectations by Latinos.
Health Care Social Support Source

The influence of health care sources of social support on self-management were present in themes of stress (e.g., not having access to alternative methods of care such as massage, and not having enough time with the physician to talk about issues) and consistency (e.g., having to switch providers). Most of the participants, regardless of whether they were from Kaiser Permanente or the Salud Family Health Center, expressed satisfaction with their health care providers. Participants expressed how important good communications is regarding health care social support as it can influence self-management of T2DM; namely, a good physician is one who listens, is patient, and takes time to understand the patient and her history.

Community Social Support Source

Perceptions of social support from the community and how those influenced self-management were present in themes of stress (discrimination, racism, and language barriers in the community), physical activity (local recreation centers and parks fostered exercise), knowledge (increased awareness to self-management behaviors through education and information in the media and through community organizations, institutions, and activities), and continuity (availability of community resources that encouraged self-management behaviors, including farmers markets, parks, free health clinics, diabetes workshops, and social support groups).

Some of the participants expressed loneliness even when they participated in community activities, such as going to church, visiting recreation centers, and attending celebrations or gatherings, which was a surprising finding. This finding suggests that being lonely, even when active in the community, may foster depression that negatively influences self-management behaviors. Participants expressed the importance of both connecting with others who had T2DM and who were Latinas like them. A shared
connectedness of both having similar health concerns and understanding the cultural underpinnings of being a Latina seemed to resonate with many of the participants who expressed the significance of the ¡Viva Bien! study.

**Cultural Social Support Source**

Cultural sources of social support influenced participant views around self-management in the areas of medication (beliefs that medication is bad for oneself and others), stress (cultural expectations and pressures), healthy eating habits (cultural dietary traditions and cooking methods), physical activity behaviors (beliefs that it is “bad to put one’s legs up into the air”), and consistent social support networks (cultural norms around importance of family engagement and social activities).

There was a negative relationship between cultural expectations and self-management behaviors for many of the participants who expressed concern over changing behaviors that were considered culturally the norm. For example, when the participants learned how to cook using healthier cooking methods than what they had learned when they were children, several of the participants expressed feelings of guilt and insufficiency that they then felt from family and friends. An interesting finding in this area was around the issue of convenience that many of the participants spoke to as a negative aspect of American culture; namely, the U.S. culture is very hectic, fast paced, and encourages convenient, fast foods. Many of the participants spoke of the importance of cooking from scratch, and not purchasing convenient foods for their families, which in turn may be an opportunity for researchers and clinicians to explore regarding how to build on cultural expectations around cooking from scratch. Family-based interventions and programs could be tailored to Latin diets, which would modify existing recipes and food preparation strategies and methods, and focus on increasing family knowledge around using more healthful ingredients and recipes.
Another example of cultural dissonance from the ¡Viva Bien! study was during the stress management component of the study meetings, as several women expressed initially being uncomfortable doing yoga as they did not know if it was either culturally or spiritually, given their faith, appropriate to engage in. Ultimately, some of the ¡Viva Bien! participants opted not to do the stress management component at all, and used the time to walk, meditate, or talk with other participants who were also uncomfortable doing the stress management activity. The use of meditation as a form of stress management seemed relevant to all of the study participants, and may be an important part of the Latina lifestyle worth considering as a contributor to managing stress.

**Summary of Social Support and Self-Management**

Three overarching themes characterize these results about potential pathways between social support and self-management: (1) collective-efficacy, (2) awareness, and (3) continuity/routine.

The meaning of family, and a perceived collective-efficacy, was recognized by participants in the home, within community, and through their culture as having significance, and was brought up several times throughout the interviews with regard to how social support groups often become proxy for an extended family and helped reduce loneliness. This sense of collective-efficacy is different from family, health care, community or cultural social support. Namely, collective efforts and cultural beliefs at the group level seemed to help participants feel more confident in their own self-management behaviors and also encouraged accountability to others. The collective perspective of Latina culture (e.g. familism, care giver roles) helps to explain the need for collective-efficacy for Latinas, which seemed to be a process not an event. There was a sense of wisdom, or sabiduría, that came from a sense of collective empowerment. For example, participants expressed the significance of the feeling part
of an extended family and a sense of empowerment that came with feeling a part of a
group, and the collective-efficacy that ¡Viva Bien! instilled in them, which helped them
with their self-management behaviors.

“I’m glad they picked me - that they picked my name - and the three of us, we all
got picked, and we became like a family.”
-Participant 1, pg. 32

The theme of awareness around self-management behaviors was repeated throughout the interviews and was tied to social support. Awareness was often gained through community and cultural levels of influence when the individual began to understand and accept what needed to be done for them to improve their disease management through the form of education, information, and learned self-management behaviors. These pathways appeared to foster additional social support influence and had a synergistic effect toward increased self-management behaviors for the participants.

“I thought, “Well, I don’t need support with exercise, I just need to go do it. And
now I’m finding that, “No, you’re probably more likely to do it if you have a
purpose, like a class to go to, or a partner to go with or something like that.”
-Participant 6, pg. 13

The concept of continuity and routine was associated positively with a self-
management of T2DM behaviors, even when the behavior wasn’t something the
participant was too keen on. For example, the continuity of social support offered through the ¡Viva Bien! program helped build the behavioral systems that could be sustained through on-going support and routines.

“I think I would do better with support, and getting into exercise, and getting into
some sort of routine where I’m doing it.”
-Participant 6, pg. 6

“But with time, time is a good friend, and it goes opening your eyes, and it
teaches you that you are wrong, that you have to gauge yourself, that you have
to take care of yourself.”
-Participant 9, pg. 30
In summary, explanation of these relationships supports research that shows sources of social support can help facilitate or hinder self-management of T2DM, and that collective-efficacy, increased knowledge, and continuity of services and resources, is especially important for Latinas.

Potential Pathways: Self-Efficacy and Self-Management

The themes that were present in both self-efficacy and self-management concepts were depression and denial. Findings suggest that there is a reciprocal relationship between self-efficacy and self-management, which may be influenced by depression and denial, as shown in the figure below (Figure 4.6).

![Figure 4.6: Potential Pathways Between Self-Efficacy And Self-Management](image)

In general, depression was negatively related to self-efficacy and self-management. For several participants, depression was an important factor in their ability to successfully manage their disease and was negative in relation self-efficacy. The relationship between self-efficacy and self-management was inhibited by depression. Participants reported that when depressed, they felt less capable of doing things such as exercise, eating well, or taking their medications on time. Participants expressed decreased feelings of confidence around managing their T2DM when depressed.

As previously discussed, denial was seen as a negative influence on self-efficacy for many of the participants, with several participants commenting that they were in denial about having T2DM - some for extended periods of time. Several participants suggested that they either did not want to accept the diagnosis of T2DM nor did they want to tell their families that they had the disease as to not worry them as they were
matriarch of the family and expected to be the care giver. This finding suggests that there are cultural biases that influence self-efficacy, and may lead to barriers to self-management. When in the state of denial, most participants suggested that they did nothing to manage their diabetes, and many worry that this denial – and delay - may have made their disease worse in the long term than it needed to be.

**Summary of Self-Efficacy and Self-Management**

The themes of depression and denial, especially when combined, hinder self-efficacy for some of the participants who could not or did not want to improve self-management behaviors. Several participants spoke about how getting through their depression and coming to terms with their disease empowered them to learn new skills around managing their T2DM, and increased their beliefs that they could effectively manage their condition. The participants suggested that this increase in knowledge empowered them, and others they know, to have different behaviors, and increased self-efficacy or beliefs that they could do different behaviors to help manage their T2DM, and improve their health.

“Now if something hurts, I say something. Before I tolerated the pain, now no. Now I go to the doctor that attends to me for free and she gives me everything.”
-Participant 10, pg. 19

“……it was incredible (VB) because for me, when they talked about diabetes, I didn’t want, I was embarrassed to say I had diabetes, I didn’t want to talk about diabetes. I didn’t want to accept that I had diabetes. And when they talked about that, it bothered me a lot. I didn’t want to accept it. And I didn’t want to do anything to control it, knowing that I was already taking medicine for diabetes. So just, it’s like with an alcoholic person, and that doesn’t accept, doesn’t accept that she is sick, doesn’t’ accept that she needs help. I didn’t accept that, that I need support. And when I entered Viva Bien, it changed everything for me,”
-Participant 16, pg. 17

Two positive influences on self-efficacy are increased self-management behaviors and collective-efficacy. This unexpected finding suggests that increased self-management behaviors and increased collective-efficacy increased self-efficacy for
many of the participants in a reciprocal relationship; namely, seeing other ¡Viva Bien! participants successfully make changes in a group setting helped other participants believe that they were able to make successful changes too.

“I probably have more energy (since participating in ¡Viva Bien!). I can do more things. Because it used to be that “Oh yea, I’m going to paint the kitchen.” And then I started thinking, “Oh, maybe I can’t do this.” Where now, we had our garage insulated, so I thought “I’m going to paint the garage.” And by golly, I did, even though I was on a ten foot ladder you know doing the ceiling and stuff, I got it done. And it looks good. Or maybe before I went to this class (VB), I couldn’t because you know the mind was thinking I could do it, but the body wouldn’t let me. But now that I’m exercising and stuff, I have more strength and more, you know I can do more than what I did before.”
-Participant 23, pg. 26

Similarly, many of the participants reported increased social support at home when they had increased self-efficacy around managing their T2DM.

“When they started to see the changes that were in me, that they say that I felt better, that is when they started to support me in that too.”
-Participant 15, pg. 16

This finding supports a reciprocal relationship between self-efficacy and self-management; namely, increased self-efficacy increases self-management and increased self-management increases self-efficacy.

In summary, the influence of depression and denial on the relationship between self-efficacy and self-management were found to negatively influence self-management behavioral outcomes for the participants. However, when participants were able to get out of their depression and overcame feelings of denial regarding their disease, self-management behaviors increased due to an interest in learning how to better manage their disease, which in turn fostered increase self-efficacy.
CHAPTER V
RESULTS AND INTERPRETATION OF AGE, ACCULTURATION AND LEVEL OF EDUCATION

The complexity of thematic findings according to age, acculturation, and level of education categories are explored in this chapter as they contributed negatively or positively to the concepts and interrelatedness of self-management, self-efficacy, and social support. Similar to the last chapter, results are grouped as themes under each concept, including self-management, self-efficacy, and social support. For example, similarities and differences of self-management themes discussed in chapter IV were further examined according to participant age using the three age categories (42-51, 52-61, and 62-70). Next, self-management themes were examined according to participant acculturation level, using the three acculturation categories (M/S Latino, Mixed Latino/Anglo, and M/S Anglo). Finally, self-management themes were examined according to participant level of education using the three education categories (< high school, high school, > high school). The concepts of self-efficacy and social support follow in a similar manner with an examination of the influence of participant categories as they relate to age, acculturation and level of education. The last section of this chapter summarizes similarities and differences in the relationship of age, acculturation and level of education according to the three concepts of self-management, self-efficacy, and social support to help interpret study findings.

Self-Management and Age

Thematic results for the concept of self-management and age category are presented in Figure 5.1.
Figure 5.1: Thematic Findings For Self-Management And Age

Participants in the youngest age range of 42-51 (n=9) had similar thematic findings regarding dietary self-management behaviors, primarily with regard to how eating a healthy diet was frequently a challenge for them. Many of the participants in this age range also expressed stress as an on-going challenge that they struggled with that influenced their self-management behaviors (6/9). Seven participants between the ages of 42-51 (7/9) expressed how they feel the younger generation of Latinas view diet and physical activity behaviors differently than they did when they were the same age, suggesting that there has been a cultural shift in how younger Latinas view health more proactively. In addition, six of the nine participants in the age range of 42-51 commented that they had fostered changes in their children’s and other family members’ dietary habits, suggesting the importance of prevention.
“She’s (daughter) more aware at a younger age I think than I ever was. So hopefully, she can do something about that prevention. So I think maybe their generation is learning about prevention….and so, maybe that will finally get into our culture. Because it’s not there.”  
-Participant 31, pg. 31

Other thematic areas in self-management that participants in the age range of 42-51 commonly spoke to were around the shift in physical activity and how they were enjoying it more and were encouraged by their children to participate more in exercising. A few of the participants (3/9) spoke specifically to how their children encouraged them to participate at recreation centers with them, but one younger participant also mentioned how she was not encouraged as a younger Latina to “put her legs up”, which was a repeated theme throughout the interviews regardless of age. These younger participants had more quotes regarding self-management of their disease as it impacted their family’s health, including the importance of prevention of T2DM, health promotion, and disease prevention in their children, and was likely due to the fact that many of these women had children still living at home. The importance of sharing knowledge and wisdom toward improved family health seemed to be an important motivator for the participants’ own self-management of T2DM.

Participants in the middle age range of 52-61 had several common themes in the area of self-management, including a greater number of comments around the importance of physical activity (9/12). In addition, several participants spoke to how physical activity was something they really wanted to do more of when their bodies ‘let them’; a few (4/12) of the participants commented that they often had significant pain issues that interfered with daily exercise and activity routines. Several of the middle aged participants (6/12) also discussed medication has being bad for them and for others, with several stating they were trying to wean off of their medications.
“And that I shouldn’t be taking medications for things…and need to quit taking medication and I would feel better.”

-Participant 5, pg.9

Other common themes in the area of self-management for participants aged 52-61 were around the importance of passing information and knowledge to their children to increase good self-management behaviors, with 5/12 participants mentioning the importance of prevention. Several middle aged participants (7/12) also commented on the value of support systems with other Latinas who have diabetes as being a good influence on how they manage their disease, including comments regarding the importance of the continuity of social support from participation in the ¡Viva Bien! program.

Participants in the higher age range (ages 62-70, n=12) had common themes in the area of self-management with social support seeming more important for the higher aged participants than for the younger participants. Several participants (8/12) expressed the desire and need for more social support to help them manage their disease successfully as they got older. The types of support participants mentioned included references to tangible, emotional, and informational support. Similar to the middle aged participant group, participants in this higher age range also spoke to physical limitations now that they were older, which decreased the amount of physical activity and exercise they could do on a regular basis. Several higher aged participants (5/12) also expressed feelings of loneliness, which negatively influenced self-management by not feeling they had the support they needed to successfully manage their disease. Some of the participants (4/12) in the older age range also spoke to the importance of continuing cultural traditions with regard to dietary practices, which was seen both positively, as food customs encouraged social activities, and negatively, given
how the traditional Latin foods are often expected at gatherings and prepared using unhealthy ingredients.

“Our celebrations are punctuated with food. Food that we grew up on are foods that are killing us…..we are really communal, we do a lot of stuff around food.”
-Participant 30, pg. 29

The influence of knowledge and education was not as prevalent in the quotes with the older aged participants, and more significance was placed on the value of ongoing social support.

Similarities between self-management and the younger age (42-51) and middle age (52-61) categories included the importance of physical activity, prevention, and influencing the health of others. This finding was not surprising given the number of participants who expressed a shift in how younger generations of Latinas viewed health differently than they had when they were younger. Participants expressed the need to increase awareness of T2DM prevention in younger Latinas to help empower new generations to be more proactive in their health. Participants in the middle (52-61) and higher age (62-70) categories expressed similar concerns over physical limitations as it influenced their self-management. The older participants also expressed more concern over consistency of social support, which was a finding in the older age category (62-70) for the concepts of self-efficacy and social support as well. This finding illuminates the importance of social support for older Latinas who have T2DM.

**Self-Management and Acculturation**

Thematic results for the concept of self-management and acculturation category are presented in Figure 5.2.
Figure 5.2: Thematic Findings For Self-Management And Acculturation

Participants (n=9) in the lower acculturation category of most or somewhat Latino (M/S Latino) had several common themes regarding self-management of their T2DM. Several participants who were less acculturated (5/9) spoke about concerns they had over money and finances as it impacts self-management behaviors. For example, paying for medicine, health care, and food were frequent concerns mentioned during the interviews for the less acculturated participants. Several of the lower acculturated participants (5/9) also expressed how they were not encouraged to exercise when they were growing up, and that this made it harder for them to exercise or do physical activity on a daily basis as part of their self-management. The concept of family was very prevalent in the comments regarding self-management, including the importance of extended family being involved in self-management. For example, several participants spoke about how they were more apt to carry out self-management behaviors (e.g., exercise, eating healthfully, and monitoring their blood sugars) when they were encouraged by family and loved ones to do so. The notion of collective-efficacy from
participation in the ¡Viva Bien! program was also suggested from less acculturated participants; namely, participants felt more empowered to manage their disease more proactively given the group’s expectations to be successful in the program.

“I think the best thing was the group meetings. I really enjoyed everything that we did in there, and how we spoke to each other and helped each other. But I think the best thing was the whole, the whole meeting. It was structured in such a way that for me it gave me everything I really needed. I don’t particularly like to exercise, but all the things that (the physical activity teacher) brought us, she just kind of moved us, kept moving us, kept moving us in the direction we needed to be. And I learned that I could do things I didn’t feel like I could ever do again. And that surprised me...... the group is what made the difference with everything. We weren’t individually in there. We were a group working together.”

-Participant 5, pg. 22 & 25

The middle acculturated participants (Latino/Anglo) also had some thematic similarities. It is worth noting that only six of the total sample (n=33) reported that they were a mix of both Latino and Anglo, and most participants in the study (n=18) reported that they were more acculturated (most or somewhat Anglo) according to the ARSMA II scale. It may be that participants in the study wanted to identify more with one or the other (Latino or Anglo) for purpose of feeling part of a group. Interestingly, the mid-acculturated participants reported more comments throughout the interviews on the importance of cooking from scratch (4/6). The importance of food preparation and types of traditional foods were common themes for the middle acculturated participants, and healthy eating habits were a frequent concern as they impacted self-management. The mid-acculturated participants may have discussed scratch cooking more than the other two acculturation groups as they see the value of cooking traditional foods as an important part of their culture to retain as they become more acculturated. Other similarities regarding self-management of T2DM were around increasing knowledge to manage their disease.
“The level of awareness (learned through VB) - even though I don’t necessarily make the changes. I am aware that I am making choices now, as opposed to not even giving it a thought before.”
-Participant 6, pg. 12

Several of the participants (4/6) expressed value in the education and knowledge they gained by participating in the ¡Viva Bien! program, commenting that the collective effort of the group was important as they felt supported in each component of the program (diet, physical activity, stress management and social support), which made their efforts to improve self-management easier as they were learning together and encouraging each other (collective-efficacy) to tackle multiple self-management skills suggesting behavior change at a group level.

The more acculturated participants (n=18), most or somewhat Anglo according to the ARSMA II scale, had similar themes throughout the interview in the area of self-management. The importance of continuity and routine (e.g., regular physical activity, on-going social support activities), was a common theme that participants (6/18) spoke to with regard to how they managed their T2DM.

“I’m not much for support groups, but the way ¡Viva Bien! was presented to us, it was easier for me. It seemed like it was easier to make friends with the staff, get to know them. It was a routine more, so you got to know people more, you got more comfortable with them…..And it was easier to open up to people when you know them.”
-Participant 3, pg. 22

In addition, several more acculturated participants (8/18) also spoke to the importance of social support in their lives as it impacts self-management (e.g., tangible support from loved ones and family to help do physical tasks, informational support from physicians, care givers, and educational programs such as ¡Viva Bien!, and emotional support as gained through close social support networks). It is worth noting that four of these individuals spoke to having social support as a need they had as a Latina; meeting other Latinas who had similar health conditions and life circumstances helped them build
trust more easily and manage their disease better when they felt they were working together to positively change their health behaviors. In addition, four others spoke about social support influencing their self-management. However, these individuals appeared to view the influence of social support more individually, and less collectively, with comments around how they needed and valued social support to learn new self-management skills, but that it was ultimately up to them as individuals to manage their disease successfully. Nonetheless, the issue of trust was discussed when these participants, who expressed more individualism, commented that they were responsible for self-management; with three out of four suggesting that the collective support of the ¡Viva Bien! group helped them feel more empowered to manage their disease more proactively. Both individual and collective-efficacy seemed to resonate within the group of more acculturated participants.

The collective-efficacy of the ¡Viva Bien! group for all study participants, regardless of acculturation category, seemed to benefit the increased self-management behaviors of both the participants who viewed their health more individually or more collectively. The importance of family in Latina culture underscores this finding; namely, familism and the care giver role are supported through the collective-efficacy of a group and fosters empowerment to manage disease more proactively.

**Self-Management and Level of Education**

Thematic results for the concept of self-management and level of education category are presented in Figure 5.3.
Participants who had less than a high school degree (n = 9) had similar thematic findings in the area of self-management regarding needing more positive support systems to help them manage their disease better, with a couple of the participants commenting that they felt little or no support from their husbands at home.

“They had to listen to what their husbands wanted as opposed to what they were trying to be taught.”

-Participant 13, pg. 38

For example, both of these participants spoke about how it was at first difficult to attend the ¡Viva Bien! program meetings as they did not feel that their husbands supported them to participate for themselves, suggesting that they were made to feel selfish for wanting to attend. In addition, one of these participants talked about how she initially prepared two meals for dinner; one for her and one for her husband, but she eventually stopped doing this. In addition, three of the less educated participants also spoke to the importance of routine for them with regard to self-management of T2DM, commenting that when they were able to get into a consistent routine around physical...
activity and eating a healthy diet it became easier to maintain the behaviors. Further, five of these participants suggested that the routine of ¡Viva Bien! was an important factor in helping the women feel that they could manage their disease more effectively as it became an expectation that they had for themselves, as well as others had for them (i.e., family members, program staff, participants).

Several high school educated participants (4/10) discussed patient-provider relationships and the importance of having a doctor who listened and cared about partnering in health care decisions. Three of the participants also spoke about health care information they received from television programs, such as Dr. Oz, which helped them learn how to effectively manage their disease. Another theme for a few (3/10) of the participants who graduated from high school included stress, specifically around how they felt they were often rushing around and had hectic, busy schedules.

“I think people need to learn to relax. And that’s something that’s always been hard for me. But I’m learning that. I’m learning that, with mental health, it’s important to do things that are relaxing. Like just going to the movies, or not just always rush, rush, rush, work, work, whatever. It’s got to be a good balance. Everything’s got to be a good balance.”

-Participant 10, pg. 31

Several of the high school educated participants (6/10) also spoke to how taking care of others was something that gave them support to take better care of themselves, suggesting a reciprocal relationship.

Fourteen of the study participants had a higher education (some college, college graduate, or post graduate). About half (6/14) of the higher educated participants suggested that eating a healthy diet was one of the more difficult areas of self-management for them and that they struggled to maintain a healthy diet routine. A few of the participants (4/14) who commented that as young children they were encouraged not to speak Spanish, or not to speak it out in public, as it would be looked down upon. In addition, a few participants (3/14) commented that they were encouraged to “do
“We found out we do everything for everyone else, but not ourselves. And here (in the U.S.) we don’t worry about our diabetes, we’re neglecting it. ‘Til we got into this program we learned not to neglect it, and take care of it.”
-Participant 2, pg. 34

There was a similar finding of the importance of taking care of others in both the high school educated and higher educated categories. However, education and self-management did not have other salient relationships.

The reciprocal relationship that many of the participants discussed with regard to caring for others and caring for themselves, suggests an important insight that may help Latinas be more proactive in self-management of T2DM. The value Latinas place on caring for others can be reinforced by encouraging proactive self-management behaviors; namely, participants may self-manage their disease better as they desire to be able to help others.

Self-Efficacy and Age

Thematic results for the concept of self-efficacy and age category are presented in Figure 5.4.
Several participants in the age range of 42-51 expressed having depression as a negative influence on their self-efficacy (6/9). The theme of awareness was also prevalent in many of the interviews of younger participants (4/9) who spoke about how they became aware and accepting of their disease, which helped build confidence for them to make changes and learn what they needed to do to stay healthy.

"Even though maybe it’s genetics, as long as you know, maybe you’re aware that you can get it. It should be easier to prevent it because then you can watch what you’re eating and say “Well, I better not indulge so much in sweets and all that because there’s that potential.”

-Participant 12, pg. 16

Further, participants suggested that until they accepted that they had diabetes, they didn’t accept the knowledge to manage their diabetes. Participants discussed different situations that helped build awareness for them, with the two most prevalent including (i) having a family member who became very ill or died from diabetes and (ii) participating in the ¡Viva Bien! program, which presented understandable information in multiple ways, in several areas (diet, physical activity, stress management, social
support), over a two year period and helped teach how to take steps to manage T2DM effectively. The concept of awareness seemed to be fostered in many of the participants through multiple pathways, including increased knowledge and self-management behaviors, and also supported by the fact that many participants had been depressed, but had changed their perception of their disease and began to manage it differently. Depressed patients expressed how their depressive state held them back from believing they could manage their disease successfully, and that staying in a state of denial helped support the lack of awareness they had around needing to make behavior change. Participants in the age range of 42-51 also commented that they encouraged their children to have better health behaviors than they had. In addition, many of the participants suggested that they were supported by their children to sustain healthy behaviors (e.g., exercise regularly, eat a healthier diet, stay more positive, take better care of their health). This dynamic, reciprocal relationship between the mothers and their children suggested increased self-efficacy for both the mother and her children to have improved health behaviors, and may have an influence over depression and/or denial of disease.

Seven of the participants in the middle age range of 52-61 (n=12) expressed having issues of denial, which negatively influenced self-efficacy, when it came to recognizing and accepting their T2DM. Similar to the younger participants, several participants expressed how being in denial of their disease stifled their self-efficacy to self-management of the disease, suggesting that if they had been more aware of their disease and that it could be managed then they would currently be in better health.

“Again, I think it goes back to not being knowledgeable about certain things that are there that are available to me that I wasn't aware of.”
-Participant 4, pg. 20
Several middle age range participants expressed how the younger generation of Latinas are more aware of health issues (n=6), and many of these participants (n=5) expressed the significance of prevention of T2DM and how important it is to teach prevention to younger generations. This finding suggests that there may be a shift in how younger Latinas define what a healthy person should look like. Further, participants in the middle age range suggested that younger Latinas have more knowledge than they did when they were younger. An increased knowledge and awareness may help younger Latinas may be able to develop more self-efficacy to have better health behaviors.

Participants in the older age range of 62-70 had themes emerge in the areas of depression and loneliness, suggesting that these two factors negatively influenced participant self-efficacy to manage their disease, as they were less likely to want to be proactive in improving their health, and were less motivated to want to take care of themselves.

“Sometimes when you’re alone, and you can be alone in a crowd….loneliness is hard. You just try and live with it.”
-Participant 13, pg. 32

This finding suggests that the concept of loneliness impacted how the participants viewed the importance of self-efficacy. A few participants commented that they didn’t really care to change their health behaviors or improve how they take care of themselves when they were lonely and depressed. However, several of the older participants spoke about how increased social support and the collective-efficacy that came from participation in the ¡Viva Bien! program influenced their perception of self-efficacy and, thereby increased self-management behaviors. Several of the older participants (7/12) spoke about how their participation in the ¡Viva Bien! program helped them learn new skills but, more importantly, helped build social support bonds with other participants. The social support component of the program was noted as the most
important component of the program as it influenced their self-efficacy to improve self-management behaviors and helped reduce depression for many of the participants.

There was a similarity between the younger age (42-51) and middle age (52-61) categories regarding knowledge as it influenced self-efficacy. This finding supports the importance of knowledge for Latinas with T2DM, as knowledge increases awareness, and accentuates the role of education that must be culturally appropriate and factors in health literacy levels. Further, denial or depression was present regardless of age category. This finding highlights the importance of understanding where denial or depression are present in Latinas with T2DM to help health care providers and researchers alike develop education, care practices and interventions that address these critical issues toward increased self-efficacy.

**Self-Efficacy and Acculturation**

Thematic results for the concept of self-efficacy and acculturation category are presented in Figure 5.5.

![Thematic Findings For Self-Efficacy And Acculturation](image)

Figure 5.5: Thematic Findings For Self-Efficacy And Acculturation
Several common themes emerged from the less acculturated participants (M/S Latino), with 5/9 participants expressing an increase in self-confidence and self-efficacy in the area of self-management due to their participation in the ¡Viva Bien! program, with several of the participants (4/9) commenting that they had been in denial about their disease prior to participating in the program. Interestingly, some of the lower acculturated participants (4/9) spoke about how individuals with negative attitudes were frequently sick, or made themselves sick by being negative.

“The positive takes the sickness away, and negative people are always sick.”
-Participant 8, pg. 24

The importance of taking care of oneself and “fixing up” was also mentioned by a few less acculturated participants (3/9), and the participants spoke to how it made them feel better to fix themselves up (e.g. get hair done, go to the salon, dress up nicely), and that it improved their confidence when they took the time to spend time on their appearance. In addition, several of these participants (4/9) also felt that being skinny was viewed as unhealthy and could be viewed as a negative characteristic for a Latina.

“If she is thin, “Ay no! She is sick! She is skinny.”
-Participant 22, pg. 37

One participant seemed to struggle with her perception of weight as it influenced her self-efficacy. This participant viewed her weight, which was slightly overweight, as bad and considered herself to be unhealthy, and suggested she did a poor job of self-management of her T2DM. However, this same participant also spoke of her sister, who was also overweight, as being healthy because she was positive, and looked good.

Another participant commented similarly that she was “disgusting” because of being overweight, but then subsequently made another comment that suggested being skinny was ugly. These findings suggest varied perceptions regarding what a healthy weight is and how it is viewed by some of the less acculturated participants.
Several mixed Latino/Anglo participants commented that they struggled with depression (n=5/6), with two of the participants commenting that they have to “fight” to manage their depression, suggesting it was an on-going battle and influenced their self-efficacy to manage their disease successfully. It is also worth noting that generational changes were discussed frequently within the mixed Latino/Anglo participants (4/6) regarding self-management, as the participants spoke about how there was an increase in knowledge that was being transferred to younger generations of Latinas, and that there was a new awareness around prevention of disease that seemed to positively influence self-efficacy in the younger Latinas. Further, mixed Latino/Anglo participants also spoke to the importance of increased knowledge and education as it influenced their self-management behaviors, and suggested that the more information they learned about how to manage their disease, the more confident they were that they could have improved health behaviors and problem solve.

“There was something about being in ¡Viva Bien!, and us talking about what we were struggling with, that made me try find some solutions.”

-Participant 30, pg. 56

The more acculturated participants, those who identified as most or somewhat Anglo (n=18), had similar themes regarding self-efficacy in the area of collective-efficacy (7/18) and the importance of learning from other Latinas and other diabetics. This finding suggests that the vicarious experiences, or role modeling, of learning from others is important to helping individuals apply learned knowledge, so that they believe they can make the suggested changes to health behaviors. Further, several participants (5/18) discussed how they valued the ¡Viva Bien! program and suggested that they all learned new skills within multiple areas (diet, physical activity, stress management, and social support), and that it was a collective effort, across many topics, that helped them
successfully change their behaviors. Participants also expressed concern when they were no longer involved in group activities that supported on-going health behaviors.

“It’s like growing up in a wealthy family and then going back to poverty. And then I was stressed, and I was trying. I was like “Oh, I need to talk to people about issues.” And not like a therapist. Just like a group of people that are struggling with the same stuff.”

-Participant 30, pg. 55

These comments suggest the importance of collective-efficacy across multiple topic areas, which may increase the improvement of self-efficacy. A few of the more acculturated participants (3/18) also spoke to how the ¡Viva Bien! program would have been good for other women, and not just for Latinas, with two of the women also commenting that they do not necessarily feel a strong attachment to being Latina. Further, more acculturated participants also commented more frequently that a healthy person is one who educated (5/18), suggesting that they see an association with education and health.

There was a similar finding between self-efficacy and acculturation for the mixed Latino/Anglo and M/S Anglo category regarding the importance of education. This finding further supports the importance of knowledge and education as they relate to self-efficacy. Findings also suggest the importance of collective-efficacy, and learning with and from other Latinas, including younger generations. There were no other similarities between acculturation categories and self-efficacy in this study population.

**Self-Efficacy and Level of Education**

Thematic results for the concept of self-efficacy and level of education category are presented in Figure 5.6.
Figure 5.6: Thematic Findings For Self-Efficacy And Level Of Education

Several of the participants who had less than a high school degree (4/9), reported more comments around how they felt they had lower self-efficacy or self-confidence before participating in the ¡Viva Bien! program, with comments suggesting that they believed they were capable of making behavior changes that they previously did not think possible. In addition, a few of the participants (3/9) also suggested that they felt empowered or more confident upon completion of the program to know what they needed to help them sustain the changes they had made (e.g., support systems that needed to be in place, daily routines). Along this same theme, three of the lower educated participants discussed how they started to like “fixing themselves” up more when they started feeling better about themselves.

In addition, a few of the participants (3/9) who were less educated discussed how they had become depressed upon learning that they had T2DM, and five of the participants also commented that they were in denial about their health condition prior to participation in the ¡Viva Bien! program. The theme of denial and depression was
prevalent across the interviews regardless of level of education, however the less educated participants suggested that self-efficacy increased more (compared to the other two education levels) upon participation in the ¡Viva Bien! program, with more comments suggesting they felt more confidence to manage their disease now that they had learned that it was manageable. Several of the participants had suggested that they had been in denial prior to ¡Viva Bien! because they had felt their T2DM was unmanageable and that it could not be controlled.

“I think I kind of didn’t believe it (when diagnosed with T2DM). And to this day I still feel good. You know how people keep saying, “oh I feel bad, I feel this.”? They just complain about everything. It’s like “God. Am I going to be like that? “Sure enough, I’m going to be like that if I’m not careful, if I don’t take care of myself. I didn’t want to end up like my mom……. I deal with it now (since participation in ¡Viva Bien!).”

-Participant 11, pg. 19

Several participants who graduated from high school (n=10) had similar themes in the area of self-efficacy including the importance of knowledge and learning new self-management behaviors (6/10), with several of the participants (5/10) speaking about how they shared what they learned with their family members in order to help the health of their loved ones.

“I want to tell you that I am horrified to see what lack of information about diabetes has done to her (sister), she has diabetes for 18 years, 19 years of diabetes, it’s to a degree that diabetes has already, how can I tell you, it has already absorbed her. Like I’m telling you, how is it possible that living in the United States, you have let diabetes advance so much…here where you have opportunity, to have support, to have information without it costing us, it’s that you’re not listening. Can you believe that she did not use oil to cook, not even olive, not even canola, pure lard with the years that she has of having diabetes and she eats…….I was very upset when she came (to visit). We fought, she cried, because I was making her see things.”

-Participant 8, pg. 54

Many participants who were high school educated (6/10) also expressed the importance of family involvement in their self-management, with comments that suggested the participants felt empowered when their family members were supportive
and engaged in their lives and health care decisions. These finding suggests an increased self-efficacy when participants felt family support to carry out self-management behaviors. In addition, the high school educated participants placed more emphasis than the two other education cohorts on sharing their knowledge and behaviors with family and loved ones.

The higher educated participants (some college, college graduate, or post-graduate) also had similar themes throughout the interviews. A few of these participants (4/14) who were higher educated made comments around problem solving and how staying positive helped them feel better about their health (6/14).

“I learned a little bit how to, how to solve a problem, you know. You look at it, you study it, you think about how you can fix it. And then you fix it. You know. That’s what I learned from ¡Viva Bien!”

-Participant 14, pg. 32

Several participants expressed how they tried to help themselves by thinking about new ways to improve their health behaviors, and were mindful of what had worked in the past (suggesting the importance of routines). Several of the higher educated participants (5/14) also suggested they were proud of themselves for taking care of their diabetes, and learning to manage their disease more effectively with comments regarding how they felt good about positive health changes, and improvements in self-management behaviors. In addition, several participants (4/14) commented that when they learned how they compared physically to others who were in worse health, it put things into a new perspective and helped them realize how they could be worse; namely, it helped them feel that they could make changes to take even better care of themselves. Findings suggest that higher educated participants had less depression and denial, with comments supporting that increased education helps increase self-efficacy.

Regardless of education, there was an underlying theme of increased self-efficacy that came from increased knowledge, and sharing of that knowledge with
others, around managing their T2DM. However, participants in the higher educated category expressed more comments regarding higher self-efficacy (e.g., proud of self, able to problem solve) and the importance of education. This finding supports the use of lay health leaders, or *promotoras*, with higher education to help facilitate group interventions and programs that foster increased individual and collective efficacy toward improved self-management behaviors of T2DM.

**Social Support and Age**

Thematic results for the concept of social support and age category are presented in Figure 5.7.

![Figure 5.7: Thematic Findings For Social Support And Age](image)

Participants in the age range of 42-51 expressed similar themes throughout the interviews with regard to the influence of sources of social support. Participants in the younger age range expressed concern over unhealthy behaviors, primarily dietary concerns that they experienced at home with family members (e.g., expectations to cook certain foods in certain ways), and discussed the importance of being a care giver to
their families (many of the participants had children living with them at home), and the expectations they had to carry out this role.

“You always provide, and I think that’s something about being a Latina mother. You’re expected to always have food on the table. You’re always expected to always have good food, Mexican food. Anybody comes to your house, you want to feed them.”

-Participant 32, pg. 27

In addition, several of the younger participants (6/9) spoke about how they feel they are more aware of important health information and behaviors that they want to share with their family members, with two participants expressing that they felt their family members knew very little about good dietary habits. Findings suggest that the younger participants placed more emphasis on family expectations, and family social support was given greater consideration for the younger cohort.

Participants (5/12) in the middle age range of 52-61 expressed similar concerns as the younger participants with regard to the importance of influence and responsibility to the younger generation of Latinos. For example, several participants in the middle age cohort spoke to how important it is to be supportive and share health information with their children to encourage better health habits and, ultimately, support better health outcomes. Some of the participants in this age range discussed expectations at home to prepare foods certain ways, however many of the participants did not have children living with them and it did not seem to be as significant as an issue as it was for the younger participants. Some of the middle age range participants (4/12) also discussed how they value the support of other Latinas with similar health conditions and how they like learning from each other.

Several of the participants (7/12) in the older age range of 62-70 expressed the importance of social support activities and participation in community organizations, with
some of the participants (4/12) commenting that they were lonely, or knew others who were lonely.

“I meet some people out there in the recreation center, but not enough who are diabetic, or they go “I don’t have the problem you have where I can eat all this stuff.” So it’s hard. And when you’re mingling with people who are diabetic you get to socializing and talk to them and know each other’s problems and know how to help each other. And see that’s what was good. And now you feel all lonely again (when you lose those types of relationships).”

-Participant 31, pg. 23

Two of the participants in the older age range also stated that they felt they needed more social support as they got older. In addition, several participants (5/12) in the older age range also discussed the importance of having a good relationship with their health care provider, including how they needed more support from their health care providers, frequently because they had more health ailments.

“…she’ll ask me how I’m doing, first of all. So then I can tell her how I’m doing, and if I’m doing good in this or not good in this. She’ll ask me. Next then she’ll give me an opportunity to say what’s wrong at that point….I always feel like she listens to me.”

-Participant 28, pg. 28

A few of the participants (4/12) commented that they liked the ¡Viva Bien! program as it was like an extended family for them.

There were similar findings in the younger (42-51) and middle age (52-61) categories regarding the importance of younger generations of Latinas and shared knowledge. Interestingly, the importance of social support sources varied according to age category, with younger participants (42-51) expressing the importance of family social support over others sources of social support; a finding that is not surprising as many of these participants had family members and children at home that they cared for. The middle aged participants (52-61) also had a similar finding regarding the importance of social support, but suggested that cultural social support was most important to them. Similar to the other participants, social support was theme for participants in the older
category (62-70) who expressed the importance of community and health care social support sources. This finding is not surprising given that the older participants expressed more loneliness and health ailments, which would speak to the need for more support from community and health care providers.

Social Support and Acculturation

Thematic results for the concept of social support and acculturation category are presented in Figure 5.8.

Figure 5.8: Thematic Findings For Social Support And Acculturation

The lower acculturated participants (most or somewhat Latino), expressed the importance of family and faith in God, with several of the participants speaking about how their faith is a type of support for them (6/9). Family was a primary support for participants who were less acculturated. Several participants commented that it was nice to feel accepted in a community and encouraged in a group setting (collective-efficacy) when they participated in the ¡Viva Bien! study (4/9). Participants also
expressed the importance of getting to know other Latinas who shared similar cultural values.

“I was very excited because I thought that the fact that I was going to be around other Hispanics was good for me, because I think it’s kind of a cultural thing.”

-Participant 4, pg. 17

The concept of family was also mentioned in a few of the interviews with regard to feeling a part of a family in the ¡Viva Bien! program. Two lower acculturated participants commented that they had a hard time adapting culturally, and another two commented that they struggled with loneliness.

The mixed Latino/Anglo participants had common themes in the social support area regarding the importance of socialization, regardless of what type of social support, with 4/6 participants discussing how they value social activities in general. In addition, a few mixed Latino/Anglo participants (3/6) also spoke about how they value their role as caregiver to their families and communities at large.

“I guess I’m such a care giver. I’m always giving and doing things and that brings a lot of fulfillment to me.”

-Participant 4, pg. 13

An interesting finding from the mixed Latino/Anglo participants was that a couple of the participants (2/6) spoke about cultural differences between Mexican Americans and Mexicans, commenting that there were differences between the two with regard to how they view social support.

The more acculturated participants also had similar themes in the area of social support sources, with several of the participants (8/18) speaking to the importance of continuity of social support from family, community, and culture; namely, ongoing support systems were important.
“And then having the same people, they came and talked, all the different sections, was great. To see, to build the bond with everybody. I think that was great. There was consistency, because you got to know, it was like a family. I think that for me, when it (¡Viva Bien) was over it was like ok, it was like a chapter in your life. It was almost like a, I wouldn’t say a death. Something was closed. And you had to go from there. You had to work on, cause you’d built this little family, and now you’re out on your own. Almost like when you are growing up. You’re going to try something out. But, you have to look at it as a positive It wasn’t an ending. You figure, “Well, go out there and see if we can do it on our own too.” That’s the way I looked at it.”

-Participant 17, pg. 57

Several participants (7/18) who were more acculturated also spoke to the value in reaching out to and helping others, and the significance of a collective effort through programs like ¡Viva Bien! (collective-efficacy), which made it easier for them to manage their disease and take better care of themselves.

Similarities between the three acculturation categories included the importance of family social support and collective efforts; namely, collective-efficacy to support each other to make positive behavior changes to manage their T2DM. Participants regardless of acculturation category expressed the importance of collective-efficacy in sources of social support to help them manage their T2DM. This finding supports the role collective-efficacy for increasing self-efficacy for Latinas.

**Social Support and Level of Education**

Thematic results for the concept of social support and level of education category are presented in Figure 5.9.
The majority of lower educated participants (8/9) discussed the importance of learning from other Latinas and/or other diabetics, and three of the participants commented that they enjoyed learning English when their primary language was Spanish.

“…to meet other Latina women, and see that you are not the only person that has…because sometimes when you have diabetes you think you are the only one having all this illness and you find out that you are not, and you get to talk to other Latina women that have a disease….”

-Participant 24, pg. 27

In addition, lower educated participants also spoke to how they valued the opportunity to meet with others in a social support setting, and for some (4/9) it was the first time they had participated in a group setting, such as the ¡Viva Bien! program.

Common themes of the high school educated participants (n=10), included having a strong faith that gave them support (6/10) to better manage their T2DM. In addition, several of the participants who graduated from high school also spoke about the importance of social time (5/6) through family and community activities.
“I went today, and I went to this exercise class because I’d heard about it. And I went today and it was really nice cause I knew a lot of people there and it was like “Oh, okay. This is going to be fun.” So I think those kinds of things really help.”

-Participant 28, pg. 36

A few of the participants (3/10) also mentioned how they grew up in neighborhoods with many Latinos, which supported their family and family values, and how this was important to them.

The higher educated participants (some college, college graduate, post-graduate), had several participants (7/14) who spoke about helping take care of others as a means of supporting themselves to take better care of themselves. The notion of helping others, and keeping busy doing it, was a common theme for higher educated participants. A few of the higher educated participants (3/14) also spoke about how they had felt discriminated against and how racism had affected them over their lives, including how they felt a sense of accountability to their families to be successful.

“My success is related to everybody. I mean, if I’m not successful it’s a reflection on my family. I believe that. I think there’s definitely a cultural piece.”

-Participant 30, pg. 30

Another reoccurring theme was laziness, with some of the women (5/14) suggesting that they feel their culture does not support their health as Latinos are often sedentary.

“With my culture anyway, I think we’re kind of lazy. Like in other cultures their mind is exercising, running a marathon, running the bikes, doing this and doing that. And I think for us, I think because we have so much to do at home, and because most of the men, the Hispanic men don’t help the women. They come home and eat their meal and “Bring me a beer!” They don’t sit there and say, “Let’s go for a walk. Or let me help you honey. Let me help you do the dishes so we can get out of here faster.” You know. In our culture, the woman pretty much does everything.”

-Participant 19, pg. 36

Several of the higher educated participants (5/14) also spoke about how they felt it was easier to build trust with other Latinas, and expressed a sense of collective-
efficacy that helped them feel supported when they got to know other Latinas with similar health and family situations.

Similarities between the levels of education categories included the importance of learning from, supporting and being supported by, and building trust with other Latinas. This finding supports the sense of collectivism that appears vital to building self-efficacy in Latinas regardless of level of education.

Summary of Age, Acculturation, and Level of Education

With regard to age, findings suggest that the younger participants were more successful doing physical activity than the other two age cohorts, primarily due to having fewer health ailments and more support at home from family members. However, the younger participants also expressed more stress, which seemed to be related to caregiving expectations and pressures at home (i.e., due to having children who still lived in the home). Participants who were younger made more comments around fostering healthy behaviors in their children, and also suggested that they received reciprocation from their children who often encouraged them to take better care of themselves. The younger participants also made more comments on self-management of their T2DM, and seemed to be more aware of how they viewed health differently than they had when they were a child.

In comparison, middle aged participants spoke about the importance of prevention for their children and how they also felt a responsibility to foster healthy behaviors in their family. In addition, these participants expressed having more physical limitations than the younger aged participants. Middle aged participants also recognized that the younger generation of Latinas may be more aware of good health behaviors. The middle aged participants also expressed the importance of social support from other Latinas, and had more comments regarding denial of their disease. Unlike the younger
participants, findings from the middle and older aged participants suggested that social support was more important as one gets older. Further, findings suggest that social support increases self-efficacy through collective-efficacy, with several middle aged participants commenting that they valued learning from other Latinas with similar issues through the ¡Viva Bien! program.

The older participants had more depression, loneliness, and more physical limitations. These participants also expressed a greater need for social support of various types (tangible, emotional, informational), including the importance of extended families now that their children and other family members no longer lived with them. The older participants also suggested that the collective-efficacy generated in the ¡Viva Bien! program was important to them as it addressed their needs for increased social support, but also helped them learn from other Latinas in various areas (diet, physical activity, stress management, and social support). Findings suggest that the continuity of the ¡Viva Bien! program, and the support throughout each component of the program, helped the older participants feel supported, which was most important to them and helped them want to take better care of their health.

With regard to the influence of acculturation, findings suggest that the less acculturated participants have less self-efficacy than the middle or more acculturated participants, with a greater number of themes suggesting difficulty adapting to their newer culture, and difficulty getting into routines. The less acculturated participants, however, also had findings that support how increased self-management skills can help build self-efficacy, and confidence, to manage disease more effectively.

The middle acculturated participants expressed comments regarding the importance of knowledge, and generational changes, than the other participants. However, the middle acculturated participants also had findings around the importance
of traditions, such as cooking from scratch, and being the care giver who passes down traditions. There seemed to be a dichotomy for these participants who recognized differences between cultural groups, and recognized how hard it can be to remain healthy when they both want to keep with traditions and learn how to take better care of their health. Findings suggest a need for increased social support to help individuals who are learning new cultural ways, while retaining important cultural traditions and values that matter to them, in order to help build trust and to share knowledge and information that is understandable and appropriate.

The more acculturated participants had findings that suggested they have higher levels of self-efficacy (e.g., pride, problem solving skills), which seemed to be supported by a greater appreciation of education as it informed better health practices. Further, the more acculturated participants had more positive comments around routine, social support activities and the importance of reaching out to others to share knowledge and learn from one another. Findings from these participants suggests that the more acculturated participants view collective-efficacy as a means to increasing self-efficacy in a greater capacity; namely, it helps build trust sooner, and the more sharing that individuals do, the more they learn and increase their own skills, awareness, and knowledge base to help manage their T2DM better.

With regard to the level of education, participants who had less than a high school education expressed the importance of learning from others, and valuing group activities to help learn new skills. In addition, several of these participants said they needed more support and more continuity of routines to be successful in their self-management. There was also a higher level of less educated participants who expressed both depression when they learned they had T2DM, and also denial of T2DM prior to participating in ¡Viva Bien! Interestingly, several of the less educated
participants also commented that they felt it was good to learn more English (many of them were monolingual Spanish speakers), and that the increased communication with English and other Latinas who had T2DM, helped them learn to manage their disease more effectively. This finding suggests that perhaps learning English increased self-efficacy to improve self-management of their disease.

Participants who had graduated from high school expressed more comments around knowledge and education than the less educated participants, and also spoke more about health care and learning about health. Interestingly, the high school educated participants commented more about family and faith values than those educated at other levels, suggesting that they wanted to improve their health, leaned on their faith to help support them, and felt responsibility to share knowledge with their family and loved ones.

The higher educated participants expressed more self-efficacy to change their health behaviors and spoke more frequently about how they believed in themselves, tried to stay positive about their health, and problem-solved issues. These participants also expressed the importance of helping others as means to help manage their own health. Findings suggest that the higher educated participants also placed more pressure on themselves to be successful, including having better health outcomes. However, the notion of doing “better” - not being lazy, staying positive - also seemed to place more pressure on cultural expectations for some of the participants, with several speaking about how they struggled with their diets, as certain food preparations and types of foods were expected at social and family gatherings, and other comments that suggested their culture had both positive (strong family ties, frequent celebrations and social gatherings, extended family support), and negative attributes (worry over being lazy, language difference, racism, and general feelings that they had to do better than
others). This finding may warrant additional studies that helps tease out how higher educated Latinas perceive self-efficacy, hence successful self-management, as compared to less educated Latinas.
CHAPTER VI
DISCUSSION AND CONCLUSION

Discussion

There were two major findings in my research, including having a sense of collective-efficacy and the importance of knowledge and awareness, or sabiduría. My findings suggest that Latinas place a greater emphasis on collective-efficacy as it positively influences self-efficacy as well as knowledge and awareness, or sabiduría, toward self-management of T2DM. Having a sense of collective-efficacy, and a shared belief that participants could make successful self-management of T2DM behavior changes together, also informed the increase of individual awareness and acceptance around T2DM. When a sense of collective-efficacy was higher, participants expressed an increase in disease awareness, personal self-efficacy, and self-management behaviors as they were reinforced through social persuasion, mastery of repeated activities and vicarious experiences with others. There was a sense of wisdom, or sabiduría, that came from a sense of collective empowerment.

Furthermore, the importance of culture and family sources of social support, including having a sense of familism, was accentuated by the significance of collective-efficacy as it influenced self-management of T2DM in the study population; having a sense of collective-efficacy as it was informed by their cultural beliefs and norms, fostered increased knowledge and awareness to support self-management of T2DM in the participants and suggests that interventions and programs aimed at increasing collective-efficacy may be beneficial for Latinas to make behavior change. In addition, an increase in knowledge and awareness was reported by participants as being important factors that positively influenced sources of social support with regard to T2DM self-management.
With increased knowledge and awareness, participants had greater self-efficacy toward specific T2DM self-management behaviors and reported less denial of disease and associated depression. When depressed and or in denial about their T2DM, participants had lower perceptions of self-efficacy and reported poorer self-management behaviors. For many participants this finding was recursive: having a decrease in denial and depression also influenced greater acceptance and awareness of disease. The importance of collective-efficacy as well as knowledge and awareness, or sabiduría, is pervasive throughout the study’s implications, and may be useful in designing future research studies and programs.

**Theoretical Implications**

My findings support the use of a socio-ecologic model (Figure 2.1) to explore social support and self-efficacy in relation to the self-management of T2DM by Latinas. This model enabled me to explore and operationalize the socio-ecological environments that were most relevant to the study population with regard to performing daily self-management of T2DM. The relationships between sources of social support, as illustrated in the socio-ecologic model, and self-management were positively influenced by the individual’s perceived self-efficacy to manage her disease; the stronger the social support, the better one’s self-efficacy, and therefore better self-management of disease.

Literature shows that self-management behaviors generally decline when interventions end, but the reasons why this occurs is not clear (Lorig and Holman, 2003; Norris and others, 2002). I used Sallis and colleagues’ four key principles in my Socio-Ecologic Sources-Of-Influence Model (Figure 2.1) to help understand the dynamic between individual behaviors and family, health care, community, and cultural factors of social support influence as they may help maintain self-management behaviors over time (Sallis, Owen, and Fisher, 2008). Understanding the relationships between the
patient and her sources of social support may help researchers and health care
providers create programs and interventions that have sustainable health outcomes
even after the program or intervention ends.

My findings suggest that having a sense of familism, an important value within
Latino culture, supports collective-efficacy that can come from feeling a part of a family
within various social support sources (e.g., family, health care, community, and culture)
and is important for increasing and maintaining self-management behaviors in Latinas
who have T2DM. The stratification of my study population supported this idea, which
was present regardless of age, acculturation, and level of education. This finding has
not been adequately explored in the literature to date for this population and may be
generalizable to Latino men.

In this dissertation, four sources of social support (family, health care, community
and culture) were examined to understand their importance and inter-relationships as
they influence self-efficacy and self-management of T2DM. The comparative importance
of sources of social support was evident through the thematic results with family and
cultural social support being most important to the participants. Current literature
suggests that individuals with T2DM perceive they have better health when they have
positive social support systems in place (Morrow, Haidet, Skinner, and Naik, 2008;
Goodall and Halford, 1991). My findings are similar in that when individuals reported
positive support at the family and cultural levels they perceived their capabilities to be
greater to manage their disease.

Some research also suggests that individuals who perceive their capabilities to
be slightly greater than they actually are have a greater likelihood of being successful in
their actions or behaviors (Goddard, Hoy, and Woolfolk Hoy, 2004). However, I did not
find this to be true in my study population; some participants reported how even when
they felt they were capable of performing a self-management behavior, frequently their health in the form of depression or a physical limitation (e.g. inability to move very well) got in the way of them performing the actions they felt they were capable of performing.

The significance of denial and depression for the study participants was an important finding as they negatively influenced self-efficacy toward specific self-management behaviors (e.g., eating a healthy diet, doing regular physical activity, medication adherence, and blood glucose monitoring) as well as hindered acceptance that they had the ability to take care of their T2DM. The sense of awareness that many participants spoke to upon learning to accept their T2DM and overcoming depression associated with their disease was also a surprising finding, as it influenced participants’ sense of collective-efficacy to help others with similar situations and health as they learned to help themselves manage their disease.

Specific forms of social support, including emotional, informational, appraisal, and tangible, were represented throughout the interviews. Participants expressed that emotional and tangible social support came primarily from their families and culture. Interestingly, unlike other research findings that suggest nagging as a form of informational or tangible support about behaviors that can be detrimental to self-management, my research found the opposite. Participants did not view naggings from family and loved ones to be negative, but rather endearing. This finding suggests that for Latinas, nagging can be viewed as a type of positive social support that encourages ongoing self-management behaviors.

Not surprisingly, informational support came primarily from physicians and health care providers, and was viewed positively when participants felt they were being respected and listened to. Consistent with recent literature, participants reported satisfaction with having a physician who understood her culture and preferred a provider
who spoke Spanish. Unlike some research, my findings did not find access to health care to be a significant concern for my study population, even when the participant did not have health insurance because most of the participants had some access to health care (Beach, Gary, Price, Robinson, Gozu, Palacio et al., 2005; Smedley, Stith, and Nelson, 2003). Although many of my participants had health care insurance through Kaiser Permanente (n=23), several of my participants were from the Salud Family Health Center (10), a “safety net” clinic, which aims to help reduce health disparities and barriers to health care for those without health care insurance. My findings suggest that many of my participants were happy with their access to health care and their providers, regardless of whether or not they had insurance, and participants mentioned fewer structural barriers to health care generally reported in the literature for Latinas (e.g. inconvenient hours, little or no interpreter services, long wait lines, poor education materials). This finding was a surprise finding and leads me to question whether or not structural barriers to health care for Latinas are changing; an important finding that warrants additional research.

Similar to other research findings, community social support was mostly in the form of appraisal support as participants reported assistance with coping strategies and resources to help manage their diabetes (Langford, Bowsher, Maloney, and Lillis, 1997). Like other research findings, my study found increased community social support was positively influential on increased physical activity through the use of walking partners, utilization of recreation and community centers for exercise, and other community activities that promote activity (Stahl, Rutten, Nutbeam, Bauman, Kannas, Abel, Luschen, Rodriquez, Vinck, and van der Zee, 2001; Giles-Corti and Donovan, 2002).

As evidenced by the findings, the theme of knowledge is present in all sources of social support as it directly influences both self-efficacy and self-management. At the
family level, as the primary care giver to their families, participants shared knowledge with family members and see this as a very important aspect of their role in the family. Through increased knowledge about their disease, participants recognized the importance of taking care of themselves, too, in order that that they would then be able to better care for their families.

At the health care level, participants reported the value in feeling empowered by a physician who listens and works together to identify best care practices. Participants reported the importance of having a physician who took the time to understand them as an individual and culturally. The notion of respeto, or respect, was common throughout the interviews when participants spoke about their physicians, and most participants felt they had very good doctors. However, when participants reported they did not have a good physician-patient relationship, the primary concern was that they felt that they were not respected or understood by the provider, which undermined the information the physician or provider offered. At the community level, participants gained knowledge from others who were Latinas or diabetics through shared experiences. Community level information available through recreation and community centers and organizations also helped participants gain knowledge and find support systems that empowered them to learn about how to manage their diabetes more effectively. At the cultural level, participants spoke to the importance of increasing health knowledge to share with new generations and changing some of the cultural expectations to help prevent diabetes in the future. A sense of collective-efficacy at the cultural level with others who share similar values and ideas about health also supported the sharing and idea exchange that helped foster improved self-management for the participants. Further, participants who reported increased knowledge across the four social support sources had the greatest
increase in the exercise of self-efficacy, which lead to an increase in self-management skills.

High family and cultural social support were also found to be more important than other sources of social support as related to self-efficacy. Similarly to other studies, this study supports how stronger self-efficacy beliefs in relation to specific self-management behaviors can help maintain the management behavior. However, my study also found that the influence of family and cultural social support strongly relates to how those behaviors are maintained over time; namely, even when the individual knows she is capable of doing a specific self-management behavior such as cooking a healthy meal, exercising daily, and monitoring her blood sugars, she may choose not to do the behavior depending on the influence of others and/or cultural expectations. This influence of family and culture to self-efficacy was pervasive throughout the interviews.

Prior studies support the concept of self-efficacy as an important mechanism to behavior change (King, Glasgow, Toobert, Strycker, Estabrooks, Osuna, and Faber, 2010; Krichbaum, Aarestad, and Buethe, 2003; Bandura, 1997). My study’s findings show a significant influence on self-efficacy is a lack of or limited knowledge of self-management that is present when an individual is either in denial about their disease or feels depressed. The concept of awareness was also present throughout the interviews as supporting the increase of knowledge and how it helped bring them out of a state of denial. Both depression and denial were themes that participants spoke to as restraining them from learning what they needed to understand to better manage their diabetes, and served as negative influences to self-efficacy. Knowledge that is facilitated through social support increases confidence and beliefs around successfully carrying out self-management behaviors. For the participants, increased self-efficacy was due to believing they had the information and knowledge necessary to now know what to do.
Once participants accepted their disease, learned how to take care of it, and identified with others who had similar situations, their confidence and beliefs in their ability to make the necessary changes toward managing their T2DM significantly increased. However, when the support systems were not in place to foster the new behavior changes, through continuity and routine, many participants commented that it was harder to maintain their new behaviors and self-efficacy diminished.

As previously discussed, I also found collective-efficacy to be an important factor that needs to be considered when working with Latinas as an influence on the exercise of self-efficacy for self-management. While it is known that culture influences self-efficacy through norms and beliefs (Concha, Kraviz, Chin, Kelley, Chavez, and Johnson, 2009), research to date has not explored culture as it influences perceptions around behavioral capabilities collectively for Latinas.

My findings suggest that collective-efficacy may impact self-management differently for Latinas based on specific self-management behaviors (e.g. diet, physical activity, A1c monitoring and medication adherence). For example, the collective influence on physical activity was greater for my study population when the participants worked in a group setting. This finding was also prevalent throughout the participants’ involvement in the ¡Viva Bien! study as the perceived collective-efficacy was supported through the four sources of efficacy development: mastery experience, vicarious experience, social persuasion and affective states (Bandura, 1986, 1997). In addition, the study’s findings support that individual efficacy may be strongly influenced by collective efficacy at the cultural and community levels, further establishing the significance of fostering self-efficacy through knowledge and awareness. Although they differ in the unit of agency, both collective and individual efficacy, are grounded in similar beliefs and functions as evidenced in the ¡Viva Bien! study; namely, the vicarious
experiences and social persuasion toward the exercise of self-efficacy collectively had a significant impact on the study participants. Furthermore, thematic results found a sense of collective-efficacy to be an important influence to the exercise of self-efficacy and community level social support as it influenced self-management. An increase in self-management skills worked reciprocally as a positive influence to self- and collective efficacy. In addition, thematic findings of consistency and routine were supported as positive concepts in relation to self-management as they further enabled the establishment of mastery and vicarious experiences thereby increasing self-efficacy at the individual and collective levels.

These relationships are interrelated, and can be figured conceptually in a triangle to show the potential pathways between social support, self-efficacy, and self-management as they were moderated by linking themes, which influenced the strength between the concepts. The study’s findings show a two-way relationship between social support and self-efficacy, with knowledge, awareness, and collective-efficacy indicating a theoretical pathway. Knowledge, awareness, and collective-efficacy increased participant self-efficacy and also influenced how the participants received social support. Depression and a sense of denial about their T2DM had a two-way relationship between the participants’ self-efficacy and self-management. When depressed and/or in denial about their disease, participants had lower perceptions of self-efficacy and reduced self-management behaviors. There was also a two way relationship between social support and self-management. Continuity of social support and routine in self-management behaviors were indicators of the theoretical pathway between social support and self-management and were reinforced through an increased awareness and sense of collective-efficacy. Participants expressed the importance of continuity and routine to help manage their T2DM. The routine of self-management behaviors and on-going
social support further increased social support and helped the women maintain their self-management behaviors (Figure 6.1).

FIGURE 6.1: Recursive Conceptual Pathways

In summary, the increase in knowledge, awareness, and collective-efficacy in the study participants had the greatest positive impact on increased self-efficacy as it influenced self-management of disease and opposed denial and depression. This relationship was supported when increased self-management behaviors - reinforced through mastery of repeated activity - further increased self-efficacy, which supported increased knowledge and awareness. Thematic interpretation also suggests that community and culture play an important role in, and are positively associated with, a sense of collective efficacy; creating a pathway from individual self-efficacy to collective
self-efficacy. This relationship appears to work both ways, as it influences individual self-efficacy toward self-management of disease, and fosters a culture of perceived collective efficacy that may further influence individual self-efficacy. I believe that these findings suggest a reciprocal relationship between self- and collective-efficacy that are important to sustaining good self-management behaviors for Latinas. The theoretical pathways may be tested quantitatively in additional research to further examine the influence of age, acculturation, level of education, and other factors as influenced by collective-efficacy.

**Intervention Implications**

My findings support the need for interventions and programs that help increase self-efficacy at a younger age for Latinas. Younger Latina women have delayed diagnosis, treatment, and mismanagement of T2DM leading to poorer health outcomes. Further, this study suggests that there is a generational difference between younger and older Latinas. Participants in my study spoke to the importance of sharing knowledge and increasing awareness to prevent T2DM in younger Latinos, and suggested that younger Latinas are also more aware of how to prevent disease through healthier behaviors; this is a finding that is supported by research showing how early screening and prevention of T2DM are important to reducing health disparities, comorbidities and mortalities, health care costs, and poor health outcomes (Black, 2002; Heart Study Outcome Prevention Evaluation Study Investigators, 2000). The study’s findings suggest that health views of younger generation Latinas are changing, and that there may be a shift in how younger Latinas view health behaviors. All ages of study participants reported denial and depression as being negative influences to the exercise of self-efficacy. Implications for future behavior change interventions are that researchers and health care providers need to reach out to Latinas at a younger age to
help prevent or delay the onset of T2DM through increased awareness. Informing Latinas at a younger age to be more proactive in their health may help prevent denial of health ailments, such as T2DM, and may help Latinas feel more empowered; thereby helping to prevent or reduce depression.

As the primary care givers in their families, participants frequently discussed the importance of taking care of their families first. Several of the study participants spoke to the difficulty of taking better care of their health after they had children, with many participants commenting that they had their children at a young age. With T2DM on the rise in the U.S. at younger ages, it is imperative that interventions and health care providers reach out to younger Latinas (teen to early 20s) to both educate and increase awareness of health behaviors that will decrease T2DM in this growing population. Incorporation of cultural aspects of diet, exercise, and medication into the patient’s self-management regimen through culturally competent care is needed to ensure that information is relevant and understood by the patient.

Another implication of the study’s findings to future interventions is the importance of continuity within social support settings for Latinas. Participants expressed the importance of socialization and collective-efficacy as part of their family, community, and culture. Participants reported a reduction in both self-efficacy and self-management when social opportunities were limited; a finding that was evident in participants who expressed depression and reduced self-management when social groups ended.

Thematic findings show that the social support group setting within ¡Viva Bien! had the greatest impact on the self-management behaviors of the study participants. The sense of collective-efficacy that the participants spoke of as care givers to their families and within their culture was exemplified when they participated in ¡Viva Bien!. The importance of collective-efficacy was expressed by participants when they commented
about the social support component of the study; namely, participation in the social support group fostered both socialization and expectations around self-management of T2DM. This finding has implications for future interventions. The sense of collective-efficacy was evident from the participants who felt a sense of responsibility and accountability to their peers and the program, and was strongly supported through the on-going social support group setting that helped establish trust among the participants. This finding reflects how self-efficacy at the individual level may be influenced by the collective-efficacy of the group. Implications for future interventions include the potential benefits of incorporating components of collective expectations toward goal achievement though support group settings that are maintained over time.

Based on my study findings, I believe a stronger emphasis on collective, organizational, socialization may be applicable and beneficial to multiple health interventions and throughout primary care systems, and generalizable to other populations. Specific to Latinas, interventions within medical clinics and community level programs could incorporate culturally competent care initiatives with information targeted to the needs and culture of Latinas. Furthermore, these interventions could focus on young Latinas who are genetically predisposed to T2DM, and/or have gestational diabetes. The importance of having consistent programs and interventions that are sustainable cannot be understated, and effectiveness studies could be developed to explore how to increase long-term results through sustained self-management programs available in health care systems and community settings.

**Implications for the Patient Population of Latinas**

The foremost importance of family for Latinas demands that future health services research on this growing population needs to factor family and cultural levels of influence into the research design. This study found that high family and cultural social
support are more important than other sources of social support as related to self-efficacy for Latinas. Study findings suggest that family and cultural social support, and the sense of familism and collective-efficacy, is in need of additional research. The influence of collective-efficacy for Latinas may be an important next step to explore as it relates to increasing greater awareness of T2DM and individual self-efficacy for ongoing self-management of T2DM. The study’s findings suggest that the concept of familism gained at the community level – sharing with other women who had diabetes, and who struggled with similar family issues - is important throughout the patient’s social support; namely, a sense of collective-efficacy can help foster and empower Latinas to feel more confident in making necessary health behavior changes. In addition, participants expressed the influence of knowledge and awareness, or sabiduría, which is grounded in culture though applicable in each social support level, was more relevant to the exercise of self-efficacy. An important finding was how knowledge and awareness, or sabiduría, impacted increased wisdom, which helped several participants get out of a state of denial about their T2DM, and it also helped participants feel empowered to do something about their disease, reducing depression by doing so. Wisdom, or sabiduría, was gained through learning with other Latinas and diabetics, and from care givers and providers, as it instilled true learning around self-management of T2DM. Findings also suggest the importance of having diabetes-specific social support opportunities for Latinas to help reduce feelings of loneliness, especially those who are older, who are struggling with feelings of denial and depression around their disease. Further, this study supports future research in the areas of denial and depression for Latinas as they negatively influence social support, self-efficacy, and self-management of T2DM behaviors.
Finally, interview data from the study revealed discrepancies in the health care knowledge provided to the participants that may help elucidate why programs for self-management of diabetes for Latinas are not fully effective. Although current literature supports the cultural adaptation of programs and interventions that are targeted to Latinas, my study participants expressed how some current treatment programs are not adequately tailored to the cultural needs and expectations of Latinas. For example, as primary care givers, Latinas frequently put their own health needs after the needs of family members, which my findings suggests helps to enable a sense of denial or lack of awareness around health and the importance of self-management. Specifically, middle aged Latinas were highly suspicious about prescription medication, and could benefit from more information and discussion from their healthcare team to help assure medication adherence. This finding supports the need for additional guidelines for physicians and health care providers to assess the patient’s understanding of her condition and treatment options and provide a more culturally tailored message to the patient.

**Conclusion**

This qualitative study’s findings have implications for improving self-management of T2DM for Latinas. Effective self-management of T2DM requires continuity of treatment regimens that are culturally informed. Gaining knowledge and wisdom, or sabiduría, is a process that takes time. Awareness and acceptance of the disease is a first step to manage T2DM effectively. Social support sources of influence are moderated by knowledge, which facilitates self-management behaviors. The study’s findings suggest that cultural influences and a sense of collective-efficacy informed the participant’s knowledge base regarding self-management of T2DM. Denial of disease and depression suppresses awareness and knowledge of self-efficacy toward self-
management. Further, negative influences to the exercise of self-efficacy, depression and denial, were found to suppress or limit knowledge and decreased the relationship between social support sources of influence and self-management. Participants who reported either denial of their disease or depression did not have good self-management behaviors. Participants felt that knowledge, awareness, and collective-efficacy were the largest influences on their self-efficacy and self-management. Participants expressed how the decrease in depression and the increase in acceptance of their condition enabled them to accept social support at higher levels, and encouraged an increase in the exercise of self-efficacy as they felt more positive about the behavior change needed. For the purpose of this study, increased knowledge as evidenced in the participant’s quotes came in the form of participation in the ¡Viva Bien! program. Several participants suggested that they initially felt inhibited to participate in the ¡Viva Bien! program due to family and life demands and expectations; however, they also felt that their disease was getting out of their control and something needed to be done to more effectively manage their disease. Further, many participants spoke to how they had seen what their family members went through having diabetes and how they didn’t want to suffer the same fate. This factor seemed to be highly associated with participation in the ¡Viva Bien! program, and once participants started the program they gained a sense of collective-efficacy and responsibility to the other participants. This factor encouraged consistency in attendance and fostered self-efficacy through mastery experiences, vicarious experiences and social persuasion. Opportunities for building collective-efficacy through similar health care and community programs may help improve Latinas’ self-efficacy beliefs toward improved self-management of T2DM.
Limitations

The study’s findings represent a small convenience sample of people selected from two healthcare settings who self-identified as Latinas with T2DM, were at risk for coronary heart disease, and had participated in the ¡Viva Bien! program. All of the study participants had access to some form of health care. However, the availability of health care was inconsistent for some of the women due to inability to schedule appointments that worked with their family or work schedules, difficulty getting to appointments due to transportation issues, and financial concerns.

In addition, recall bias is an issue that may need to be acknowledged given the study participants were being asked to recall health behaviors that occurred over their life span. However, the qualitative method of data collection is assumed to be valid, and true, from the participant’s perspective and memory. Another problematic area includes interviewer obtrusiveness, which includes personal bias and subjectivity due to emotions and politics (Patton, 2002). Interviews were also at risk for self-serving probing and unconscious reactivity by the interviewer (Patton, 2002). Another potential limitation was social desirability bias, which is the interviewee’s response aimed at being favorably viewed by the interviewer, in an effort to please (Fisher, 1993). This type of behavior may be attributed somewhat to an emphasis on respect in Latin culture (Bassford, 1995). Limitations regarding reliability of findings were reduced by use of clarifying probes to ensure understanding of the meanings and dynamics implied by the study participants.

Participation in the ¡Viva Bien! study can be considered both a limitation and benefit to the current study. The participants had all just participated in a lifestyle behavior change program aimed at increasing skills around self-management of diabetes. Having participated in the ¡Viva Bien! study is a limitation in that the
participants had increased knowledge about self-management of T2DM, and increased awareness of support systems available in the community; both of which likely influenced their comments during the interviews. Participants were prompted about the ¡Viva Bien! program to elicit comments reflecting themes around the three concepts of self-management, self-efficacy, and social support; reactions to the questions were not used to inform analysis of the ¡Viva Bien! program, but rather to enable data-collection about themes and concepts. Subsequently, the participant’s increased knowledge helped enrich awareness to health resources and support systems and informed the current study’s interviews, strengthening the study’s findings.

An additional limitation of participating in the ¡Viva Bien! program, which was free of cost, was that participants may have higher support levels and self-efficacy based on the fact that they participated in the intervention. Having participated in the ¡Viva Bien! program may have biased themes and concepts, due to the intervention components. For example, it is worth noting that the theme of collective-efficacy was in relation to participation in the ¡Viva Bien and had there not been the opportunity for the group to participate in the program collective-efficacy may not have been as pervasive as a theme. It is worth noting that the current study consisted of a convenience sample of Latinas who wanted to do something good for their health, made time to participate, were trying to manage their chronic illness, were supported at some capacity to do something about their health, and, again, had just participated in the ¡Viva Bien! program. The information gained can shed light into a small, biased sample of Latinas who have the support and interests to help themselves become healthier. The information may not be generalizable to other Latinas with T2DM; however, the findings provide insights into the knowledge, beliefs, and behaviors that Latinas have regarding self-management of T2DM, adds to the literature on important relationships and
pathways between psychosocial factors that influence health behaviors for a large contingency of women, and contributes to intervention recommendations that emerged from this sample.

**Future Research**

Even when access-related factors are accounted for, the quality of healthcare is considerably lower for racial and ethnic minorities than for non-minorities (IOM, 2002). The gap of this health disparity is further widened as culturally sensitive interventions and programs aimed at helping minorities are wanting. Given the dearth of culturally competent interventions in Latina populations, one strategy previously mentioned is to adapt successful, evidence-based treatment or research from one cultural group to another. Although research suggest cultural characteristics of the target group need to be incorporated into new interventions and programs, often this is not the case. Universally applying interventions grounded in data, theory, and methods from one cultural group to another saves time and money, but must factor in cultural influences and expectations when adapted. In order to decrease disparities and improve health outcomes research translation needs to consider relevant cultural variables as part of the dissemination and implementation process. Translating research into practice toward improved health outcomes and decreased disparities is evidenced by effective dissemination and implementation. This research suggests that a reasonable next step is to apply increased psychosocial measures that evaluate the underlying cultural factors that influence self-management behaviors prior to creating interventions and programs. The recent emphasis on patient centered outcomes research is a current step in this direction, with the attention where it needs to be – on the patient. By understanding the larger psychosocial environments for the individual patient and/or the collective population being studied is critical to creating successful interventions and programs.
aimed at disease self-management that effectively reaches the root of the problem at hand.

My findings suggest that there are four essential steps necessary for researchers and health care providers to improve health behavior change toward chronic disease self-management in Latinas. First, the patient’s psychosocial environment must be explored to comprehend the comparative importance of sources of social support to the individual, including how these levels are influenced and informed by knowledge, self-efficacy, and culture. This includes an evaluation of how the patient makes and acts on informed health care decisions. Second, upon having an understanding of psychosocial factors as they influence the individual, information must be presented in the form of understandable knowledge, interventions, and programs that are balanced, culturally appropriate, and accessible for the patient and her family. Having an initial understanding of the psychosocial factors at the individual level will help present information in an effective manner. With the increase of awareness and sabiduría, or wisdom, that comes from learning from others regarding information pertaining to health care regimens, programs, interventions, and treatment, patients will have increased empowerment and self-efficacy to make necessary behavior changes to manage disease states more effectively. Third, the patient’s environment(s) and support systems within that environment must be conducive to patients acting on the increased knowledge and information. If support is not available and negative influences exist including depression and denial within the patient’s family, health care, community, or cultural environments, then change will be difficult to successfully implement. Environments that enable and encourage self-efficacy, collective efficacy, and self-management of disease can be refined through increasing and sustaining the necessary
support systems, including mental health care across domains of influence through continued education and information sharing.

An example of a successful community environment, which was conducive to creating the support levels needed to foster behavior change, was the ¡Viva Bien! program. This program’s components, especially the social support component, helped empower participants to make necessary behavior change toward self-management of T2DM. The sense of collective efficacy in the ¡Viva Bien! program helped substantiate the importance of on-going social support groups and networks for the study population. This finding may be generalizable to other populations and is worth exploring in chronic disease management research.

Finally, the last step for successful health behavior change is at the policy level in the community at large. When health policies are spread throughout the community, the impact can have a greater effect on decreasing health disparities and reducing budgetary spending on medical care. Recommendations for policy changes need to be made to support culturally competent programs that account for psychosocial factors that influence health outcomes of diverse populations. Per the above recommendations, implementation of a larger number of programs and interventions supported through policy change could help increase knowledge, awareness, acceptance, wisdom, self-efficacy and behavior change to impact the collective good and promote health and prevention at an earlier age.
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<td>Do you consider yourself to be a healthy person? Why or why not?</td>
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<tr>
<td>Perceptions of confidence</td>
<td>CT-PC</td>
<td>Do you believe you have the skills necessary to manage your diabetes? Why or why not?</td>
</tr>
<tr>
<td>Perceptions of self-efficacy</td>
<td>CT-PSE</td>
<td>Do you think you can perform certain behaviors to improve your health?</td>
</tr>
<tr>
<td>Self-prevention practice</td>
<td>CT-SPP</td>
<td>Do you practice prevention in your daily life?</td>
</tr>
<tr>
<td><strong>VIVA BIEN/ experience</strong></td>
<td><strong>VBE</strong></td>
<td>“Tell me about your experience with Viva Bien”</td>
</tr>
<tr>
<td>Changes in life since VB</td>
<td>VBE-C</td>
<td>Has anything changed in your life since Viva Bien? (probe: cultural traditions, celebrations, activities, holidays)</td>
</tr>
<tr>
<td>Confidence seeking out health resources</td>
<td>VBE-CH</td>
<td>Do you feel that you have more confidence to seek out health resources since your involvement in Viva Bien?</td>
</tr>
<tr>
<td>Dealing with time commitment</td>
<td>VBE-CH</td>
<td>If time was an issue, how did you deal with this time demand?</td>
</tr>
<tr>
<td>VB helped health</td>
<td>VBE-H</td>
<td>How has Viva Bien helped your health? (probe: mental, physical spiritual)</td>
</tr>
<tr>
<td>Experience with language component</td>
<td>VBE-L</td>
<td>Would you have preferred Spanish only or English only meetings? How do you feel about having the meetings in both Spanish and English at the same time? Was enough of Viva Bien translated into Spanish?</td>
</tr>
<tr>
<td>Meaning of VB experience</td>
<td>VBE-M</td>
<td>Tell me what your experience with Viva Bien mean to you?</td>
</tr>
<tr>
<td>Viva Bien materials</td>
<td>VBE-MA</td>
<td>Would you have preferred more, the same, or fewer handouts? How could the handouts have been done differently to be more useful?</td>
</tr>
<tr>
<td>Section</td>
<td>Code</td>
<td>Question</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Structure of Viva Bien</td>
<td>VBE-S</td>
<td>Do you think there is a way to simplify the Viva Bien study? If you could, how would you restructure Viva Bien? Would you have preferred receiving information in a different format (e.g. video, more oral)</td>
</tr>
<tr>
<td>Time commitment</td>
<td>VBE-T</td>
<td>Was the time commitment of Viva Bien a problem for you?</td>
</tr>
<tr>
<td><strong>BEHAVIOR CHANGE</strong></td>
<td>BC</td>
<td>“Tell me about your behaviors changed with Viva Bien.”</td>
</tr>
<tr>
<td>Barriers to healthy lifestyle</td>
<td>BC-B</td>
<td>What are the barriers to continuing to lead a healthy lifestyle?</td>
</tr>
<tr>
<td>Feel health benefits</td>
<td>BC-HB</td>
<td>Do you feel healthier than you did when you started Viva Bien? If so, what has been beneficial to your health? Why?</td>
</tr>
<tr>
<td>Barriers to healthy eating</td>
<td>BC-HEB</td>
<td>Is there anything that makes it more difficult to eat healthy?</td>
</tr>
<tr>
<td>Health in other areas of life</td>
<td>BC-HOA</td>
<td>Did success in the study help you focus on being healthy in other areas of your life?</td>
</tr>
<tr>
<td>Maintenance behaviors</td>
<td>BC-MB</td>
<td>After participating in the Viva Bien study, what do you think you can do to continue leading a healthy lifestyle (e.g. participating in physical activity on a regular basis, stress management, eating healthy foods, not smoking, having a support network)?</td>
</tr>
<tr>
<td>Viva Bien not demanding enough</td>
<td>BC-ND</td>
<td>Did you feel that Viva Bien was not demanding enough?</td>
</tr>
<tr>
<td>Barriers to physical activity (PA)</td>
<td>BC-PAB</td>
<td>Is there anything that makes it more difficult to do PA?</td>
</tr>
<tr>
<td>Barriers to stress management (SM)</td>
<td>BC-SMB</td>
<td>Is there anything that makes it more difficult to do SM?</td>
</tr>
<tr>
<td>Barriers to social support (SS)</td>
<td>BC-SSB</td>
<td>Is there anything that makes it more difficult to find social support?</td>
</tr>
<tr>
<td>Viva Bien too demanding</td>
<td>BC-TD</td>
<td>Did you lose interest in Viva Bien because it was too demanding?</td>
</tr>
<tr>
<td>Perception of success in VB</td>
<td>BC-VBS</td>
<td>Do you feel you were successful in VB? If so, why?</td>
</tr>
<tr>
<td><strong>VALUE OF VIVA BIEN</strong></td>
<td>VBV</td>
<td>“Tell me what Viva Bien meant to you”</td>
</tr>
<tr>
<td>Weekly meeting attendance reasons</td>
<td>VBV-AR</td>
<td>Why did you go to the Viva Bien meetings every week?</td>
</tr>
<tr>
<td>Change about Viva Bien</td>
<td>VBV-C</td>
<td>If you could change one thing about Viva Bien what would it be, and why?</td>
</tr>
<tr>
<td>Like least about Viva Bien</td>
<td>VBV-LL</td>
<td>What did you like the least about Viva Bien, and why?</td>
</tr>
<tr>
<td>Like most about Viva Bien</td>
<td>VBV-LM</td>
<td>What did you like most about Viva Bien, and why?</td>
</tr>
<tr>
<td><strong>VIVA BIEN SUPPORT LEVEL</strong></td>
<td>VBSL</td>
<td>“Tell me about the support you had during Viva Bien”</td>
</tr>
<tr>
<td>Difficulty of adopting Viva Bien for others</td>
<td>VBSL-ADO</td>
<td>How difficult was it to adopt the lifestyle changes for your family?</td>
</tr>
<tr>
<td>Difficulty for adopting Viva Bien for self</td>
<td>VBSL-ADS</td>
<td>How difficult was it to adopt the lifestyle changes for you? Would you have preferred to make the changes one at a time or all at once?</td>
</tr>
<tr>
<td>Viva Bien benefits to family</td>
<td>VBSL-BO</td>
<td>Do you feel Viva Bien benefited your family? If so, could you describe the benefits?</td>
</tr>
<tr>
<td>Viva Bien benefits to self</td>
<td>VBSL-BS</td>
<td>Do you feel Viva Bien benefited you? If so, could you describe the benefits?</td>
</tr>
<tr>
<td>Met needs as Latina- cultural correctness</td>
<td>VBSL-CC</td>
<td>Do you feel the program met your needs as a Latina? If so, in what ways?</td>
</tr>
<tr>
<td>Decrease in social support because of Viva Bien</td>
<td>VBSL-D</td>
<td>By participating in Viva Bien did you feel a decrease in support from family and friends?</td>
</tr>
<tr>
<td>Increase in social support because of Viva Bien</td>
<td>VBSL-I</td>
<td>By participating in Viva Bien did you feel an increase in support from family and friends?</td>
</tr>
<tr>
<td>Others made behavior changes because of Viva Bien</td>
<td>VBSL-OBC</td>
<td>Do you think that there were people in your life (family, friends, coworkers) who made lifestyle changes in their own (e.g. changes in diet or exercise) because of your participation in Viva Bien? If so, could you please describe the changes they made?</td>
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APPENDIX B

MODIFIED ARSMA-II ACCULTURATION MEASURE

BRIEF ACCULTURATION RATING SCALE For Mexican Americans: ARSMA-II

(5) Almost Always/Extremely Often
(4) Much/Very Often
(3) Moderately
(2) Very Little/Not Very Much
(1) Not At All

1. Speak Spanish. (1) (2) (3) (4) (5)
2. I speak English. (1) (2) (3) (4) (5)
3. I enjoy speaking Spanish. (1) (2) (3) (4) (5)
4. I associate with Anglos. (1) (2) (3) (4) (5)
5. I enjoy listening to English language music. (1) (2) (3) (4) (5)
6. I enjoy Spanish language television. (1) (2) (3) (4) (5)
7. I enjoy Spanish language movies. (1) (2) (3) (4) (5)
8. I enjoy reading books in Spanish. (1) (2) (3) (4) (5)
9. I write letters in English. (1) (2) (3) (4) (5)
10. My thinking is done in the English language. (1) (2) (3) (4) (5)
11. My thinking is done in the Spanish language. (1) (2) (3) (4) (5)
12. My friends are of Anglo origin. (1) (2) (3) (4) (5)
APPENDIX C  
Descriptive Characterization of Units of Analysis

<table>
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<tr>
<th>Coded interviews</th>
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<tr>
<td>Thematic text units identified</td>
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<td>Thematic text units coded as medication (-)</td>
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<td>Thematic text units coded as stress (-)</td>
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<td>Thematic text units coded as healthy eating habits (-)</td>
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<tr>
<td>Thematic text units coded as money (-)</td>
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<td>Thematic text units coded as (-/+ in relation to self-management</td>
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<td>Thematic text units coded as physical activity (-/+</td>
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<td>Thematic text units coded as social support (-/+</td>
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<tr>
<td>Thematic text units coded as positive self-management (+)</td>
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<tr>
<td>Thematic text units coded as knowledge, awareness, and education (+)</td>
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<td>Thematic text units coded as collective-efficacy (+)</td>
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<td>Thematic text units coded as continuity and routines (+)</td>
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<td>Thematic text units coded as self-efficacy</td>
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<td>Thematic text units coded as definition of healthy individual (-/+</td>
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<td>Thematic text units coded as healthy is carrying out self-management behaviors (+)</td>
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<tr>
<td>Thematic text units coded as healthy is being happy and positive (+)</td>
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<td>Thematic text units coded as negative in relation to having self-efficacy (-)</td>
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